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Digital Health and Private Equity in Asia

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COVID-19 has turned the PE industry upside down. Most firms are firmly focussed on ensuring the survival of their portfolio companies. But with almost $400bn of dry powder available for new investment in Asia, PE firms will soon want to restart their investment activities. But where are the opportunities in the post-pandemic world?

Over the past 5-10 years healthcare and technology have represented the two major focus areas of PE activity in Asia. At the intersection of these two segments, we expect digital health companies to provide a wave of new investment opportunities for PE firms. In this article we characterise different digital health business models, describe the attractiveness of these models to PE investors, characterise the deal flow opportunities, provide examples of companies active in the digital health space in Asia and describe how PE firms can evaluate opportunities from a commercial and operational perspective.

The rise of PE investment in Digital Health in Asia

PE investment in healthcare in the Asia-Pacific region has been increasing rapidly in recent years. According to data from Bain, investment in healthcare in Asia Pacific more than doubled in the 5 years to 2019 to $11.5bn. This represents around 8% of total PE deal investment in the region. In comparison, technology and internet deals represented nearly 40% of deal value in the region in the same period.

Asia's share of global healthcare investment (~$80bn worldwide in 2019) is still relatively small, representing 14.6% of the global total. In comparison Asia's share of the global PE market (asset under management across all industry sectors) was around 25% last year, and Asia's share of global GDP (PPP) and world population is ~50% and

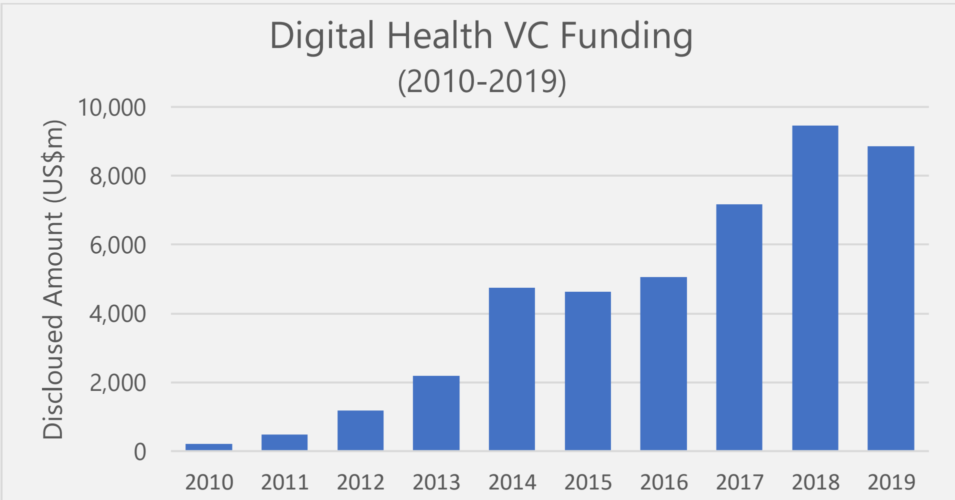
~60% respectively. This suggests there is ample catch-up growth potential for healthcare investing in Asia.

Healthcare investment covers several sub-categories, including healthcare service providers (hospitals, clinics and diagnostic labs), pharmaceutical and biotech companies, medtech (equipment, devices and disposables) and health insurers. Traditionally, most deal flow is in the provider segment where investors are consolidating hospitals and labs into larger groups to drive efficiencies and quality of care.

Digital health relative new investment category for PE funds

Digital health is a relatively new area of investment focus and one that cuts across the entire healthcare value chain. Historically, PE investors have not been very active in the digital health space given the perceived technology complexity and prevalence of younger startups as opposed to established players with steady cash flows.

But as many PE investors have pivoted their investments over the past 10 years from traditional sectors into the technology and internet space, the same trend is playing out in healthcare investing with PE firms becoming increasingly active in supporting companies in the digital health space. Data from Mercom Capital shows that global funding for digital health companies totalled nearly $9bn in 2019. This represents a dramatic increase over the past 10 years.



Source: Mercom Capital

Asia investors have become increasingly interested in the digital health space. Leading Asia-based investors such a Singapore's Temasek and Baring Private Equity Asia have recently committed large sums to back digital health companies, albeit often focussed on players in the US:

Asian PE investors becoming active on the global stage

- In February 2020, India's Premji Invest, together with co-investment from amongst others Temasek, invested \$126m in Iora Health, a Boston-based start-up which provides patients with care at brick-and-mortar locations, as well as through digital tools including text messages, emails and calls. Members each have a provider, nurse and health coach. The service also provides behavioural health coaching. On the tech side, the patients and families are supported through the company's platform Chirp, which offers open communication between their care teams and the ability for patients to access their own medical records and share notes through the portal.

- In July 2019, Baring Private Equity Asia acquired healthcare analytics company CitiusTech from PE firm General Atlantic and Citius' founders, Indian technology entrepreneurs Rizwan Koita and Jagdish Moorjani, in a deal valuing the company at a little over \$1 billion. CitiusTech was started in India but is nowadays headquartered in Princeton, USA and provides healthcare technology services and solutions to medical technology companies as well as healthcare and life sciences organisations. It employs over 4,000 people and has centres in India, Singapore, the UAE, the UK and the US.

The focus of both Iora Health and CitiusTech is currently on the US market which still represents the biggest global opportunity in terms of digital health spending. But closer to home deal flow for Asia-based digital health companies is picking up. Leading players, typically younger companies, are getting funded by investors across the region, as illustrated by the examples in the table below:

Name	Founded	Location	Disclosed Funding	Investors	Activities
Xingren	2013	Shanghai (China)	USD 287M	Country Garden Holding, Tencent + 10 more	Mobile app targeted at doctors for practice management
Medlinker	2014	Chengdu (China)	USD 252M	Sequoia Capital, China Renaissance + 6 more	Social networking app for doctors and healthcare professionals
iCarbonX	2015	Shenzhen (China)	USD 215M	OP Financial, China Bridge Capital + 6 more	Integrative bioinformatic platforms for health management & drug development
Senyi	2016	Shanghai (China)	USD 81M	Sinopharm Capital, Tencent + 7 more	Provider of medical data management and mining platform
CXA	2013	Singapore	USD 58M	Heritas Capital, MDI Ventures + 17 more	Health insurance marketplace for employees
MedikaBazaar	2014	Mumbai (India)	USD 22M	HealthQuad, Ackermans & van Haaren + 14 more	Online marketplace platform for medical equipment
Lybrate	2014	Delhi (India)	USD 14M	Tiger Global, Nexus Venture Partners + 1	Online multispecialty telemedicine platform
Niramai	2016	Bangalore (India)	USD 14M	Dream Incubator, Beenext + 9 more	AI-based early stage breast cancer screening device
The CareVoice	2013	Shanghai (China)	USD 12M	LUN Partners, SOSV + 6 more	Review based social health platform
Docquity	2014	Delhi (India)	USD 11M	ITOCHU, Singapore Press Holdings + 6 more	Mobile application for doctor's professional network
Doxper	2015	Mumbai (India)	USD 6M	Alkemi Partners, Rainforest + 27 more	Smart tools for prescriptions and physician order entry

Digital Health Business Models

The deal examples illustrate that digital health companies come in many shapes and forms. At a high level we can distinguish between companies focussed on solutions for patients and consumers versus businesses that offer B2B solutions targeting healthcare providers, payers or suppliers of drugs or devices. Consumer focused funding took ~60% of total digital health funding in 2019.

A range of different types of digital health applications for consumers and B2B users can be found across the healthcare value chain. The main applications include the following:

1. **Telehealth:** This includes telecare applications such as activity and fall monitoring for patients, remote medication management, long-term care monitoring for caregivers, remote diagnostics and video consultation. The common denominator for these solutions is that they enable remote communication between patient and healthcare staff (or amongst different healthcare professionals), reducing the need for physical meetings and resulting in greater efficiency and quality of care for patients through reduced travel and faster response times.
2. **mHealth**: This includes wearables as well as medical and wellness/fitness apps. Compared to telehealth, mHealth companies specifically leverage the ubiquitous presence of

smart phone and other mobile devices to improve health outcomes, health care services, and health research in a cost-effective way. Typically, mHealth solutions are quite discrete point solutions typically comprising the upfront sale of a device or app coupled with subscription-based income through a subscription or licensing model.

3. **Health Analytics:** This includes data analytics including data mining and AI applications for compound screening and decision support for doctors as well as data integration & interoperability, data management (EDW, Big Data), performance management (BI / analytics) and data science (predictive analytics, machine learning). Much of the value delivered by companies that are active in this field is through a combination of consulting service and software/ system solutions. Some people would also include genomics and precision medicine under this header given the heavy reliance on innovative technologies associated with these fields.

4. **Digitised Health Systems:** This includes patient- and provider-held digital records, clinical decision support and booking systems. Adoption of digital records is still low in emerging markets in Asia. These markets mostly use paper-based solutions and outdated IT equipment. With the internet and smartphone penetration growing and the technology infrastructure moving to cloud-based services, this presents an opportunity to develop innovative and cost- effective solutions to deliver healthcare services by leapfrogging the traditional bespoke digital health models that have already seen widespread adoption in developed markets.

5. **Online Market Places:** This includes platforms for bringing together supply and demand for a wide range of products and services across the healthcare value chain ranging from medtech equipment to health insurance and healthcare personnel. Market platforms can help pool demand and increase price transparency resulting to greater efficiencies for buyers and sellers.

The commercial model and risk profile of the different digital health business models differs, and PE investors will have to assess which of these models match their own investment preferences and style.

Commercial model and risk profile of different digital health business models

	Prevalent Commercial Model	Customer Stickiness	Capital Intensity	Ability to Scale	Barriers to Entry
Telehealth	License/ Pay per Use/ Capex	◕	◔	◑	◕
mHealth	Subscription/ Advertising	◔	◑	◑	◑
Health Analytics	License/ Consulting Fees/ Success Fees	◑	◕	◑	◑
Digitised Health Systems	License/ Consulting Fees	●	◑	●	◕
Online Market Places	Transaction Fees/ Advertising	◑	●	◕	◑

Source: SCP/Asia

● = highly attractive ○ = highly unattractive

Telehealth applications can take a fair amount of capital in upfront development for bespoke solutions which customers pay for through upfront expenditure. This creates switching costs and increases customer stickiness and barriers to entry. For example, if a hospital system decides to invest in a remote diagnostic capability through affiliated labs it would consider considerable investment in equipment (scanners, storage, etc) and license fees and assuming the performance is satisfactorily customers would unlikely consider alternatives for a considerable period of time.

mHealth applications are cheaper to develop but expensive to market. Marketing dollars to expand the userbase can be very significant and low monthly subscription fees can make it easy for consumers to switch. On the other hand, early mover advantage plays an important role in determining company success if a significant user base can be built and monetised.

Health Analytics firms rely heavily on service provision through professionals through consulting, system integration and solution development. These businesses are high in opex and relatively low in capex but also harder to scale due to the scarcity of qualified human resources.

Digitised Health Systems require a fair amount of upfront investment to develop but once the base architecture and applications are in place the model is highly scalable similar to software firms. Typically, the implementation of digital healthcare systems involves a major investment in training and change management from the customer who will unlikely want to switch vendor assuming performance remains satisfactorily.

On-Line Market Places are relatively easy to set up leveraging third-party solution providers such as Mirakl which help automate various aspects of marketplace management such as seller onboarding, service quality control and order distribution on a turn-key solution that is relatively easy to integrate into any e-commerce platform. On-line marketplaces are relatively easy to scale; the trick is to have significant scale in sellers and buyers to become and remain the relevant platform. Eventually there is place for only a limited number of marketplaces in any given commodity with customers and sellers gravitating towards platforms with the most choice and best prices, which typically means a limited number of large players dominating the market.

Impact of COVID-19

Covid-19 is having a profound impact on global health systems. The disruption to normal health insurance and health industry operations has been dramatic and swift during this period of the appearance and continuing threat of COVID-19. In many cases, while hospitals and clinics have focused on COVID-19 treatment initially the focus has changed on how to keep their patient customers coming back albeit perhaps using virtual means and the rise of telemedicine has taken hold in the region. Companies like Teledoc Asia – out of Shanghai, MyDoc and Doctor Anywhere, DocDoc and Halodoc in SEA have grown in profile and use in recent months. This has also allowed for more attention being focused on players like Healthbeats out of Singapore and Vivametrica out of Canada to allow insurers and employers to better handle and track chronic diseases states for wellness in the case of Healthbeats and enhance device agnostic underwriting in the case of Vivametrica.

Opportunities for PE investors

Multiple sources of potential deal flow in digital health

As can be seen from the earlier deal examples, Asian investment into the digital health space is often in the form of larger investment in more established businesses targeting global opportunities or more traditional VC-type investments supporting early stage start-ups. Are there mid-cap PE opportunities in Asia's digital health space? We think there are several sources of deal flow:

- **Back local industry leaders:** A select number of Asian based digital health companies is emerging is scaled players with the potential to become global leaders in their domain. Companies like iCarbonX and Senyi in China, CXA in Singapore and MedikaBazaar in India are examples of players of sufficient scale with products and solutions that have regional or global potential where PE funding can provide a monitization opportunity for founders and original investors and
- **Tap in the VC pool:** Galen Growth estimates there are over 3000 digital health ventures active in Asia. The top end of these companies has been active for 5-10 years and have established business models, a growing customer base and are profitable. These companies represent potential opportunities for growth capital investment by PE investors. But PE investors would have to embrace the concept of investing in still relatively young technology companies. Many traditional PE firms have already made this transition from a focus on traditional sectors into backing internet and technology companies and a similar move into digital health would be a viable path.
- **Support transition into digital health:** A second path would be to look for traditional healthcare investment opportunities with the potential to introduce digital health technology to increase revenue opportunities or reduce service delivery costs. Think for instance at suppliers of diagnostic equipment or diagnostic lab operators: can they launch remote diagnostic services and thus increase their addressable market and increase revenue potential. The underlying business provides the cash-flows

- **Carve out corporate digital health capabilities:** A fourth source of deal flow is to invest in or carve out the digital health capabilities of leading corporate healthcare players to help commercialise into a new venture. Various healthcare providers in the region as well as leading technology groups have developed digital health technologies with good commercial potential for third party sales.
- **Support smaller insurers with a digital health play or even multi-line insurers for the same:** Allows an investor to really look at a wide variety of health partnering investment opportunities across the region from lesser developed areas like Mongolia, Lao and Cambodia to more mature markets where insurers are looking for a "health related edge".

When evaluating investments in Digital Health companies, PE funds should pay attention to a range of commercial and operational diligence items including:

- Strength of brand (especially for consumer apps)
- Partnerships (e.g. with industry bodies)
- Regulatory approval
- Technology stack
- User feedback
- Competitive landscape and barriers to entry
- Corporate culture fit vis a vis digitalization
- Operational ability to transition some manual processes or legacy systems to handle digital fixes or opportunities

The digital health space has attractive fundamentals for PE investors in Asia. Expect to see increasing deal activity across the region in the coming years.

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