

The SO designs launch contract and pay the vehicle manufacture  $\alpha * p$  up front.

The VM exerts efforts  $e$  to processing the vehicle in order to put the satellite in the orbit.

With probability:  $e$

Launch successful. The SO pays the last  $(1-\alpha)*p$  to VM.

The IC offers SO the launch insurance contract with premium rate  $r$  after in-depth technical underwriting.

With probability:  $1-e$

Launch failed. SO pays nothing and obtains  $F+\alpha*p+Cs$  as the claims from IC.