

# Small Satellites, Big Possibilities: How to Build a Fair Legal Regime for a Developing Technology

December 13, 2021

On October 30, 2021, as part of the American Branch of the International Law Association's International Law Weekend, Debevoise & Plimpton gathered international space-law practitioners and scholars Sasha Field, General Counsel, Spaceflight, Dr. Yungjin-Jung, Senior Researcher, Republic of Korea Space Agency and Prof. Frans von der Dunk, Professor, University of Nebraska for a panel discussion on small satellites. The panel was titled "Small Satellites, Big Possibilities: How to Build a Fair Legal Regime for a Developing Technology" and was moderated by Catherine Amirfar, Co Chair of the International Dispute Resolution and Public International Law Groups at Debevoise.

The panel of experts focused on the rapid proliferation of small satellites, or "smallsats," and the implications of that proliferation for international and national space law and in turn, for companies operating in space. Smallsats will continue to be a key technology in the growing space-related industry, which analysts expect to account for over US\$1 trillion of annual revenue as soon as the year 2030. Michael Sheetz, *Bank of America*, *expects the space industry to triple to a \$1.4 trillion market within a decade*, CNBC.com (4 October 2020) (<https://www.cnbc.com/2020/10/02/why-the-space-industry-may-triple-to-1point4-trillion-by-2030.html>). Smallsats, made possible by improvements in microelectronic manufacturing and networking, have enabled the rapid proliferation of space activities because of their reduced cost and ease of manufacturing, facilitating access to space for public and private actors.

The panelists addressed the reality that countries and corporations operating or utilizing smallsats will be required to navigate a growing patchwork of national regulations, including where international law fails to keep pace with rapid technological developments in the space industry. The current international legal regime, based on treaties and developed in the days of the "space race," assigns responsibility for space activities solely to countries and does not directly address the implications for that regime of the rapid proliferation of private actors operating large numbers of small satellites, often sharing ownership and operation among entities in many countries. In the absence of the conclusion of new multilateral treaties, which is exceedingly difficult in the current political climate, this field has seen a proliferation of "soft law" to fill in

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the “gaps” in the international regulatory framework. For example, the UN General Assembly and other international bodies, such as the UN Office for Outer Space Affairs (UNOOSA)’s Committee on the Peaceful Uses of Outer Space (COPUOUS) and the Inter-Agency Space Debris Coordination Committee (IADC), have begun adopting non-binding Resolutions and Guidelines to mitigate risk in space activities. While lacking the force of law, Dr. Jung noted that these rules are instructive tools that provide a “testing ground” for spacefaring nations in order to jump-start development of new national regulation and customary international law. Importantly, the content and trajectory of these soft-law norms are good indicators of the evolution of the international regulatory framework.

In addition, countries are stepping in with domestic regulation that is informed by these evolving international standards, as well as to fill the “gap” where no such standards exist, making it potentially more confusing and inefficient to do business. For one example, the fragmentation of the national and international regulatory regime can harm the smooth functioning of secondary markets in many circumstances, such as insurance industry, in which operators may face conflicting obligations such as underwriting requirements. See Debevoise In Depth – International Space Law: A New Frontier of Risk (<https://www.debevoise.com/insights/publications/2020/01/international-space-law-a-new-frontier-of-risk>).

Finally, in looking into the future, one of the most significant challenges identified as facing the space industry in the coming decades is managing the accumulation of debris in orbit, created by collisions and discarded upper stages of rockets. The panelists pointed out that all actors in space face the same risks from rogue debris. Because of this, all actors have similar incentives to devise a regime for efficient communication and collision avoidance. The panelists also touched upon spectrum allocation, traffic management and military considerations, as well as their predictions for future challenges and solutions to those challenges.

A recorded version of the panel is available [here](#).



**Catherine Amirfar**  
Partner, New York  
+ 1 212 909 7423  
camirfar@debevoise.com



**Ina C. Popova**  
Partner, New York  
+ 1 212 909 6754  
ipopova@debevoise.com



**Meryll Lawry-White**  
Associate, London  
+ 44 20 7786 3042  
mlawrywhite@debevoise.com



**Nicole A. Marton**  
Associate, New York  
+ 1 212 909 6578  
namarton@debevoise.com



**William C. Mattessich**  
Associate, New York  
+ 1 212 909 6266  
wcmattessich@debevoise.com



**Adrian St. Francis**  
Associate, New York  
+ 1 212 909 6739  
astfrancis@debevoise.com