Standstill covers under CAR and EAR insurance
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Foreword

Many CAR and EAR projects run smoothly, reaching completion and allowing the contractor to hand over the works in line with the original time schedule. Other construction or erection works experience delays or may even be suspended altogether. Difficulties of this kind are often linked to unsettled economic conditions, such as the Asian financial crisis at the time of writing this brochure. If the financial foundations of ambitious engineering projects are shaken and made unstable in the wake of an uncertain economic environment, there is a marked increase in demand for insurance protection against the hazards arising during periods of temporary suspension.

The publication in hand sets out to explain this special line of engineering insurance to underwriters and other interested parties using the sub- and superstructure works of commercial building construction as an illustrative example. It starts with a brief presentation of the main triggers for standstill cover before examining the risks and minimum conservation requirements involved at a site during interruption of works. A closer look is then taken at insurance terms and conditions for standstill risks and possible applications. Finally, a representative example of interrupted works is presented in the appendix to give the reader a first-hand impression of standstill cover in practice.
1 Typical triggers for standstill of works

The many different direct and indirect causes for the interruption of construction or erection works can generally be grouped under the following main headings:

- investors become unable to fulfil their obligations;
- temporary liquidity problems arise as local currencies devalue against a hard contract currency and loan interest rates soar;
- changes in the economic environment challenge the viability of the project concerned;
- works progress affected by disputes between principal and contractor over the interpretation of the contract agreement;
- project time schedule delayed by shortage of, or late delivery of, material and equipment.

These circumstances invariably lead to one of the three scenarios described below:

a) The investor decides to abandon the project altogether and dissolves the works contract accordingly.

b) The contractor abandons the site (cessation of work) following unilateral contract frustration by the principal, e.g., cancellation of progress payments.

c) The works are temporarily suspended after negotiations and agreement between principal and contractor.

From the insurer's viewpoint, these scenarios have one aspect in common: they represent a "material change in risk" which results in the termination of the insurance policy, unless the insurance terms are modified by mutual agreement between the insured and the insurer. The criteria regarding the termination or modification of insurance terms are expressed in General Conditions nos. 2 and 9 of Swiss Re’s standard wording for CAR and EAR policies.

As a rule, insurance policies contain a condition stipulating that the insured or his broker or agent are obliged to inform the insurer about any material changes in the project. Information of this kind enables the insurer to reconsider and adjust insurance terms and conditions as required. The direct insurer must also ensure that his reinsurer is involved in this process, be it directly or indirectly via the appointed reinsurance broker, as his reinsurance protection would otherwise cease.

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**General condition no. 2:**
“The Insured shall immediately notify the Insurers in writing
• of any material change in the risk insured hereunder,
• of any cessation of work presumably exceeding one month.
In such cases, except seasonal interruptions, continuance of the Policy shall be subject to terms and conditions to be agreed.”

**General condition no. 9:**
“In the event of
• termination of the Contract by the Principal
• withdrawal from the Contract by the main Contractor,
this Policy shall cease unless its continuance be admitted by endorsement signed by the Insurers.”
Any modifications to the insurance policy must be viewed in the context of the original or modified contract works to which the principal and the contractor have agreed. In the three scenarios listed above, the insurance contract will be affected as follows:

a) Abandonment of the project
   Effect: cancellation of the policy with final premium adjustment.
   Required action: depending on the state of completion, the project may still represent an insurable value. It may be of interest for the insurer to examine suitable insurance options, such as a named perils policy, with the owner.

b) Abandonment of the site
   Effect: policy cover ceases in line with General Condition no. 9 (see page 5).
   Required action: as under item a) above, the abandoned project may still represent a substantial value. It may be attractive for the insurer to identify the party with an ongoing insurance interest and to offer suitable protection.

c) Temporary interruption of the project
   Effect: policy cover needs to be adjusted on the basis of General Condition no. 2 (see page 5).
   Required action: depending on the progress of works achieved prior to the "agreed interruption", special terms and conditions need to be arranged for the standstill period. Named perils protection is the most suitable cover for the period leading up to the time when contract works are resumed and full all risks cover is reestablished.

In all three scenarios, any existing advance loss of profits (ALOP) extension to the relevant CAR or EAR cover ceases with the interruption of the works and is renegotiated once the construction or erection works are resumed. Only then can a fair assessment be made of the "new" economic situation at the revised completion date and according to a new schedule.
Swiss Re’s experience has shown that works suspension most frequently affects the following types of construction and erection projects:

- residential and commercial buildings, e.g. condominiums, office blocks, hotels, shopping centres;
- civil engineering projects, e.g. earthworks, site developments, road projects;
- industrial buildings, e.g. warehouses, factory buildings.

Standstill cover for such “standards risks” can be provided by way of a proposed standard endorsement in connection with a site survey in order to fine-tune terms and conditions.

The risk of works suspension also affects projects of far greater complexity, such as power plants, industrial complexes and entire traffic systems. In such cases, a thorough examination and assessment of the individual risk is necessary to design tailor-made standstill cover. By way of example, this publication focuses on the sub-and superstructure works of commercial building construction.

2.1 Construction phases in building construction

A building construction project typically runs through the following phases:

- Mobilisation and site installation
- Substructure works
  - pile driving (if applicable)
  - shoring for excavation (sheetpile, borepiles, diaphragm wall)
  - basement excavation
  - foundation works
  - structural basement works
  - backfilling
- Superstructure works
  - building shell
  - interior fit-out and finishing
- Demobilisation and hand-over

The value at risk and the risk potential may vary substantially depending on the stage of construction works at the moment of interruption. The following schematic diagram illustrates the increase of value over time for a common construction period of 30 months. Unless a structure requires costly foundation and substructure works, the main increase in value at risk will occur during the superstructure works, particularly towards the end of that period if high technology installations are involved.
2.2 Main hazards during construction

Water and fire are considered the main hazards in building construction, carrying large loss potential. Earthquake and typhoon hazards may be of additional relevance in certain countries or regions.

Whereas the water risk is of minor importance after completion of the substructure works, the main concern until the moment of hand-over is the fire risk. In the worst case, the maximum probable loss (MPL) may occur, which – in building construction – usually means a fire close to the hand-over date.

Losses resulting from flood or inundation may also reach significant amounts. For example, flooding of the excavation pit or of completed basements may be a concern, in particular where basements are used as storage areas. Moreover, if flooding is coupled with unfavourable soil conditions, the supporting structures for the basement construction, such as sheetpil walls, are likely to collapse.

Additional hazards include the third-party risk (loss or damage to persons or property), the exposure of a site to theft, burglary or malicious damage and all kinds of loss or damage to the works resulting from faulty design, material, or workmanship.

2.3 Main hazards during the standstill period

If works on a construction site are interrupted, the “site operational risk” largely disappears and is succeeded by the main hazards of water, fire, theft, burglary and malicious damage. The third-party risks may also be a concern, depending on the neighborhood around the site. This section examines the main hazards involved following works interruption in greater detail.
2.3.1 Water

To measure the possible impact of water on the interrupted construction works, the cycle between the dry and the wet seasons at the project location must be established. Figure 2 illustrates the interruption of a project during the substructure works. Our assumption, by way of example, is that the shoring wall (eg sheet piles) is in place and excavation down to basement level 4 has been completed, while only two basements are constructed and backfilled at the time of the interruption.

In the example, the interruption period starts in the middle of the rainy season, and the site is abandoned as a result. The site is seriously flooded and sustains damage to completed works. Water pressure causes the sheet pile wall to become deformed or collapse, and settlement damage to adjacent third-party property becomes inevitable. After several dry months, the uncompleted substructure again enters into the rainy season, possibly resulting in further losses. The overall exposure to water damage is much higher than assumed in the original construction time schedule.

An example for the interruption of construction works during the superstructure phase is shown in Figure 3 (see page 12). At this point, the structure is not primarily exposed to water damage, provided that the rainwater ingress from the top of the building is blocked. Water damage to stored material and equipment for permanent fit-out however is a concern, and appropriate protection is required. If there is heavy rain in connection with a storm or typhoon, special attention must be paid to partially completed curtain walls.
### Mobilisation Period (months)

<table>
<thead>
<tr>
<th>Substructure</th>
<th>Superstructure</th>
<th>Demobilisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>24</td>
<td>30</td>
</tr>
</tbody>
</table>

**Original value**

<table>
<thead>
<tr>
<th>Water hazard</th>
<th>Fire hazard</th>
</tr>
</thead>
</table>

**Figure 2**

The water risk: suspension of works during the substructure phase over 30 and 42 months, respectively.

![Graph showing mobilisation, substructure (extended period), superstructure, and demobilisation periods with different events and value increments.]

1. Original value at suspension of works
2. Adjusted value at restart of works
3. Original final contract value
4. Adjusted final contract value

- Rainy period
- Standstill period
- Completion of works
Figure 3
The fire risk: suspension of works during the superstructure phase over 30 and 42 months, respectively.
2.3.2 Fire

The closer to the scheduled completion date the interruption of works occurs, the higher the fire risk (compare figures 2 and 3). Scaffolding and shuttering, interior decoration and fit-out, equipment stored in and around the building, and the accumulation of combustible and explosive material and substances together form a substantial fire load. Negligence or even arson may result in an enormous fire loss. Only strict loss control measures can prevent any major casualties.

2.3.3 Theft, burglary, malicious damage

For obvious reasons, a "silent site" invariably attracts visitors of a certain kind. Objects that are not stolen may be damaged on purpose, eg windows may be smashed and cables, pipes or hoses cut through.

2.3.4 Third-party risk

Damage to third parties, ie bodily injury or property damage, cannot be excluded altogether. While strong winds may carry away objects from higher storeys, a safety net set up around the uncompleted building will certainly reduce this risk to a minimum. Further aspects to consider here are settlement damage and the risk of fire spreading.

2.4 Site condition at start of interruption of works

In order to determine standstill terms and conditions as well as pricing, the condition of the site must be assessed by way of a survey. A checklist addressing the following items is a useful tool to this effect.

- Stage of completion, in percent
- Interruption during critical phase, eg semi-completed steel tank erection, curtain wall assembly, retaining wall construction?
- Comparison of planned to actual progress
- Estimated value of completed portion(s)
- Stage of substructure works
- Water exposure, eg ground water, distance to bodies of water, surface water, heavy rainfall
- Drainage facilities (availability and maintenance)
- Windstorm exposure, eg semi-completed curtain walls, condition of scaffolding, safety nets
- Fire exposure (fire load of uncompleted structure, storage or accumulation of combustible or explosive material, eg timber, plastics, chemicals)
- Fire protection and fire-fighting facilities
- Exposure to theft or burglary (site fencing, security staff)
- Third-party exposure (adjacent property, objects falling from site, prohibited access)
- Storage of material or equipment, eg location, size, locking, access control, wear and tear, corrosion
3 Minimum requirements for conservation of construction works

Certain minimum requirements are indispensable to site protection during the standstill period. Project sites covering vast or scattered areas, prototype constructions or specific environments may require special measures. A detailed expert survey should be conducted to ensure appropriate risk assessment for projects of this kind.

The standard minimum requirements include:
• fencing of the site, 24-hour watch and site patrolling with trained security guards,
• removal of highly inflammable and explosive substances,
• clearance of combustible waste material,
• installation and regular inspection of appropriate fire-fighting equipment (size and number),
• sufficient supply and storage of fire-extinguishing water (quantity and pressure) and direct contact with nearest fire brigade,
• sufficient standby pump capacity for dewatering purposes,
• semi-completed installations and work sections secured against windforce, safety nets installed around superstructures.

Curtain walls or safety nets secured around construction works may inhibit damage by windforce, prevent objects falling from the site and reduce exposure to theft, burglary or malicious damage.
4 Insurance terms and conditions for standstill risks

Figure 4 illustrates the general insurance plan of a project which runs into a standstill period.

4.1 Scope of cover

The abandonment of the project site and the interruption of all site activities represent a material change of risk. A prerequisite insurers stipulate for the continuation of any coverage (standstill cover) is that the works must be adequately protected. Since unfinished works and projects are primarily exposed to external perils, the scope of cover is generally reduced from “all risks” to “named perils”, i.e. to external perils existing during the relevant standstill period. The endorsement in Appendix 1 is a suitable tool for the transfer of CAR cover into named perils cover for the duration of the standstill period. The reinstatement of all risks cover following the interruption must be made subject to a survey of the site before any activities are resumed.
4.2 Premium, deductibles and sum insured

The premium for the standstill period must be calculated and paid separately from the CAR or EAR premium arranged at the start of the project. General tariffs cannot be drawn up owing to the specific characteristics, location and progress stage of each project. There are some useful guidelines, however, such as the fire tariff for the relevant country and - where civil works are concerned - the recommended rates for civil engineering completed risks. In both cases, the rates are calculated on a named perils basis.

Standstill cover can be endorsed and extended at certain time intervals. In order to keep administration to a minimum, the interval should be three or six months, and certainly no less than one month. The interval premium is based on value at risk and calculated as a pro rata temporis share of the annual tariff rate. Seasonal influences, such as monsoon or typhoon, should also be considered with regard to the insured time interval. The insurer and insured negotiate the details regarding the payment method, including the actual premium payment status. The following questions may arise at this stage:

- Was the premium for the entire project paid in advance?
- Do the instalments paid to date reach up to or beyond the interruption date?
- Has no premium been paid yet, or is premium payment behind the agreed instalment plan?
- If additional standstill intervals are requested, has the premium been paid for previous intervals?

The consequences of negligent or delayed premium payment on the continuation of insurance cover must be defined for the standstill period. It is in the interest - and actually the obligation - of the insurer to establish and monitor clear payment terms in order not to endanger his reinsurance protection.

Depending on the exposure of the suspended contract works, the deductibles of the original policy are either maintained or adjusted for the standstill period, for example by introducing a flat deductible per loss occurrence.

The sum insured (value at risk) must also be monitored and adjusted in response to inflation and currency devaluation. Unless the insured project is redesigned to a more economical standard following the standstill period, the new replacement value will increase in comparison to the original plan and calculation. Figures 2 and 3 illustrate this point.

Imported plant and equipment such as elevators, appliances in buildings or entire machine complements in industrial plants may contribute substantially to the value of a project. As insurance is adjusted on new replacement value basis at the completion of the works, the value of imported items may increase substantially in local currency. The value of the works follows the inflation index. Premium and deductibles are thus subject to upward adjustment in line with currency devaluation and rate of inflation.
There is no automatic return from named perils to all risks cover following a standstill period. Any resumption of all risks cover is subject to a survey that must be conducted before the contract works are resumed. After all, long interruption periods or negative loss experience may require the insurer to redefine certain clauses or warranties, or to introduce special exclusions. The option of finding a new contractor or subcontractors or of adjusting the works design may also need to be carefully examined.

Construction or erection works may be temporarily suspended for manifold reasons. During any such standstill period, insurance cover can be arranged as an endorsement to existing CAR or EAR policies. This is an advantage for both parties to the insurance or reinsurance contract as it guarantees consistency and uninterrupted insurance coverage from a single source. Swiss Re has developed a set of guidelines and a standard endorsement (Appendix 1) for standstill cover in CAR and EAR insurance. The example from practice given in Appendix 2 serves to demonstrate the general and practical approach Swiss Re takes in providing tailor-made solutions in this complex field of insurance.
Appendix 1

Endorsement no. 66
Standstill periods in CAR and EAR insurance

Notwithstanding the conditions, provisions and other endorsements of the policy, it is agreed and understood that for the standstill period as specified below, insurers shall only be liable for loss or damage caused by:

- Fire
- Flood
- Earthquake
- Inundation
- Windstorm
- Typhoon
- Hurricane

Insurers will also indemnify the insured for loss of or damage to the insured property occurring during the standstill period caused by any act or omission of the contractor(s) during the construction period prior to the beginning of the standstill period.

Cover is subject to the following special conditions and provisions:
1. No construction or erection works (other than works for the sole purpose of conservation of stored material and equipment) shall form part of the sum insured.
2. Adequate protection against windforce and water damage (e.g., safety nets, bracings, covers, insulation, dewatering devices etc).
3. Site properly fenced in and equipped with sufficient number of access warning signs, central access control gate and 24-hour, uninterrupted security guard patrol.
4. Stored equipment to be checked at regular intervals not exceeding four weeks, and insufficient or damaged packing to be replaced at the expense of the insured.
5. In the absence of or in case of insufficient warranties in respect of fire prevention measures and storage of construction material and equipment in the underlying CAR or EAR policy, minimum requirement is per Swiss Re Standard Endorsements 37 (Fire Prevention Measures), 38 (Property in Storage, limit USD ………………..), 39 (Storage of Construction Material) and 40 (Dewatering).
6. No automatic re-establishment of full all risks cover without the written consent of the insurer following a detailed site survey at insurer’s instruction at the end of the standstill period.

Insured: ……………. (principal)

Period: from ………. to ……...

Estimated value of completed works and stored material and equipment: ……………

Deductible: …………… any one event

Limit of indemnity: …………… any one event

…………….. total for period

Premium: ……………
Appendix 2

Practical example of combined CAR/EAR standstill cover

1 Initial risk information and original insurance terms

Risk type and exposure:
Construction of a hi-tech, 300,000 square metre building complex mainly consisting of a 40-storey/1 basement office block and a 39-storey/1 basement condominium block in a central, but isolated metropolitan location easily accessible by a major roadway.

Site surrounded by:
- a third-party building to the east
- a public building to the north
- major roads to the south and the west

Comment: Separate policies have been issued for the civil works and for the erection works of the hi-tech installations. Both policies have the same principal but different main and subcontractors as named insureds. They are issued by the same direct insurer, but reinsured with a different panel of reinsurers.

<table>
<thead>
<tr>
<th>Policy form:</th>
<th>Standard Swiss Re CAR policy extended to cover</th>
<th>Standard Swiss Re EAR policy extended to cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sum insured:</td>
<td>USD 70 million (Estimated final contract value)</td>
<td>USD 47 million (Estimated final value of declarations)</td>
</tr>
<tr>
<td>Original period:</td>
<td>3/95 – 2/98 (36 months)</td>
<td>12/95 – 2/98 (27 months)</td>
</tr>
<tr>
<td>Premium rate:</td>
<td>0.075 ‰ per month (average monthly rate)</td>
<td>0.125 ‰ per month (average monthly rate)</td>
</tr>
<tr>
<td>Deductibles:</td>
<td>AOG: USD 25,000 others: USD 2,500</td>
<td>AOG: USD 2,000 others: USD 2,000</td>
</tr>
</tbody>
</table>

AOG: Acts of God
tppd: third-party property damage
a.o.a. any one accident
a.o.p. any one period
2 Interruption of the project

Following a major dispute with the principal, the main CAR contractor pulled out of the project and the principal temporarily took over full responsibility for the uncompleted project.

Interruption date: August 1996

The principal took the initiative to negotiate adequate insurance protection for the interruption period, as the policy cover would otherwise have ceased according to General Condition no. 9.

3 Site condition at start of interruption

A site survey revealed the following important details:

• 12 storeys of each block had been completed (structure only) and a reservoir of 24 x 40 m had been excavated down to 4 m below the ground surface.
• 8 out of 24 lifts had been delivered to the site and stored in the basement on pallets covered with tarpaulin.
• The project was on schedule at the interruption date. Progress of the civil works was estimated at 30% of the final contract value. The progress of the erection works was minor and the declared value amounted to only 3% of the final declaration value.
• Flood exposure was remote except for accumulation of surface water following heavy rainfall. A manual pump was available to drain water away to the public sewer system.
• Windstorm exposure was moderate. In order to deter unwanted attention and to prevent objects from falling onto public ground, the principal opted for the installation of safety nets at his own expense after the interruption date.
• The site was cleared of combustible and explosive material and adequately equipped with portable fire extinguishers.
• The site was cleared of valuable plant and equipment except for the items mentioned above, which were stored in the basement. 4 security guards ensured 24-hour uninterrupted site protection. The site was fully fenced in and entry was checked at a central guard house.
4 Conditions for standstill cover

An initial period of standstill cover was agreed upon as 10 months from 1 September 1996.

In the meantime, further extensions have proved necessary as the country was hit by a severe economic crisis in early July 1997.

Scope of cover: original CAR and EAR policy forms including Swiss Re’s standard endorsement for standstill periods, which transfers all risks into named perils cover and covers the following additional perils:

<table>
<thead>
<tr>
<th>Additional cover:</th>
<th>for CAR:</th>
<th>for EAR:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- TPL limit USD 250,000 a.o.a., unlimited a.o.p.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- theft with limit of USD 25,000 a.o.o., unlimited number of occurrences</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- cover for maintenance works limited to 0.5% of sum insured</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sum insured:</td>
<td>USD 21 million</td>
<td>USD 1.25 million</td>
</tr>
<tr>
<td>Premium rate:</td>
<td>0.07 % per month</td>
<td>0.07 % per month</td>
</tr>
<tr>
<td>Deductible:</td>
<td>USD 2,500 a.o.o.</td>
<td>USD 2,500 a.o.o.</td>
</tr>
</tbody>
</table>

a.o.a. any one accident
a.o.p. any one period
a.o.o. any one occurrence
5 Continuation of all risks cover

Owing to the persistently unfavourable economic situation, the project has not yet been resumed. Standstill cover is since being extended for six months at a time, and the site conditions are being closely monitored by professional surveyors.
Albrecht Domke

Albrecht Domke graduated in 1978 with a degree in Civil Engineering from Berlin Technical University. He worked for eight years as a consulting engineer in the construction industry before moving in 1986 into reinsurance. Through many years of practical underwriting in the Middle and Far East, he acquired specialist knowledge in all aspects of technical insurance. Albrecht Domke joined Swiss Re in 1997 and has since been in charge of underwriting for the Asian and Arabic territories.