

Space law fundamentals for finance professionals

Tuesday 22 September 2020

“What is now proved was once only imagined.”
– William Blake



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**A primer on
space assets
and space law**

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**Legal case
studies**

How are
jurisdictions
addressing this
sector?

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**Market case
studies**

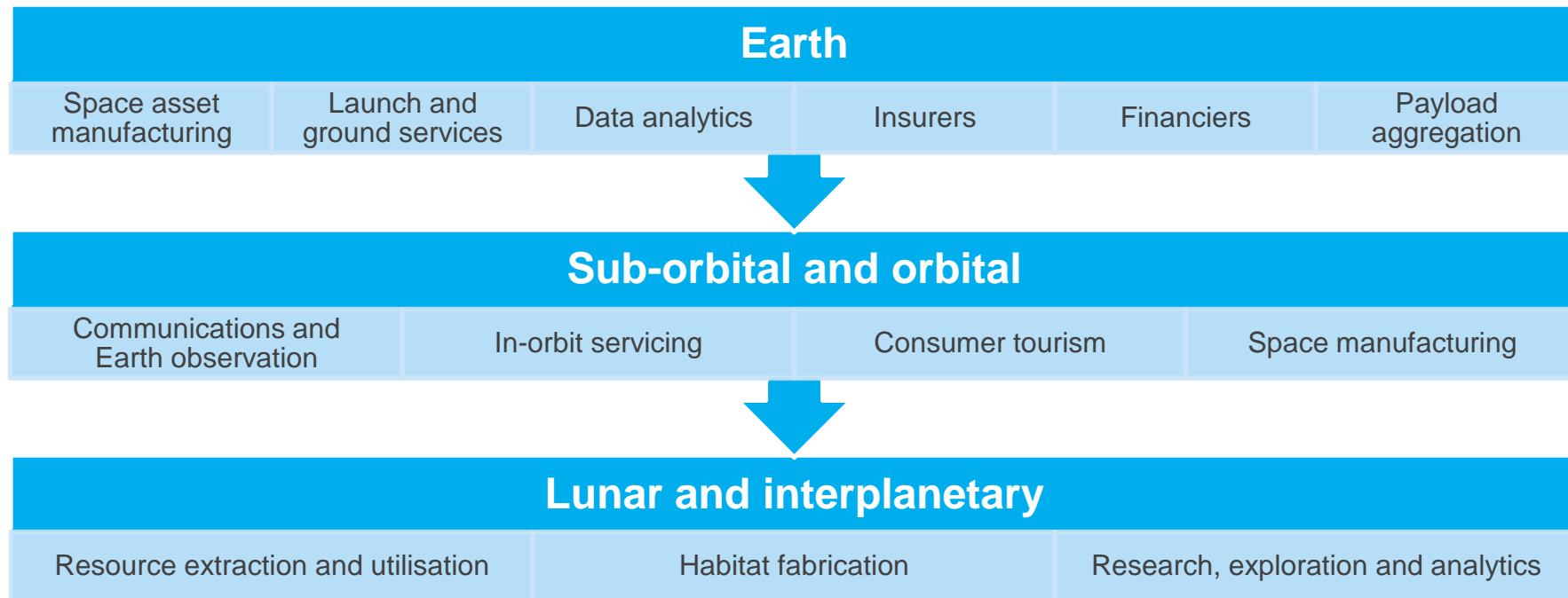
Who is leading?
Where do the
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**Practical tips
for financiers
and investors**

A primer

Key players



What law applies in space?



**International
space law**



**Jurisdiction-
specific space
laws**



**Contract and other
general laws**



**Cape Town
Convention -
Space Protocol**
(Not yet in force)

International space law

1967 Outer Space Treaty



Article VI – States are responsible for public, private and collaborative activities

*“States Parties to the Treaty shall bear international responsibility for national activities in outer space, including the moon and other celestial bodies, **whether such activities are carried on by governmental agencies or by non-governmental entities**, and for assuring that national activities are carried out in conformity with the provisions set forth in the present Treaty. The activities of non-governmental entities in outer space...shall require **authorization and continuing supervision** by the appropriate State Party to the Treaty. When activities are carried on in outer space...by an **international organization**, responsibility for compliance with this Treaty shall be borne both by the international organization and by the States Parties to the Treaty participating in such organization.”*

Jurisdiction-specific rules

Space laws vary significantly across jurisdictions.

They typically establish:

- ❖ a **licensing regime** for launches and other space activities;
- ❖ a **national register** for space assets; and
- ❖ in some cases, **indemnification or insurance requirements** for private space actors.

More on this soon...

Space Protocol

Part of the Cape Town Convention – *but not yet in force*



Berlin Protocol on Matters Specific to Space Assets, 2012

The Protocol aims to **enhance legal predictability** for space asset financing parties by:

- allowing the creation of **internationally enforceable interests** in space assets;
- establishing an **electronic international registry** of interests in space assets; and
- providing creditors with a set of **default and insolvency-related remedies** that take into account the impossibility of taking physical possession of a space asset.

Legal case studies

Eclipsing Australia's legal black hole

Space (Launches and Returns) Act 2018

Regulates launch and return of space objects from Australia

lowering minimum insurance requirements for launches from AUD\$750 million to a maximum of A\$100 million, and widened the scope of insurance exemptions

penalties for non-compliance (breaches can attract penalties of AUD\$21 million and criminal penalties)

requires a debris mitigation strategy as a condition of obtaining authorisations

“space objects” and “high power rockets”

aim was to enhance the Australian space industry internationally competitive – to encourage investment and innovation

why: eyes on the prize

Hong Kong's Outer Space Ordinance

Prohibition

- Unlicensed space activities that are within the personal or territorial jurisdiction of Hong Kong are **prohibited**.

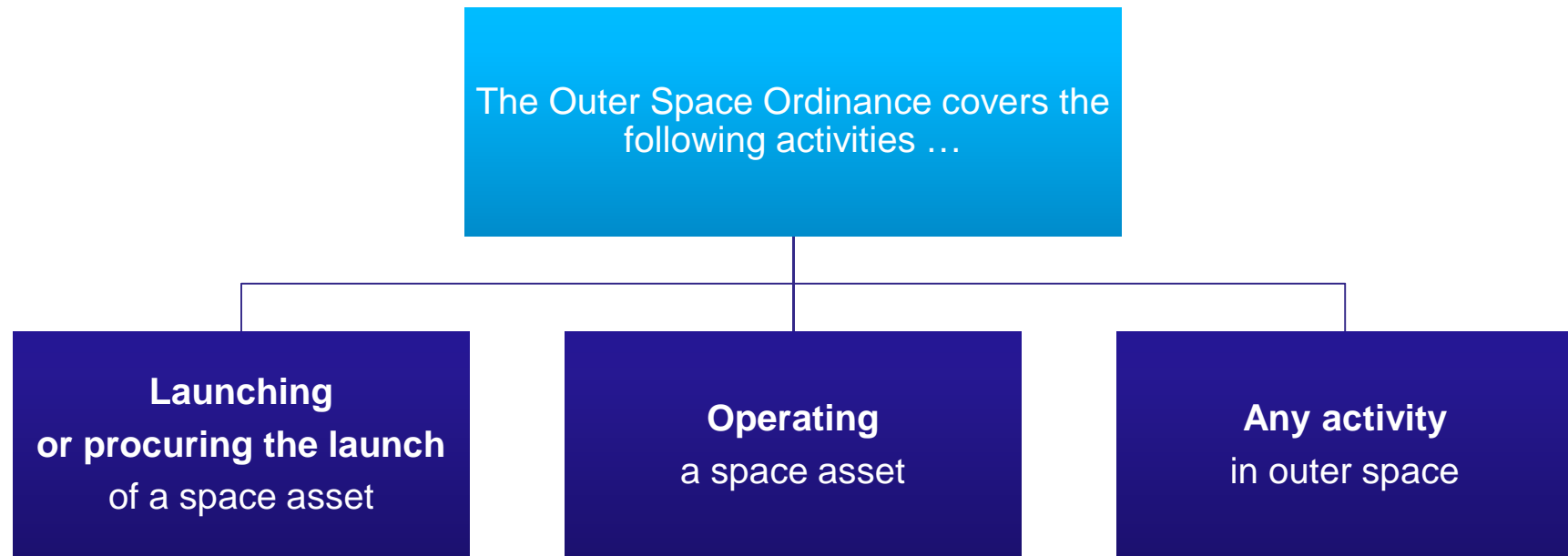
Licensing

- Applicants must show that their space activities will not jeopardise **public health, safety of persons / property, or undermine national security**.

Indemnity

- **Indemnification** of the **Hong Kong Government** and the **Central People's Government** against all claims arising out of space activities (whether licensed or unlicensed).

Hong Kong's Outer Space Ordinance



Mainland Chinese space regulation

International treaties

- Outer Space Treaty
- Liability Convention
- Registration Convention
- Rescue Agreement
- Cape Town Convention

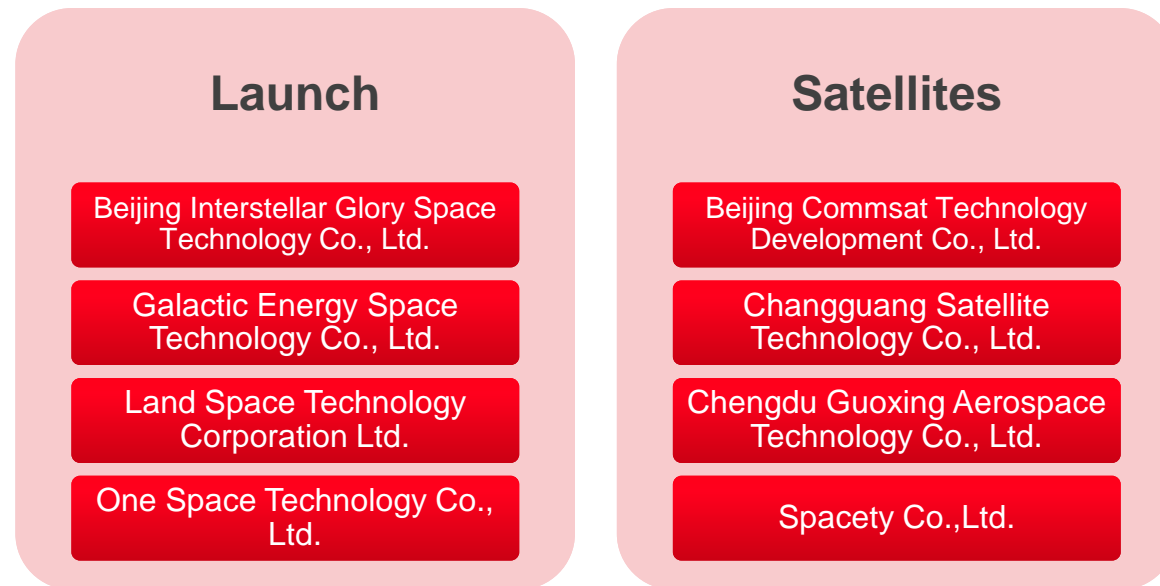
China is **party to all major treaties** addressing outer space. However, the implementation of these treaties in the domestic space law regime is **relatively under-developed, limited in scope and low in the Mainland legal hierarchy.**

Departmental measures

- Space Object Registration Management Measures
- Interim Measures for the Licence Management of Civil Space Launch Projects

Vibrant market: satellite and launch

- **Vibrant start-up scene.**
- **Fund-raising is mainly equity financing.**
- **Debt financing information is rarely publicly disclosed.**



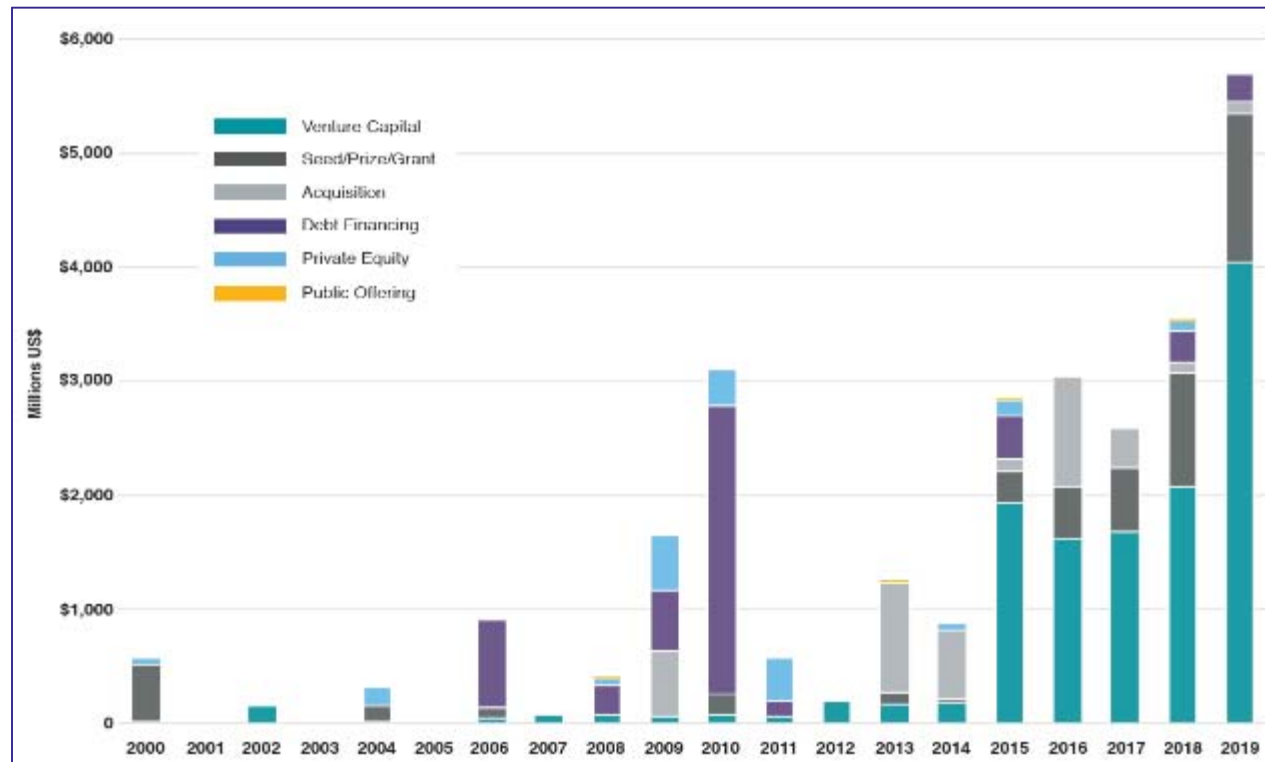
Market trends



*“The satellite industry is booming but companies **need to innovate**, both in terms of **technology and financing**, to **succeed**”*

- Wim Steenbakkers, global head of Satellite Finance at ING Commercial Banking

From venture capital funding ...



Source: Bryce, Start-Up Space Report 2020

... to multilateral development financing



Source: Asian Development Bank, 2019

Tips for financiers and investors

Financing models

Secured / Project finance

- ❖ Financiers are repaid through income generated by the space asset.
- ❖ Income from transponder satellite leases or space tourism.
- ❖ Taking effective security over the space asset may be challenging.
- ❖ The relevant applicable law and registration of the security should be considered.



Financing models

Securing repayment

- ❖ Practical difficulties with repossession of a space asset.
- ❖ Security may be taken over other valuable assets on land, such as equipment, factories or intellectual property.
- ❖ Assignments over ancillary agreements (such as transponder leases, service agreements and customer agreements).
- ❖ Holding control codes of the space asset in escrow until an event of default.



Unique attributes of the space industry

Manufacture and testing

- Space asset manufacture is **highly specialised**, with layers of contractors and sub-contractors.
- Delays** are frequent, both during design and manufacturing.
- Space asset testing is rigorous and can lead to the **total destruction of the space asset**.

Launch and rescheduling

- Launch is subject to **range availability, launch vehicle readiness** and **weather**.
- Rescheduling a launch** often takes months, and can sometimes take years (although this is improving as more launch options come online).

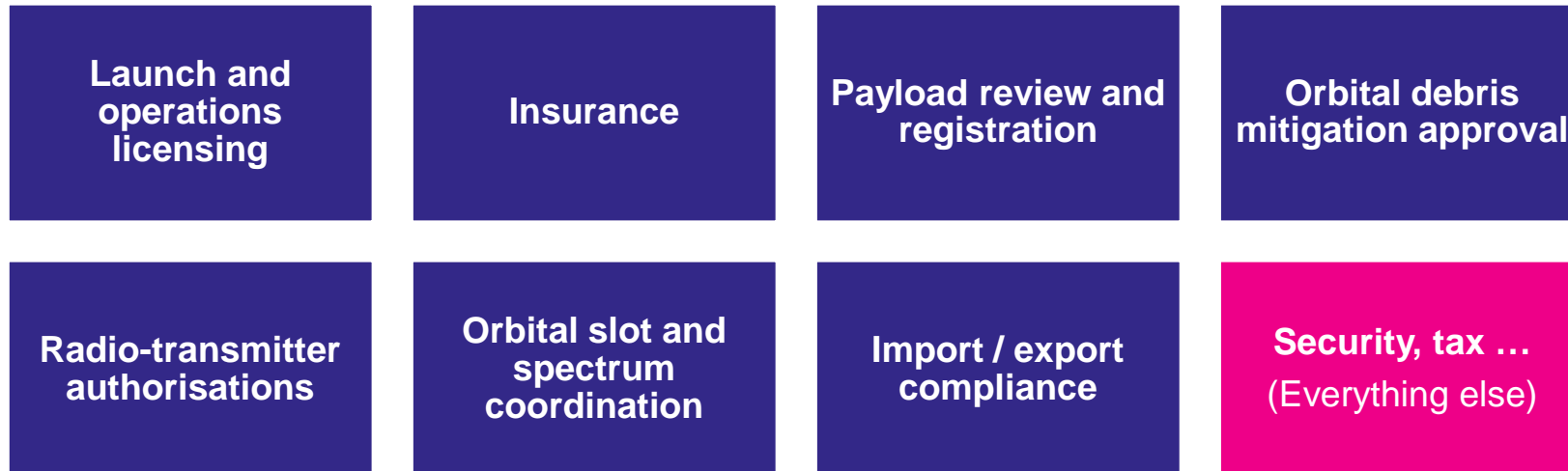
Political and regulatory sensitivity

- Some jurisdictions view space activities through a **military or national security lens**.
- Harsh restrictions** can be imposed without consideration of commercial operations.
- Space activities are also a source of **national pride**, which requires political sensitivity to navigate.

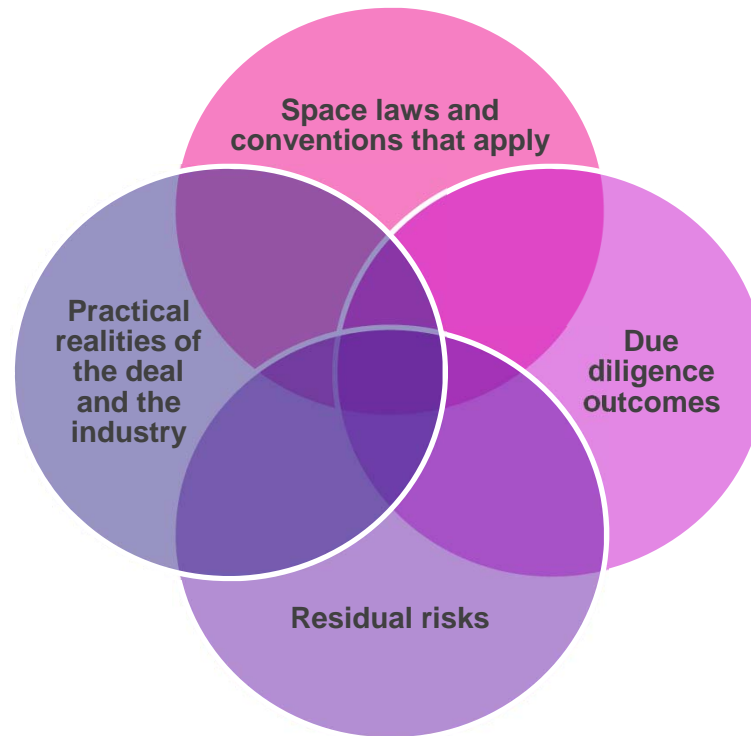
Nature of space environment

- Once a space asset is in orbit, **repair is virtually impossible**. This means that **hidden defects** are a particular risk.
- Creditors **cannot take physical possession** of an orbiting space asset, making effective control of prime importance.

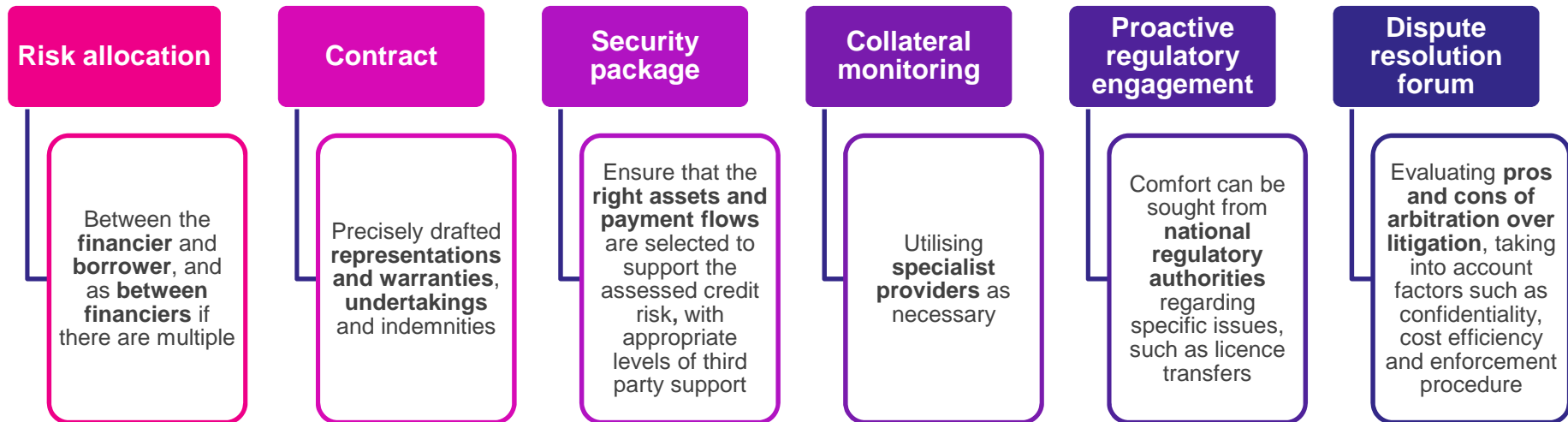
Key regulatory touchpoints



Space-specific contracts



Residual risk mitigation



Key contacts

Your moderator



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Urszula McCormack is a regulatory specialist, focussing on financial technology, data regulation and financial crime.

Blockchain and fintech expertise

Urszula is one of the leading digital legal specialists and blockchain experts globally. She has helped pioneer the creation of one of Asia's most respected fintech practices.

With over a decade of institutional regulatory expertise, Urszula has advised on over 180 blockchain-based assets, stored value facilities (SVFs), major OTC desks, global banks, multiple crypto-funds and several exchanges.

Urszula's work in the technology space covers:

- trading platforms and market conduct;
- payment technologies;
- financial services licensing;
- blockchain-based virtual assets;
- digital platforms, including SVFs, rules-based OTC desks and regulated exchanges;
- custody solutions; and
- eKYC / KYC utilities and digital identity projects.

Data protection / AI

Spanning her practice, Urszula advises on privacy regulation, digital transformation and algorithmic design.

- Privacy policies and procedures
- AI / algorithmic decision-making for asset management, banking credit and risk
- Open API systems
- Cross-border data transfer and outsourcing
- Data breach and regulatory enquiries

Licensing track record

Urszula has advised on multiple successful regulatory licensing and approval applications over 12 years in Hong Kong, covering the full gamut of new applications, expansions and restructures. This includes SFC applications, as well as HKMA, Customs & Excise Department, Companies Registry and insurance industry licences, ongoing approvals, audits and investigations.

Financial crime systems and controls

Urszula has had a pivotal role in developing the Hong Kong AML/CTF framework, through her work as lead lawyer for The Hong Kong Association of Banks (HKAB) since 2011. Urszula advises clients on AML/CTF and sanctions compliance and investigations. Urszula is a Certified Anti-Money Laundering Specialist with ACAMS. A key current focus is controls for virtual assets.

Industry roles and government advisory

- Appointed Member, SFC Fintech Advisory Group
- Appointed Member, FSDC Working Group on DCEP/CBDC Implementation
- Steering Committee Member, Global Blockchain Convergence
- Member, KYC Working Group, Global Digital Finance
- Member, Fintech Working Group, ASIFMA

Urszula has been invited to brief governments, regulators, the APAC Deputy Governors of Financial Stability, World Bank, IOSCO, FSB Financial Innovation Network and other transnational bodies on emerging technologies.

Market recognition

Urszula was recognised by the Financial Times as a "Top 10 Legal Innovator of the Year" in 2018 and a finalist for the Euromoney 2018 "Best in Compliance & Regulatory" Award. She is also rated by IFLR as a leading lawyer, and leads KWM's Band 1 Chambers Fintech team.

Your KWM team



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Annabel is a corporate and commercial adviser with experience gained from advising clients in Australia, London and Singapore. She advises private and public sector clients on a range of corporate, commercial and technology projects. She also advises on a range of regulatory reform projects and has deep experience dealing with regulators and policy makers on changes in laws.

Annabel has been involved in the start up community in Australia, including those in the space sector, for a number of years, having advised on the creation of the first government-funded innovation hub. She is on the board of the Innovation Network in her home city of Canberra and works closely with a number of government agencies and policy makers including the Digital Transformation Agency and the Department of Industry, Science, Energy and Resources.

Technology

Annabel has advised on a diverse range of technology projects, from blockchain enabled bank guarantee solutions (Lygon involving Hyperledger) to SaaS, IaaS and PaaS solutions and managed services. She advises many government agencies as well as private clients. Currently advising on 4 major IT acquisitions, including in the particularly sensitive sector of healthcare.

Regulatory

Annabel's practice involves advising on a wide range of regulatory schemes and advising on the development of new laws. Annabel has undertaken significant regulatory reviews for a broad range of government clients in a number of different sectors, including digital identity, data use, technology transfer, waste management and energy regulation. She advises clients on the regulation of the space sector and on the new(ish) authorisation requirements under the Space (Launches and Returns) Act 2018.

Commercialisation and Intellectual Property

Annabel has advised spin offs, start ups and established organisations on the commercialisation and use of intellectual property rights, including licensing rights and commercial structures, including payment options.

In the space sector, she advises on IP licensing arrangements and funding arrangements. She focuses on commercialisation work both within Australia and internationally.

Data protection

Annabel advises on privacy regulation and digital transformation

- Privacy policies and procedures
- Privacy Impact Assessments
- Cross-border data transfer and outsourcing
- Data breach and regulatory enquiries
- Regulatory reform

Governance

Annabel advises a large number of organisations on governance arrangements, including shareholdings, joint ventures and partnerships. She advises on shareholder agreements' and other corporate documents, directors duties, funding arrangements and other commercial matters. She is an expert in governance for government bodies having advised on a significant number of projects requiring the development of new governance models.

Your KWM team



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Areas of Practice

Wang Ning specializes in aviation industry, banking and finance and debt capital markets.

Aircraft Financing

Wang Ning has extensive experience in aircraft financing and leasing practice, he assists various domestic and overseas lessors, financiers and airlines in almost all types of transactions in the market, including US Ex-Im guaranteed financing, European ECA financing, French tax leasing, JOLCO leasing, Chinese bonded area leasing, etc.; in addition, Wang Ning also represents clients in numerous business jets acquisition transactions, and he is quite familiar with each aspect of the purchase, importation, financing and operation of the business jet transactions.

Debt Capital Market

Wang Ning assists various banks, non-banking financial institutions and companies in their asset backed securitization transactions, the underlying assets includes auto loans, lease receivables, property fees, toll rights, heating fees, etc.; he also advises several clients on their offshore bond issuance projects.

Establishment of Financial Institutions

Wang Ning has assisted a large amount of foreign banks in setting up their wholly owned subsidiary banks in China, including Standard Chartered Bank, ABN Amro, BNP Paribas, Hang Seng Bank, Mizuho Bank, Woori Bank, Hana Bank, Shinhan Bank, Kookmin Bank, etc.), and he has also been involved in several banking acquisition projects, such as Fortis's proposed acquisition of the private banking business of ABN Amro in China.

International and Domestic Lending

Wang Ning advises clients in various international and domestic finance transactions of different structures, including bilateral loan, syndicate loan, import & export credit and trade finance.

General Banking

Wang Ning keeps his eyes open on various kinds of general banking business, assisting both domestic and oversea banks by providing clients compliance services concerning various regulatory matters, advising on general issues arising from general banking business, providing general legal advice and comments, drafting or revising banking standard documentation, etc.

Work Experience

Wang Ning joined King & Wood Mallesons in November 2006.

Wang Ning received his bachelor degree in law in 2005 from the China University of Politics and Law, and received his master degree in international business law in 2006 from the University of Manchester.

Wang Ning was admitted to practice PRC law in 2009.

Wang Ning's working languages are Chinese and English.

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Katherine's practice area focuses on cross-border financing transactions, asset finance and the aviation sector.

Katherine has more than 15 years' experience representing PRC and global lenders, lead arrangers, sponsors and corporates in a range of PRC inbound and outbound financing transactions including general syndicated loans, project finance, structured finance, trade finance and receivables finance.

Katherine also has extensive experience representing PRC and international lessors and financiers in the leasing and financing of commercial aircraft and business jets, portfolio purchase and sale, purchase orders and commercial agreements with original equipment manufacturers (OEMs).

Katherine is admitted in England and Wales and the State of New York, United States. She speaks native Mandarin and fluent English. She has also passed the PRC bar exam.

Katherine graduated from Fudan University and Stanford Law School.

Aviation finance

Katherine has extensive experience advising banks and lessors in cross border commercial aircraft financing matters. With her unique combination of multi-jurisdiction background, she worked on some of the first cross-border transactions for major PRC leasing companies and some of the first structures involving PRC free trade zone SPVs for international lessors.

Asset finance: other asset types

Katherine also has experience in financing of vessels and other types of assets, representing leasing companies and banks.

Cross border lending and project finance

Katherine has acted for both sponsors and arrangers in major cross-border lending and project finance matters.

Reputation

- Up and Coming Lawyer, Aviation Finance – Chambers Asia Pacific, 2017 – 2020
- Listed in Expert Guide: Women in Business Law – Euromoney Legal Media Group, 2020
- Listed in Expert Guide: Aviation – Euromoney Legal Media Group, 2020

Chambers & Partners

"Katherine Ke continues to develop her practice, representing a variety of PRC and international lenders in both inbound and outbound financing matters. Regularly instructed to provide advice on commercial aircraft and business jet finance transactions."

Chambers Aviation: Finance (International Firms) – China 2020

"Katherine Ke maintains a notable practice, assisting on various sales, financings and leaseings in the aviation finance space. One interviewee describes her as "a reliable lawyer" who is "able to resolve practical issues."

Chambers Aviation: Finance (International Firms) – China 2019

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Jack Nelson is an associate based in Singapore, focussing on emerging technology regulation and financing.

He is admitted in Hong Kong and Australia, and is a Registered Foreign Lawyer in Singapore.

Emerging technologies

Key areas of Jack's expertise include:

- **Distributed ledger technologies:** dedicated counsel on numerous blockchain projects, covering payments, exchanges, video games and high-value asset tracking.
- **Space:** elected to membership of the International Institute of Space Law in 2020, and sole author of the first practitioner's guide to Hong Kong's Outer Space Ordinance.
- **Artificial intelligence:** working with regional industry groups to identify emerging best practices and key target areas for future regulation.

Regulator experience In 2016 – 2017, Jack completed a secondment with the Hong Kong Securities and Futures Commission, primarily working on enforcement matters.

