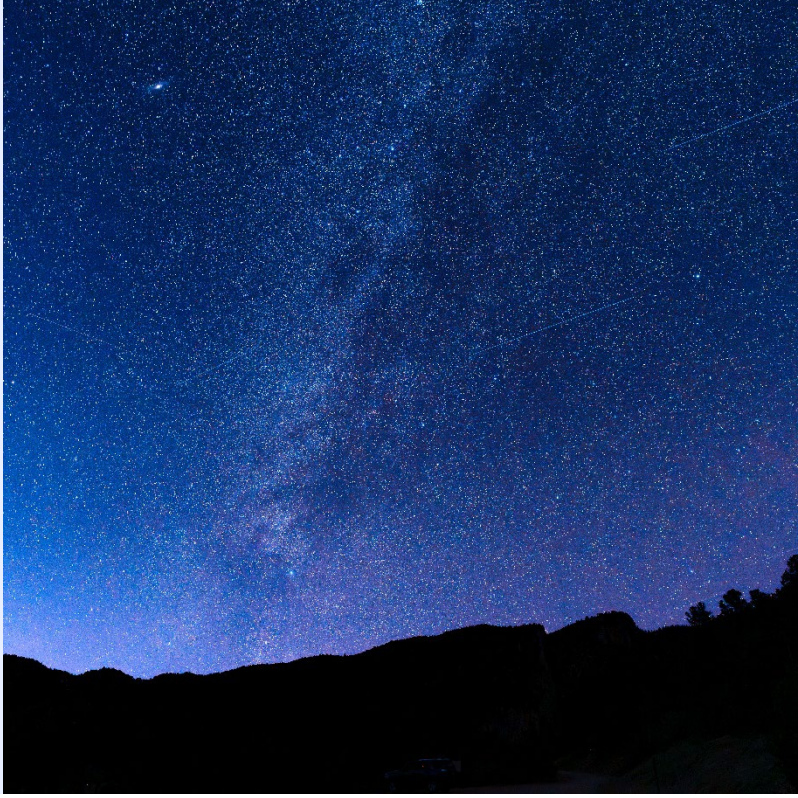
Clifford Chance

BRIEFING



Space and satellite infrastructure: Opportunities for private equity

3 August 2026

The investment space race is much more than rockets: it's about real estate in orbit and significant downstream opportunities. Falling launch costs, advances in satellite technology and growing demand for connectivity are rapidly reshaping the economics of space. Already worth US$626 billion and projected to exceed US$1 trillion within the next decade, the global space sector is attracting growing investor interest.

SpaceX's US$1.75 trillion IPO valuation has focused attention on satellite connectivity and space infrastructure as a mainstream investment asset class. Yet for investors, the opportunities lie not in the rockets but in the infrastructure, networks and services that terrestrial systems cannot provide. In this briefing, we explore those opportunities, the legal and regulatory issues that shape value, pricing and deal structures and how regulatory frameworks are evolving in response to the sector's rapid commercial development.

Key takeaways

1. The global space market is racing toward a US$1 trillion-plus valuation with expanding opportunities beyond connectivity, including defence, sovereignty and Earth observation.
2. Satellites go where fibre and phone masts cannot. Roughly a third of the world's population is still unconnected, and satellites are often the only economically viable way to reach them.
3. Launch costs have fallen by around 95%, transforming space from a niche sector into a viable infrastructure asset class.
4. Regulation is currently light-touch but the regulatory framework is evolving.
5. The opportunity for investors is significant, but success will depend on addressing challenges including licensing, security and geopolitical risk.

WHAT ARE THE OPPORTUNITIES?

1. Market scale: capital flows into the space economy

The global space economy reached roughly US$626 billion in 2025, with most forecasters expecting it to double in size in the next decade. Commercial activity accounts for around 78% of the market, or roughly four times government spending. However, government and defence budgets are now the fastest- growing segment. Growth is also increasingly diversified: beyond consumer broadband, satellite infrastructure underpins Earth observation, maritime and aviation connectivity, IoT and GNSS-enabled navigation. GNSS alone supports an estimated US$300 billion of downstream economic activity across transport, agriculture, logistics and financial services.

2. Reach: where fibre and phone masts cannot follow

Terrestrial connectivity has a geography problem. Laying fibre across mountains, deserts, rainforests and archipelagos, or building mobile towers with reliable backhaul, is often uneconomic long before it becomes impossible. Close to half the world's population lacks fibre-quality connectivity, and roughly 2.5 billion people do not have internet access at all. Satellite infrastructure sidesteps the civil-engineering problem entirely: a constellation in low Earth orbit can light up a village, an island or a mountain valley without a trench being dug or a pole being planted. That is why it is increasingly viewed as a far cheaper way to extend connectivity into rural and remote places.

3. Commercial applications – banking, healthcare and data centres

Satellite infrastructure delivers tangible social and commercial benefits. An estimated 1.3 to 1.4 billion adults worldwide are unbanked, and connectivity is the single biggest driver of financial inclusion. Mobile money is now the dominant channel for account ownership in Sub-Saharan Africa, and satellites increasingly underpin that shift. In Nepal, satellite links now connect rural ATMs that fixed networks cannot economically reach.

The same advantage extends to healthcare. Four in five developing countries now run at least one mobile health programme, and satellite is often the only viable link between remote clinics and specialist care. Augmented-reality telemedicine is beginning to enable specialists anywhere in the world to guide local clinicians through procedures in real time.

Digital inclusion, financial inclusion and healthcare access align closely with the UN Sustainable Development Goals, while the UN Office for Outer Space Affairs has linked satellite and geospatial technologies to progress against more than 40% of Sustainable Development Goal targets. For

investors, that alignment can support both growth and capital-raising objectives.

Looking further ahead, the same logic applies to orbit itself as infrastructure. Near- continuous sunlight in low Earth orbit removes the need for battery storage, while orbital facilities sidestep the land, grid power and water constraints now stalling planning approval for terrestrial AI data centres. What once seemed speculative is beginning to attract serious investment, with SpaceX, Google, Blue Origin and others developing competing proposals.

4. Faster networks and lower costs

The performance gap between satellite and fibre is closing faster than most public commentary suggests. Modern low-Earth-orbit constellations now deliver median latency of 25-50ms, down from more than 600ms on 2000s-era geostationary satellites, and inter-satellite laser links are already out-performing submarine fibre cable on some long-haul routes. Underpinning this is a dramatic decline in the cost of reaching orbit: launch costs have fallen roughly 95% over the past decade, taking the cost per kilogram from the tens of thousands of dollars to the low thousands. That shift has made entirely new categories of space business commercially viable within a single investment cycle.

5. Defence and sovereignty

Governments are an increasingly important buyer, alongside consumers and enterprises. Global government space spending reached roughly US$137 billion in 2025, with more than half directed towards defence. Industry analysts describe defence and sovereignty as the main driver of the space economy's growth.

6. Earth observation: a distinct, fast-growing vertical

Earth observation is a vertical in its own right, separate from the connectivity market. Satellite imagery and monitoring now underpin agriculture, insurance underwriting, ESG reporting and disaster response. The resources sector is also making increasing use of these technologies. Mineral exploration is increasingly guided by satellite-derived data, and the growing demand for critical minerals is reinforcing that trend. As governments and supply chains scramble to secure lithium, cobalt and rare earths, the ability to screen vast and remote acreage quickly has moved from a nice-to-have to a strategic priority.

7. Direct-to-device

Smartphones can now connect directly to satellites without additional hardware, moving the technology from niche use cases into the mass market. The commercial demand is already evident: Starlink's subscriber base has doubled year-on-year for three consecutive years, surpassing 10

million subscribers in early 2026, while Amazon Leo and AST SpaceMobile are also competing for market share.

8. A lighter regulatory footprint, and the broader case for growth

While terrestrial infrastructure and data centres are facing local planning objections, grid-connection queues and permitting delays, satellite operators benefit from different dynamics: spectrum and orbital-slot coordination runs through a single international body, the ITU, rather than a new planning process in every municipality. For a first mover with a strong balance sheet to secure spectrum and orbital slots early, that thin regulatory perimeter is a speed advantage. Operators can commercialise faster than an equivalent terrestrial build-out would allow, ahead of regulation that will, over time, significantly develop.

Separately, satellite capacity is increasingly bought by enterprises and governments as a backup to submarine cable and terrestrial fibre, as a network-resilience case.

THE CHALLENGES – WHAT STANDS BETWEEN THE OPPORTUNITY AND THE RETURN?

The investment case for satellite networks is increasingly compelling. However, there are several legal and regulatory risks that come up repeatedly in transactions across the sector. None is a deal-breaker, but all can affect price, structuring, timing, warranties and indemnities.

1. The absence of a unified global regulatory regime

Satellite networks are not regulated in the same sense as terrestrial telecoms. The legal framework that exists is built on two ageing instruments: the 1967 Outer Space Treaty and the 1972 Liability Convention. Both were negotiated when fewer than a dozen states operated in orbit and commercial satellite constellations were not contemplated. They impose obligations on launching states, not directly on private operators, and they were never designed for fleets numbering in the thousands.

Spectrum allocation and orbital filing is coordinated through the ITU, which performs a genuinely useful administrative function, but has no enforcement power, court or mechanism to compel an operator to de-orbit a defunct satellite or to behave safely once a filing has been made.

As a result, there is no single regulator that can be sued, fined or petitioned by a private commercial party in the way an investor would expect of a terrestrial telecoms regulator. Each launching state applies its own domestic licensing regime: the US through the Federal Communications Commission (FCC) and the Federal Aviation Administration (FAA), the UK through the Civil Aviation Authority (CAA) and Ofcom (the UK's communications regulator), and so on. But once a

satellite is in orbit, behaviour in space itself is governed by a largely voluntary layer of debris-mitigation guidelines that have no binding force.

For investors, this creates three practical issues:

- **Licensing risk is jurisdictional and fragmented.** A constellation operator may hold a licence in one major market and be in active negotiation or in dispute with others. Diligence needs to map licensing status market-by-market, not assume a single "global" authorisation exists.
- **Standards are voluntary, not enforceable**. Debris-mitigation and end-of-life de-orbiting guidelines exist but are not binding law in most jurisdictions Compliance is a matter of operational policy and reputational risk management, not legal obligation, which affects how much weight should be placed on ESG-style representations in a purchase agreement.
- **Cross-border coordination is informal**. Collision avoidance relies heavily on bilateral data-sharing, industry practice and commercial space situational awareness providers rather than any binding international dispute-resolution framework.

None of this makes satellite assets unlicensable or uninsurable. It does mean the regulatory perimeter around the asset is thinner than in almost any other infrastructure class a PE fund is likely to underwrite. As a result, warranty and indemnity protection should be drafted accordingly, with specific reference to jurisdiction-by-jurisdiction licensing status rather than a generic "compliance with applicable law" warranty.

2. Orbital congestion and the liability gap

Low Earth Orbit is becoming crowded and conjunction (near-miss) events now occur routinely. Two incidents illustrate the legal problem. In 1978, a malfunctioning Soviet satellite scattered radioactive debris across Canada. It was the only claim ever brought under the Liability Convention, and was settled state-to-state, because it involved damage to sovereign territory with an unambiguous source. In 2009, an operational US commercial satellite collided with a defunct Russian satellite, destroying both and creating more than a thousand pieces of debris. No claim was brought to conclusion, because the Convention's fault-based standard for in-orbit damage made it practically impossible to prove which operator was responsible.

The legal mechanics that drive these outcomes explain why “liability” in this sector behaves so differently from liability in any terrestrial infrastructure context:

- **Claims are state-to-state, not private right of action**. The Liability Convention operates between launching states, not between the operators themselves. A private operator generally has no direct legal standing to sue another private operator; it must persuade its own government to bring (or decline to bring) a state-level claim on its behalf, a political decision as much as a legal one.

- **Liability standards are bifurcated, and asymmetric.** Damage on Earth or to aircraft in flight attracts absolute liability where no fault need be shown. Damage to another space object in orbit attracts only fault-based liability: the claimant must prove the other party was negligent. Given the difficulty of establishing exactly which debris fragment, from which prior break-up event, caused a given impact, fault is, in practice, extremely hard to prove.
- **There is no agreed standard of care**. Neither the Outer Space Treaty nor the Liability Convention defines what "fault" or reasonable conjunction-avoidance conduct looks like in orbit. There is no equivalent of an industry-recognised duty of care, no settled case law, and essentially no judicial precedent to draw on.
- **Domestic law rarely fills the gap**. Ordinary tort or negligence concepts do not transpose cleanly into an environment governed by an international treaty regime that largely pre-empts them, and most domestic courts have neither jurisdiction nor a developed body of law to apply.

Under an investment case the assumption that an operator's satellites will keep working and can be replaced or insured on commercially sane terms, currently relies on industry self-discipline and commercial insurance capacity, not on an enforceable legal right to compensation from whoever caused the damage.

3. Spectrum and market access risk

Satellite operators do not obtain a single licence to operate globally. They require separate approval from the regulator in every country where they want to provide a service. For example, the FCC in the US, Ofcom in the UK and the Telecom Regulatory Authority of India (TRAI). Each jurisdiction applies its own criteria, timetable, process and political considerations. There is no single global regulator and no fast-track route around this. As a result, a constellation may be fully operational in some markets, while still awaiting approval – sometimes for years – in others.

Approval is rarely unconditional. Even where a licence is granted, it is rarely a clean, permanent right. Approval is often subject to:

- Coordination requirements: operators may need to coordinate spectrum use with existing mobile network operators to avoid interference.
- Rights may lapse if a specified proportion of the constellation is not deployed by a fixed date.
- Renewal and renegotiation risk. Regulators can impose new conditions or deny renewal altogether.
- Licensing decisions are becoming more political. Regulators increasingly assess not only technical capability but also control, accountability and national security considerations. Regulators in some markets are inclined to favour, or move faster for, operators they consider more accountable to local authority, whether that is a domestic operator, a joint venture with local ownership, or simply an

operator with a longer track record of compliance in-country. A licensing strategy built only around technical and commercial readiness, without also addressing this kind of trust and control question, can stall even after most of the formal approval process has been completed.

4. Mobile and cross-border traffic

Cross-border services create an additional layer of complexity. Aircraft and vessels routinely move through multiple jurisdictions, each of which may impose its own licensing requirements on satellite connectivity. In practice, the industry relies on a patchwork of reciprocal arrangements and regulatory cooperation rather than any binding international framework. Market access therefore cannot be assumed once a licence is obtained in the operator's home jurisdiction. Rights need to be assessed country by country, including in territories the service merely passes through rather than serves directly.

5. The EU Digital Networks Act

The European Commission's proposed Digital Networks Act (DNA), published 21 January 2026, would address some of these challenges by replacing up to 27 separate national satellite spectrum licences with a single EU-wide authorisation. It would also move toward licences of unlimited duration subject only to periodic review. This is only a partial fix and is not yet law. Existing national licences are expected to run on for up to 36 months after the DNA takes effect. It also does not remove conditions, it consolidates them. Moreover, the EU-wide authorisation comes with its own interference, data-retention and security obligations, and only solves the EU piece of the puzzle. Operators will still need separate approval in the US, UK, India and every other market outside the EU.

6. National security screening

Satellite and space technology sits near the top of the sensitivity list under most foreign developed-market foreign investment screening regimes. A satellite operator, or a fund invested in one, should expect the reassessment risk to attach to the investor, not just the equipment. The mechanics differ by jurisdiction: the Committee on Foreign Investment in the United States (CFIUS) can trigger a review by rights well short of control; French telecoms investments require mandatory ministerial review; and Canada treats satellite technology as a standalone national security trigger, but the underlying exposure is consistent.

7. A growing number of state-backed constellations

Through two state-linked constellations, Guowang ("National Network") and Qianfan ("Thousand Sails"), China plans to place almost 28,000 satellites into low Earth orbit. Deployment so far has been measured in the

low hundreds combined, compared with Starlink's constellation numbering in the thousands. India is also active through the Indian Space Research Organisation's (ISRO) institutional programmes, the commercial plans of Tata-backed OneWeb India, and a liberalised regulatory environment that has opened the domestic market to competitive pressure.

More broadly, a pattern of state-directed investment is emerging. The UAE and Saudi Arabia have active programmes tied to national development agendas; Brazil is exploring constellation options to address rural connectivity gaps; and several jurisdictions across South-East Asia and Sub-Saharan Africa are pursuing bilateral or multilateral satellite arrangements. Though the gap in operational capacity remains wide, the direction of travel is clear:

- **Regulatory deadlines are forcing pace**. ITU filing rules require a meaningful proportion of any filed network to be in orbit by set deadlines, creating strong incentives to accelerate launches.
- **Strategic objectives differ.** Some constellations are structured as state infrastructure; others are being marketed commercially, with trial service agreements reported across Latin America, South-East Asia, Central Asia and parts of Africa.
- **Orbital slots are a finite resource.** Large-scale filings function as a claim on scarce spectrum and orbital capacity, disadvantaging later entrants regardless of technical capability.

Western LEO operators retain a commanding operational lead in the near term, but in the medium term the picture will become more complex. The geopolitical risk premium attached to satellite investments – where competing networks are vying for the same customers and the same orbital resources – is increasing across the board.

WHERE THIS LEAVES THE INVESTMENT CASE

The opportunities in the satellite sector are substantial and diverse, underpinned by defence, sovereignty and Earth observation demand alongside connectivity, advantages over fibre and falling costs that have made new categories of space business viable within a single investment cycle. But that expansion is running ahead of the legal and regulatory framework governing the sector. Liability for in-orbit loss remains largely untested, spectrum and licensing rights are conditional rather than absolute, FDI screening will shape deal structure from the outset and state-backed constellations are shifting the competitive landscape. Investors who map licensing and spectrum exposure jurisdiction by jurisdiction, stress-test insurance cover, build clearance timelines into deal structuring and price in today's geopolitical realities will be best placed to capture what could be one of the strongest infrastructure opportunities of the next decade.

Richard Hastings
Director – Technology, Media and Telecommunications, London

richard.hastings@cliffordchance.com
+44 7793 312 110