IAF SYMPOSIUM ON COMMERCIAL SPACEFLIGHT SAFETY ISSUES (D6)
Commercial Spaceflight Safety and Emerging Issues (1)

Author: Mr. Marco Cattadori
PwC Strategy&, The Netherlands

Mr. Giovanni Di Antonio
ENAC, Italy
Mr. Marco Di Giugno
Italian National Aviation Authority (ENAC), Italy

HOW COULD LOOK LIKE A FUTURE BALANCED AND INDUSTRY-FRIENDLY REGULATORY LIABILITY FRAMEWORK FOR SUBORBITAL HUMAN SPACEFLIGHT COMMERCIAL LAUNCHES?

Abstract

Suborbital human spaceflight launch vehicles after a long period with few launch tests have recently completed the very first commercial launches with "spaceflight participants" (SFPs) on board. In this pioneering era, regulatory frameworks like USA have been shaped to stimulate this nascent industry (rightly so) and highly protect (from a financial risk perspective) launch vehicle operators from spaceflight participants' claims. SFPs fly after i) an informed acceptance of risks and ii) signing "reciprocal waiver of liability agreements" in which they fully wave claims for death and personal injury they may suffer. When in future this nascent launch industry matures, regulators will likely have to consider how to shape their regulatory framework to stay industry-friendly and potentially become more balanced vis-à-vis spaceflight participants. This paper analyses a future hypothetical regulatory regime in which i) the operator is required to take out an insurance coverage, or provide an alternative financial guarantee, for a defined amount per spaceflight participant to cover for the damage the "SFP" may suffer, and ii) the parties are subject to a waiver of liability regime for the amount exceeding the required coverage. So, the operator liability exposure is limited and the SFP can receive some compensation. The paper addresses the current challenges and upcoming opportunities in establishing such regulatory regime. Key points include: i) Absence of "SFP coverage" insurance policies: Currently, there is a lack of insurance policies covering spaceflight participants in the space market. Insurers are, however, open to developing such policies, ii) Potential reference amounts for "SFP coverage": Consideration of specified amounts, such as 1-5 million USD per SFP, with 3 million USD identified as the minimum relevant amount, iii) Financial capacity despite recent losses: Despite significant losses in the global space insurance market, there is financial capacity available for SFP coverage, iv) Costs for operators: Estimated costs for operators to obtain "SFP coverage" at current launch failure rates are high, leading to price increases exceeding 50 percent for an 18 million USD "SFP coverage" (3 million per SFP with 6 SFPs on board), however can become affordable should vehicles become more reliable in the coming years, and even more so should insurers be in the position to offer multi-launch yearly coverage, v) Regulatory timing challenge: a key challenge for regulators and the industry will be to determining the opportune moment to implement such a regulatory regime.