

The Space Insurance and a cow called Rufina

Classic insurance like life and home also includes some others that are much more remarkable: insurance for satellites. It may seem to come from another galaxy, but these policies are essential for guaranteeing your Internet connection or for you to be able to watch your favorite TV show. They may even prove useful in case of an accident and the accidental death of a cow.

November 30, 1960. A solitary cow is grazing in a meadow in the south of Cuba. On the other side of the Caribbean Sea, at the United States launch center, Cape Canaveral, a Thor DM-21 rocket is launched into space carrying a satellite. But something goes wrong. On the way to the stratosphere, Thor explodes and a part of its fuselage hits the Cuban cow head on. Rufina, for that was the cow's name, dies.



What may have remained as a mere anecdote in the long list of claims and accidents in space ended up being so much more. Fidel Castro called the accident a "cruel attack and violation of Cuba's air space" and exhorted the people, with their cows, to demonstrate in front of the United States embassy in Havana. "The Yankees are killing us without mercy", "Eisenhower, you murdered one of my sisters", cried one of the banners draped over a protesting cow.



As strange as it may seem, the Cuban strategy had the desired effect. The world became aware of "the dangers" of the space race, the American government awarded the Cubans 2 million dollars compensation, and Rufina, the most expensive cow in history, was seen off with full State honors.

The role of the insurance industry

This was the beginning of the conquest of space and governments were the only ones involved in space activity, so they were the only ones responsible for damages and costs if anything did not go as planned. As far back as 1965, the insurance company Lloyd's assumed the first space risk. Nowadays, with countless multimillion dollar claims, and with private companies and commercial telecommunications providers at the helm, the role of the insurance industry is crucial to facilitating the continuing work of the aerospace industry.

There are only about thirty companies worldwide sharing aerospace risks and the Spanish company MAPFRE is one of them. "We started out with Hispasat - a Spanish operator which put its first satellite into orbit in 1992 - and since then we've been growing and expanding our international activity", explains Paola Serrano, Head of the MAPFRE Global Risks Aviation and Space Area. "In the case of an accident, it's very difficult for an operator to recover financially if there's no insurance coverage. We're talking about satellites that may be worth over 400 million dollars, which is how much the largest telecommunications satellites cost."

When there is a claim, the insurance company is responsible for providing the funds necessary to the operator to manufacture and launch a new satellite, and in this way provide the military and civil services to which it is committed with telecommunications companies, governments, etc."

Types of space insurance

It can be said that the insurance modality relating to space activities is basically divided into two types of coverage, the first which is assumed by the launcher to cover damages to third parties, such as the cow Rufina - third-party liability - and the second, taken out by the operator, covering the space object itself. Insurance of the second type covers the operator's property, that is, the satellite, usually from the launch (which may last from 40 minutes to 10 hours, depending on the orbit in which the satellite is placed) to its life in orbit. All operational activity is insured.

"10, 9, 8, 7, 6...0. Our launch insurance starts when the countdown ends and take-off cannot be aborted. It's no small feat to put a satellite into orbit and this phase is one of the most critical. Some operators choose to only insure this risk exclusively, and others extend the insurance to life in orbit", explains Cristina Quintero, an expert in space insurance at MAPFRE. "In the life in orbit phase, the policies are of 12 months duration. Telecommunications satellites usually have a useful life of 15 years because that's how long their fuel lasts. As an insurance company, we ask operators to provide us with a report on the satellite's state of health and it's on the basis of this information that we renew the policy", she adds.

The future of space insurance

At the end of 2016 there were estimated to be 1,500 operational satellites orbiting earth, providing geographical data, information on the weather and telecommunications services. But this figure may well skyrocket as companies keep launching thousands of spaceships that are increasingly smaller in size. All satellites are assigned an orbital position and sometimes require small maneuvers to reach their exact location. The prospect of an enormous swarm of satellites puts us on alert against the growing risk of collision during these maneuvers. But there are also asteroids, meteorites and other particles to contend with, as well as tons of space debris, which comprises the remains of inoperative satellites that are left to go round and round endlessly in the vast space graveyard after they have completed their missions.

As far as manned missions go, coverage for astronauts, being "those sent by humanity on high-risk missions", covers disability, natural or accidental death and in some cases, it includes getting lost in the infinity of space. On this point and with space tourism becoming a reality, this is where the challenge lies for insurance companies. "It's important for developments in this segment to be accompanied by appropriate insurance solutions. Where there's a new risk, there's a new insurance requirement" is what MAPFRE Global Risks says.

It may seem outlandish to speak of astronauts and trips to the moon. You may not be planning your next vacation in space nor are you likely to be unlucky enough for the remains of a fuselage to land on one of your cows. But when you realize that so many of the television channels you watch, your internet connection, your cellphone and the navigator in your car all depend on satellites, the subject becomes something much closer to heart. As such, a sound insurance market is the source of confidence required to continue progressing in our knowledge of extraterrestrial space and so improve the quality of life here on earth itself.