

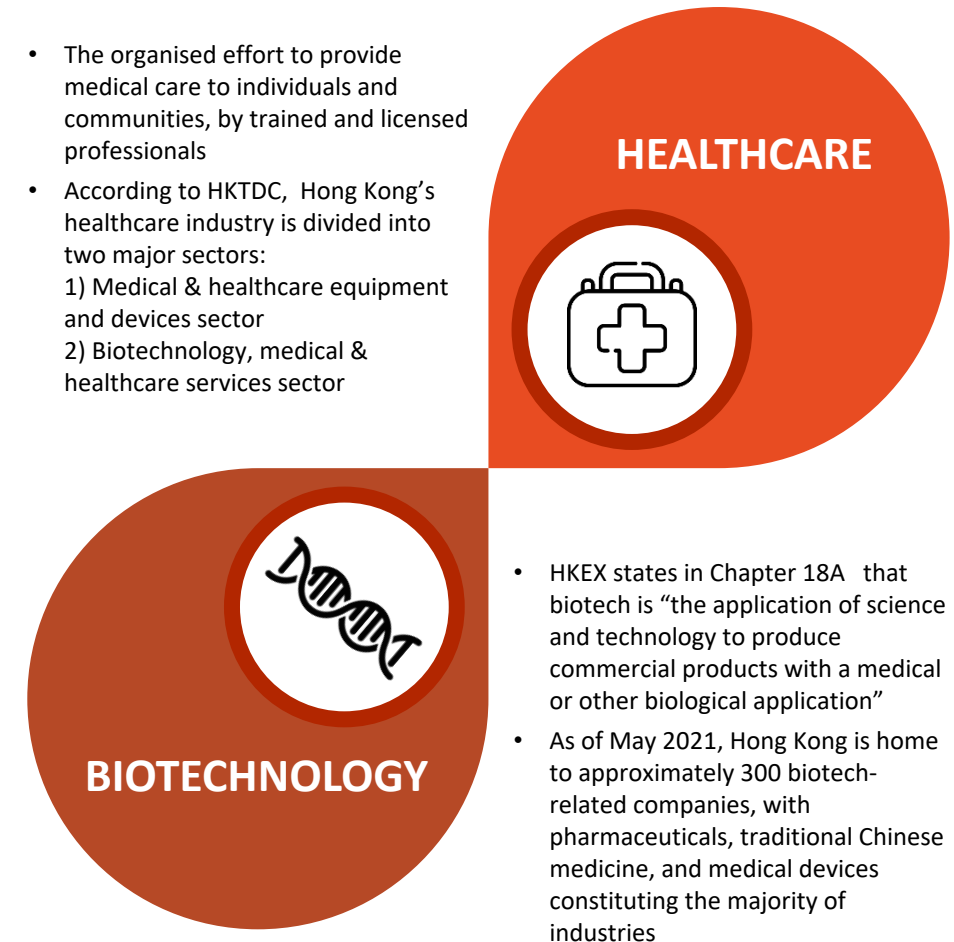
FSDC Industry Exchange Series Webinar on the Launch of Report

“Fuelling Further Growth of Biotech and Healthcare Industries: Leveraging Hong Kong’s Financial Infrastructure”

15 November 2021

Background & Overview

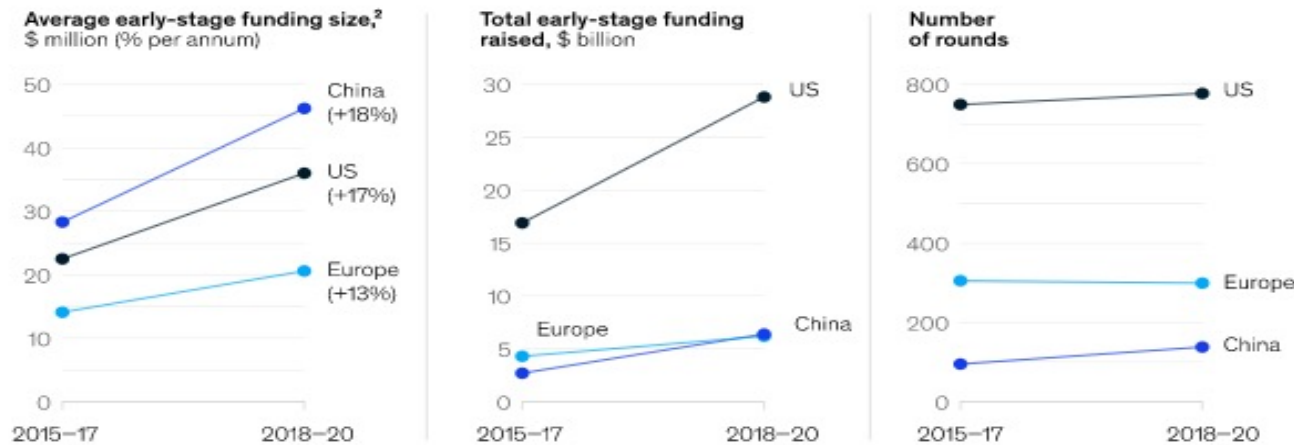
- **Solid foundation of healthcare system in Hong Kong**
– Ranked No.2 in Bloomberg's Bloomberg Health-Care Efficiency Index 2020
- **Rise of Health expenditure over the past three decades**, growing at an average annual rate of 5.6% from 1990 to 2020, higher than the average GDP growth rate of 3.4% during the same time period
- The Government identified biotechnology as one of the four key areas to develop innovation and technology in its 2018-19 Budget
- **Most sought-after listing venues for global healthcare and biotechnology companies** - HKEX introduced new rules to update Hong Kong's listing regime in 2018, opening doors for pre-revenue biotech companies to be listed on its Main Board



Global Landscape of Healthcare and Biotech Sectors

- In a report published by the World Health Organisation (WHO) in 2020, the global spending on health in 2018 reached USD \$8.3 trillion, or 10% of global GDP
- More early stage fundings, including venture seeds, Series A and Series B, were seen to have gone into biotech companies in US, Europe and Mainland China

Early-stage biotech funding¹ by region, 2015–17 compared with 2018–20



Note: Intended to provide insight based on currently available information for consideration and not specific advice.

¹Early-stage funding defined as Venture seeds, Series A and Series B.

²3-year CAGRs shown between periods 2015–17 and 2018–20.

Source: BCIO (February 2021)

Source: McKinsey

Recent developments of the healthcare and biotech sectors

1

Digitalisation

Adoption of technology has accelerated due to the ongoing pandemic, in particular the rise of telemedicine. Virtual care will likely continue to be a trend for delivery of healthcare services



2

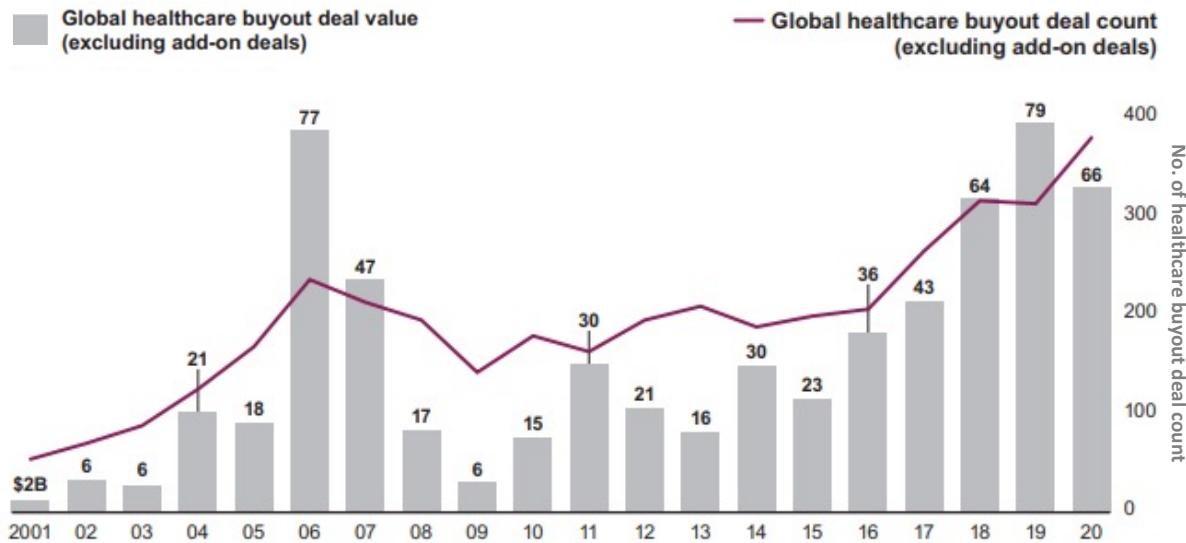
IP Financing

IP financing is increasingly being explored in mature markets as a funding source to support the research and development of biotech companies



Global Capital Market Activities – *Robust performance in 2020*

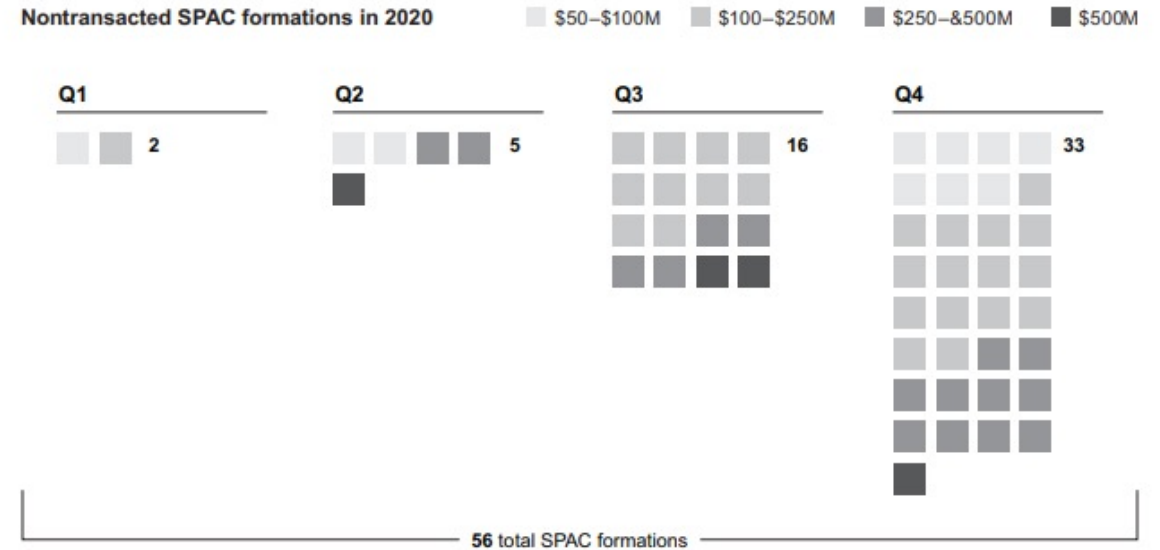
- Private equity deal volume in the healthcare sector reached 380 deals in 2020, representing a 21% year-on-year increase from 313 deals in 2019



In 2020	Global healthcare buyout deal value (exclude add-on deals) (US billion)	Global healthcare buyout deal count
Private equity	66	380
M&A	339	2845

Source: Bain & Company

- A notable global surge of IPO activity in the form of special purpose acquisition companies (SPACs) in 2020
- In 2020, 248 SPACs were formed across the globe, among which 56 of them had a focus on healthcare



Note: Includes only nontransacted SPACs
Source: SPAC Insider

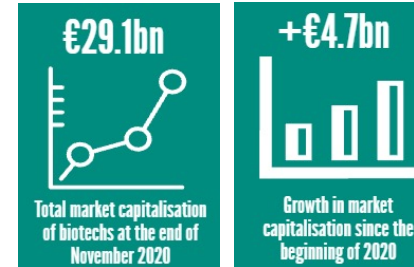
Source: Bain & Company

Biotech Landscape in the US, Mainland China and EU

Europe

Solid infrastructure and resources to shape the biotech hub

No. of patents registered: 8,887
Universities ranked top 100: 44
IPO proceeds raised: USD 13.8b



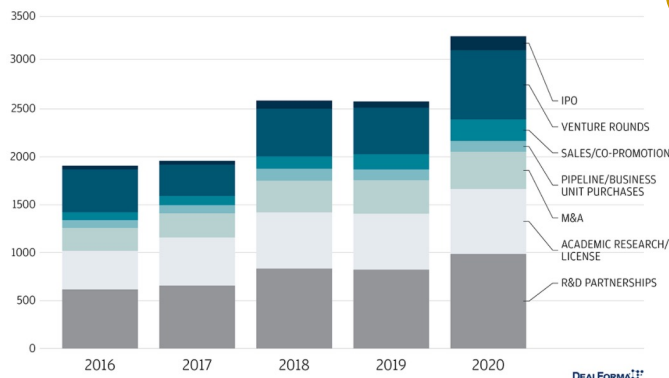
Euronext Biotech Barometer H2 2020

US

Remains the epicentre of healthcare and biotechnology financing

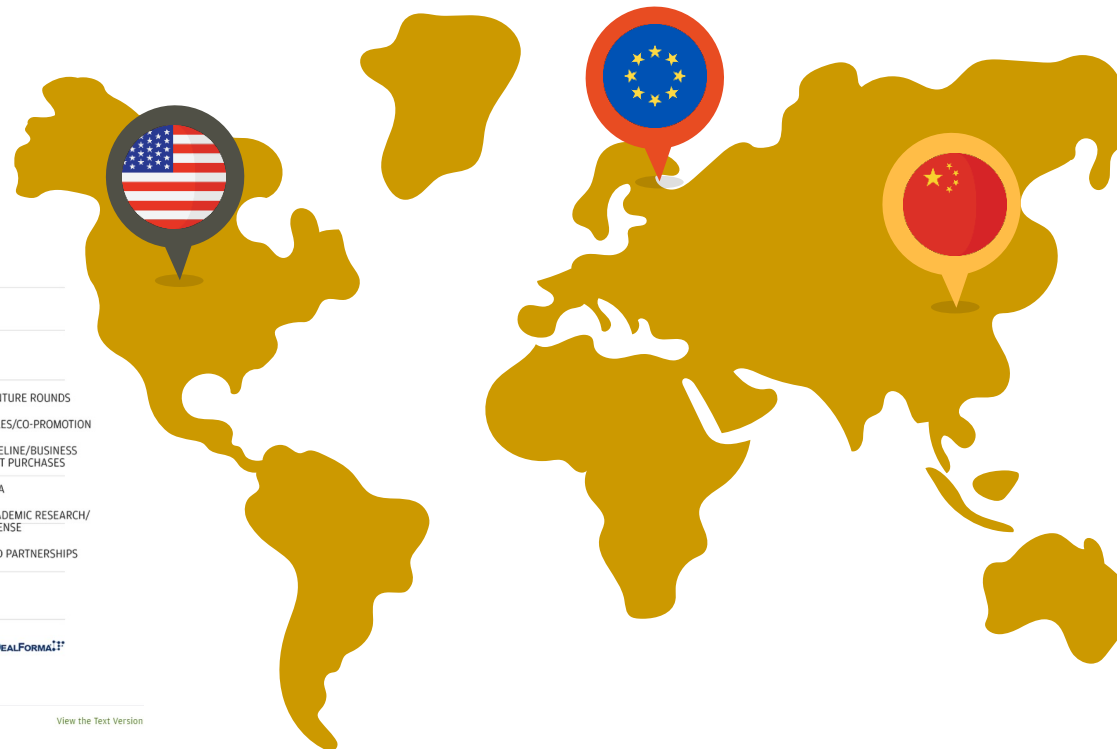
No. of patents registered: 7,796
Universities ranked top 100: 38
IPO proceeds raised: USD 42.1b

Investment activities within life science sector



Life Sciences Startup Outlook 2021 | J.P. Morgan

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Mainland China

Strong policy support to foster the development of the sectors

No. of patents registered: 777
Universities ranked top 100: 2
IPO proceeds raised: USD 19.1b

The National 14th Five-Year Plan

- Emphasise on information technology, biotechnology, high-end equipment and new-energy vehicles, in order to stimulate growth of advanced manufacturing
- Drive the development of biotechnology, especially in biomedicine and biomaterials
- Carry out reforms in centralised procurement and utilisation of drugs and developing state-of-the-art medical equipment

Opportunities and Challenges for Hong Kong

Opportunities



Capitalising on the dynamic financial markets

Hong Kong does not only act as a listing venue for healthcare and pre-revenue biotech companies, it also offers opportunities for those companies to reach out to different classes of investors, locally and internationally.



Embracing digitalisation in biotech and healthcare

Ride on Hong Kong's high internet penetration rate and existing infrastructure such as the Electronic Health Record Sharing System developed by the Government.



As a gateway to Mainland China

With CEPA and GBA development, Hong Kong connects major research facilities and institutions locally and in the GBA to foster information flows and industry knowledge.

Challenges

Survey and Interview findings

Financing

- Survey respondents indicated that they had encountered some difficulties in financing in one form or another.
- Investors have lower risk appetites and prefer investing in start-ups at later development stages.



Talent shortage

- The difficulty in acquiring the right talents was frequently cited as an issue to their businesses
- Almost two-thirds of the survey respondents had obtained support from talent programmes provided the Government



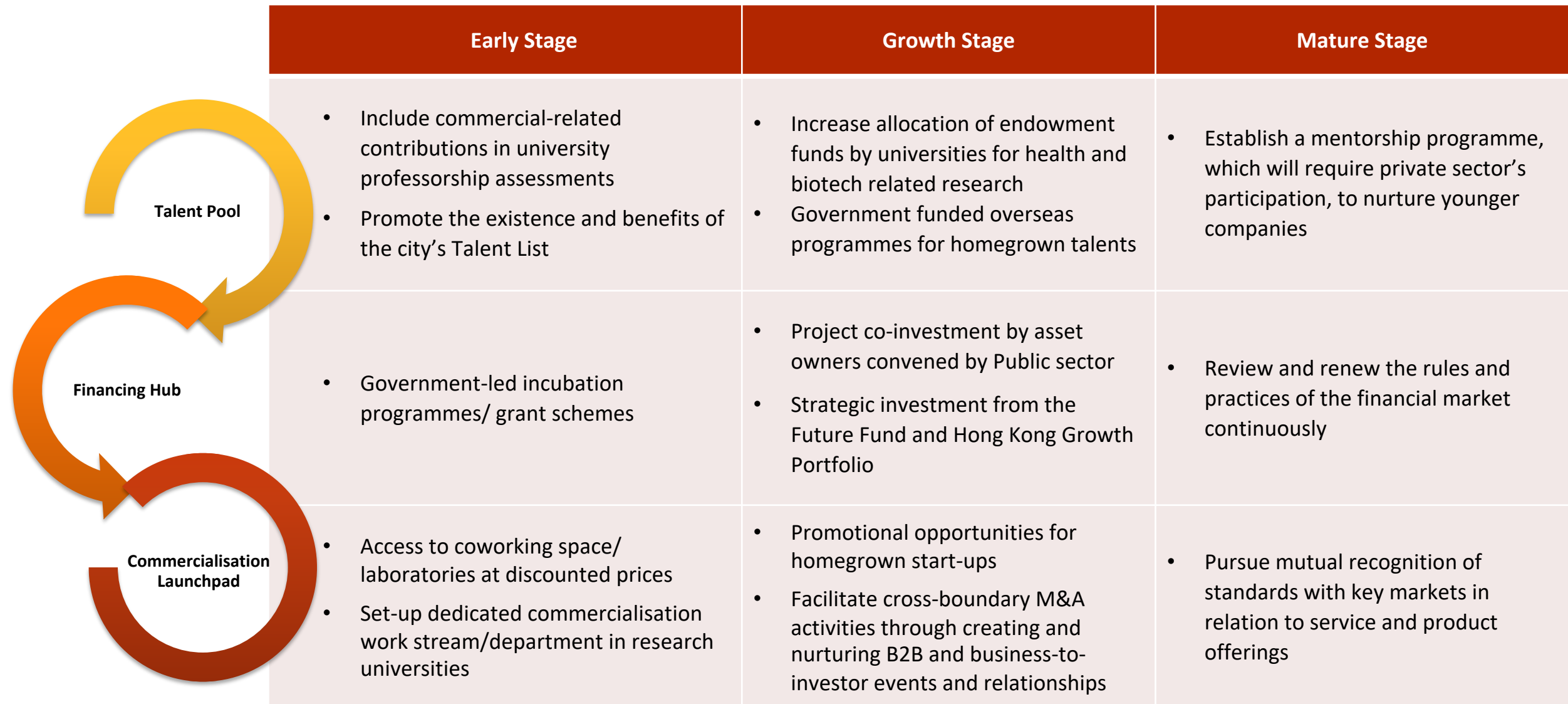
Commercialisation

The difference in regulatory requirements across markets was indicated as a hurdle in the commercialisation process.



Recommendations

Recommendations: Financing, Commercialisation and Talent



Recommendations: Talent Early Stage

- Healthcare and biotech firms around the world are in a war for capable talents, and that is applicable to companies of all types, backgrounds, and origins.
- The Talent List of Hong Kong has identified “pharmaceutical and life science/biotechnology” as one of the key areas of focus under the “Innovation and Technology Experts” category, indicating the Government’s determination for and openness to inviting overseas talent to come and work in Hong Kong.
- While some of the interviewees have shared with the FSDC that Hong Kong might be facing a shortage of science-trained talent, they also emphasised that people with multidisciplinary skill-sets and mindsets were of utmost importance to the success of their business.

FSDC’s Recommendations

Equipping and attracting talent with multidisciplinary skill-sets and mindsets

- Universities may consider **incentivising students with life science majors to take part in business- and management-related courses and access relevant training materials**, perhaps, during summer and winter breaks at no additional cost.
- **The launch of open access to such course materials**, which have been developed by world renowned institutions such as Yale University and Massachusetts Institute of Technology , can be used as references.

Recommendations: Talent Growth Stage

- The battleground for talent is not confined to the private sector, and Stevens (2017) highlighted that “brain drain” was an issue for universities.
- It is commonly observed that some of the better students having studied or researched in emerging economy-based universities would choose to study or continue their research abroad through obtaining advanced degrees and, say, post-doctoral fellowships. Oftentimes, it would mean that their homelands have lost their talents.

FSDC's Recommendations

Universities to invest in their own research and researchers

The FSDC believes that universities, among others, should consider **allocating and investing a higher share of their endowment funds in projects led by affiliated professors and researchers**, as it will not only help secure financing needs but also retain relevant talents in Hong Kong.

Salary subsidies

- According to JLL, the cost of living in a city can become a hindrance to a city/region's weakness in drawing talent. The high housing and other expenses, in particular, can make Hong Kong an unattractive market for new graduates.
- Taking reference to FAST and FIRST introduced amidst the pandemic and the Government's determination to stabilise the souring unemployment situation, **salaries subsidies may be provided to jumpstart the further development of the industry.**

Recommendations: Financing Early Stage

- Companies in the healthcare and biotech sectors require investments from the start of the journey so as to get these projects going and turn these innovative ideas into profitable businesses. However, the financing need of companies engaging in biotech and healthcare related business would face a higher hurdle in seeking investment from the private sector.
- In order to nurture the ecosystem, a diversification of financing channels should be established as funding from a platform – say, equity or private market investments – may be subject to much uncertainties.

FSDC's Recommendations

Reasonable budget

The Government should consider setting aside some budget on healthcare- and biotech-related research and development activities, with references being made to that of other markets and the existing threshold

Transparent Mechanism

Public sector funding schemes should consider laying out examples of successful and unsuccessful applications, developing fund-specific FAQs, and streamlining the application to the extent possible.

Phased Approach

A phased-approach for funding availability would be useful in managing risks of public funding abuses

Tax incentives to encourage investments

Mobilising and incentivising the private sector to invest in these innovative but not yet proven companies will be important

Recommendations: Financing Growth Stage

- Companies at the growth stage could benefit from enhanced awareness of the services and products, which will in turn lead to lesser financing pressure for the innovators and entrepreneurs.
- Meanwhile, findings from our discussion with practitioners coincide with that of our literature review, suggesting that the public sector could help these businesses in different forms.

FSDC's Recommendations

Seeking investments from local investors

Public sector players - such as Cyberport and HKSTP - may convene a group of asset owners (e.g. family offices) to **co-invest in winners of certain competitions** or, preferably, projects meeting certain standards.

Staunch government support

The Government's **Future Fund**, especially the newly established the **Hong Kong Growth Portfolio (HKGP)** should consider putting stronger emphasis on the healthcare and biotech industries, even though they are already included as priority target sectors. Also, within the capacity of its governance and mandate, the HKGP should continue investing in these relevant strategically important industries.

Recommendations: Commercialisation Early Stage

- For healthcare and biotech companies, the commercialisation phase of a product or service is the turning point whereby the firm can materialise or monetise from the invention it has invested time and other resources in.
- The absence of a commercial mindset in start-up companies had led to the failure of many spin-out companies across various technology fields.
- Among other challenges they face, early-stage start-ups and entrepreneurs who have gone through the stage shared that a major hurdle for them to operate in Hong Kong was related to land prices.

FSDC's Recommendations

Price and availability of laboratory space

Cyberport and HKSTP - prioritising the extension of support to smaller-scale start-ups in the tenant selection process and granting access to laboratory facilities to start-ups that meet the eligibility requirements but whose application is not successful solely due to limited capacity

The Government - providing subsidies to potential entrepreneurs covering the rental of the laboratory and co-working space based outside the current innovation and technology parks.

Technology transfer office

Technology transfer is an essential element in the commercialisation process. **Universities in the city should consider reviewing and modernising the operation model of such offices**, including the Technology Transfer Offices' (TTO) setup and incentive schemes for staff members working for TTOs, among others.

Recommendations: Commercialisation Growth Stage

- According to Bellavitis, Filatotchev, Kamuriwo, and Vanacker (2017), different governments around the world have geared up their support for start-ups and SMEs with an agenda of driving new research and enhancing the commercialisation aspects of innovation.
- In terms of IP commercialisation, its strategy should be dependent on various variables, including but not limited to personal circumstances, access to finance, business or commercial capabilities, as well as the operating environment.

FSDC's Recommendations

Promotional opportunities for homegrown start-ups

The public sector - led by the Government, the Innovation and Technology Commission, the innovation and technology parks, as well as other promotional agencies such as InvestHK and the Trade Development Council – should **brush up its promotional efforts and provide opportunities for homegrown start-ups. The public sector bodies could create and nurture B2B and business-to-investor events and relationships to better facilitate cross-boundary investment and merger and acquisition activities.**

IP protection and development

Riding on the support of the Central People's Government to develop Hong Kong into a regional IP trading centre as set forth in the National 14th Five-Year Plan, the Intellectual Property Department should **continue to forge strengthened cooperation internationally and with the Mainland (starting with the Greater Bay Area), to promote IP awareness and development, among others.**

Q&A