WSJ D.LIVE ASIA

© 2017 Dow Jones & Company. All Rights Reserved.

Wednesday, June 14, 2017 | **R1**

In Defense of the Giants

Yuri Milner on why big projects need the big internet companies



What does the future hold for the internet giants of today—and the companies that will rise to prominence down the road?

The Wall Street Journal's editor in chief, Gerard Baker, spoke with Yuri Milner, the founder of technology-investment firm DST Global and cocreator of prizes to honor scientific achievements and reinvigorate the search for life in space. Here are edited excerpts of the discussion.

The internet future

MR. MILNER: It's not a secret that the internet as an investment class did very well in the last 10 years. I just wanted to reflect on some of the reasons why and make predictions on how well this asset class will do in the next 10 years.

There is common knowledge about why this specific asset class is so powerful. There is no need for physical infrastructure. All the heavy lifting has been already done: low operating costs, global distribution networks, viral capabilities to distribute products and a very fast productdevelopment cycle.

I wanted to focus on two more reasons.

Internet companies spend dramatically more on R&D per dollar of revenue. The second reason is that internet companies have been extremely successful in attracting and retaining talent. All of those reasons lead to value creation. But we asked, what's going to happen in the next 10 years?

And you only need to make some relatively conservative assumptions to come up with a significant number. What percentage of consumption is happening online, the number is only 6% globally. We believe that in the next seven to eight years, this number will more than double. That means that there will be an additional \$4 trillion created in that space.

MR. BAKER: What could change that trajectory?

MR. MILNER: It looks like that's how innovation is taking place in the 21st century. The internet is enabling innovation. In the last maybe 20 years new companies were more successful in capturing this opportunity. And these companies over time became big compa-

MR. BAKER: These companies are enormously dominant. Their scale is extraordinary. Apple approaching a trillion dollars of market cap. Google. Facebook. How concerned should we be about the domination in all kinds of things? MR. MILNER: The key question we all collectively need to ask is, what is best for consumers? What is best for all of us? Let's also not forget that these companies became big in a mostly organic way. There was not a significant amount of M&A happening.

MR. BAKER: You're comfortable right now that the concentration that we're seeing is not fundamentally either anticompetitive or harmful to the consumer?

MR. MILNER: Obviously, there has to be a balance. Governments are looking for ways to find this balance. What I would like to focus on and what I do focus on is what value these companies can bring to all of us in the future.

As I mentioned, the sector really dominates in R&D spend. If we focus on the biggest projects that require many billions of dollars in funding-like, for example, virtual reality or artificial intelligence—those projects require an enormous amount of capital. They require computation. They require server capacity. And I think we all have an intrinsic interest in those projects getting funded. So

Please see MILNER page R7

THE ASIAN TECH **REVOLUTION**

For many years, technology firms in Asia were dismissed as merely copycats, with much of the innovation coming from Silicon Valley giants. But at the inaugural Wall Street Journal D.Live Asia conference last week in Hong Kong, more evidence emerged that companies and startups from this region are creating unique products and services that are being emulated in the West. That's largely due to Asian companies' intense focus on what consumers want on their

Asia is home to more than 2.5 billion mobile-phone users, with China being the world's biggest smartphone market, according to researcher eMarketer. Tech startups in the Asia-Pacific region raised more than \$100 billion over the past five years through venture-capital funding, according to data from CB Insights, highlighting just how much growth is coming from this region.

The Wall Street Journal convened over 300 tech executives, entrepreneurs and investors to address topics ranging from the future of the internet to technologies that are changing our world such as artificial intelligence, driverless cars and mobile payments. In onstage interviews, executives discussed how the fintech revolution is unfolding, where venture-capital money is flowing, which companies are winning the AI battle, how Asian internet firms are plotting their future and how Western companies are navigating China's opaque market. Edited excerpts are presented here.

-Yun-Hee Kim

INSIDE

Qi Lu on turning Baidu around and how the driverless-car race is going, **R2**

Richard Liu of JD.com says the Chinese retailer is going to have to diversify, R2

Microsoft's Alain Crozier explains the mind-set needed to succeed in China, R3

Connie Chan and David Su on venture capital in China and learning from products that originate there, R4

Jonathan Larsen on what's holding back fintech, R4

Andrew Ng and Tong Zhan on how Al is going to transform every industry, **R5**

Kavin Bharti Mittal and Ji-Hoon Rim discuss how messaging apps are changing and how their companies will compete, **R6**

Anthony Tan and Doug Parker discuss where the ride-sharing industry is headed in Asia, **R6**

Nadiem Makarim and William Tanuwijaya on the technology battle raging in Indonesia, R7

Ctrip Sets Its Sights Globally

CEO Jane Jie Sun says that while her company is No. 1 in China, it is an 'infant' around the world

China's outbound tourism industry is growing rapidly. Ctrip.com, China's biggest online travel site, is challenging Priceline to become the world's biggest online travel platform.

discuss Ctrip.com's growing ambitions, Street Journal senior editor Yun-Hee Kim spoke with the company's chief executive, Jane Jie Sun. Here are edited excerpts of the discussion.

Buying strategy

MS. KIM: You did a major acquisition last year, the \$1.7 billion deal to buy travel search site Skyscanner. When you look at acquisitions, what do vou look for?

MS. SUN: First, it needs to be closely related to our core business, which is travel. The second thing is, normally when we look at the target, it needs to be the No. 1 or No. 2 industry leader in that vertical. The third criteria is the valuation needs to be reason-

MS. KIM: You have also been acquisitive in the U.S. How is your strategy in the U.S. different from Europe?

MS. SUN: In the United States, we saw a very strong trend for customers to move from the rest of the world to the United

The visa restrictions in the United States were finally lifted up. Chinese citizens were able to get 10-year visas. Second, lots of young kids are very curious and want to study in the United States. And third, the U.S. has lots of travel resources, and it's relatively very safe.

So when we saw the trend to move customers from the rest of the world to the United States, then we needed to make sure our customers were provided the best service, best products.

So our three investments in the United States will be able to block the best hotels, the best transportation for our customers.



MS. KIM: Has your business been impacted at all by the political climate in the U.S.? MS. SUN: So far, not significantly, because travel is not political. When we send a customer to the rest of the world, I always encourage our team to tell our customer, "You represent China. You are the best diplomats of China. Please bring the best of the culture of China to the rest of the world. And when you come back, bring the best of the world back to China." Travel encourages international cultural exchange and therefore promotes peace. So far, so good.

Going global

MS. KIM: Ctrip.com has pretty much consolidated China's online travel market. Do you see further room for consolidation in the global market?

MS. SUN: We are the No. 1 player in the China market. There is lots of room for us to further penetrate into the second-tier and third-tier cities. In the global space, though, Ctrip is an infant. I think the golden years are yet to come. So we are very excited about the future opportunities.

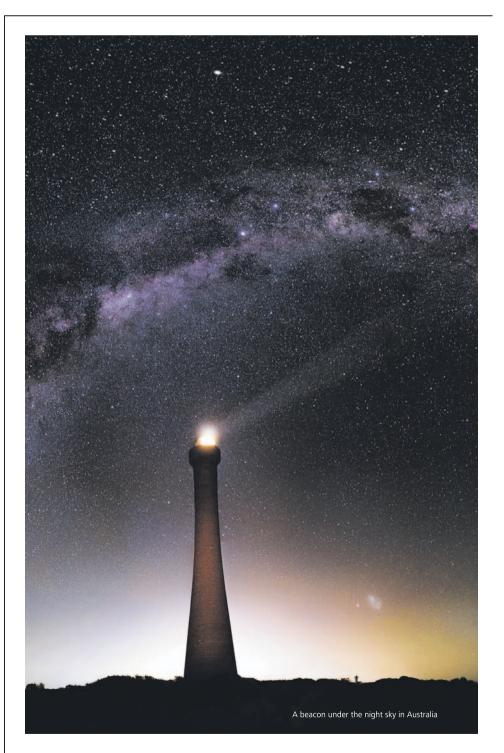
MS. KIM: You have a 10% stake in MakeMyTrip in India. India's a very competitive market, but also very different from China. What are the biggest challenges there and why did you decide to invest?

MS. SUN: India will overtake China as the most populous country in the world. Although the GDP per capita is quite low, it has potential to grow the affluent portion of its people. And these people will be able to travel.

The India market is very similar to China in the sense that it's very localized. Only local people know how to deal with the government, how to develop that market. We believe MakeMyTrip is a very good player in that market.

MS. KIM: Let's talk about regulatory challenges. What are the headwinds that you see coming from the government? MS. SUN: The government is very supportive of travel, because we are nonpolitical. We bring people together. So our government supports us. And enterprises also like us because to conduct business meetings, they need a good supplier to make good arrangements for their travel.

And the citizens like Ctrip because after they buy a house, buy a car, they want to travel. So as long as we deliver a high level of service, provide the most comprehensive products and offer the best price, I think we will be able to serve the government, enterprise and individuals very well.



Exploration lights the way forward

The relentless pursuit of innovation enlightens the intelligent world



Baidu's Turnaround Strategy

President Qi Lu's view on how the driverless-car race is shaping up



Baidu Inc. is a company in transition, driven by Qi Lu, who joined the Chinese tech giant as its president earlier this year. Baidu, which rose to prominence as a search engine, has stumbled in recent vears as it tried to expand into additional online services, and its profits have fallen.

Mr. Lu's plans to turn Baidu around include a big investment in artificial intelligence for the development of new technologies for search and other businesses-including driverless cars, a technology where Google, the acknowledged leader, has a big head start. Mr. Lu announced in April that Baidu will open its self-driving car technologies to others, on a platform called Project Apollo, to help develop autonomous vehicles.

At last week's D.Live conference in Hong Kong, Mr. Lu never came out of the blue. The reason you're searching for something is because you have a purpose in mind, you want to accomplish something. You want to listen to a song. You want to ask a question. You want to study. We want to bring the user a lot closer to the [subject]. So that, for example, if you want

And the second is to make

the user interactions richer

and better. Because the inspi-

ration for a user to search

to listen to a song, you can play the song. You can watch a movie, watch video clips-interacting with the services di-

MS. YUAN: But the problem now is that people increasingly rely on social media for information. And people don't search as much as before. How are you going to tackle that? MR. LU: I do not agree with your premise. Social media is a great product. However, having said that, each social-media product is a proprietary, closed information ecosystem. That's number one.

Number two, the digital universe is expanding at such a vast pace, it will outstrip any social media, any proprietary closed world. And users, our interests, our needs are longterm. This is why search succeeded-it never ends. If you blend these two, there's people always seeking more information.

The key is the search experience needs to be better. What search brings the user, the interaction needs to be richer. We want to enable every human being to easily discover access to anything they care about.

The driverless car

MS. YUAN: Baidu and Google, who's going to have a driverless car on the street first?

MR. LU: First of all, let me describe what I think is the state of the driverless-car industry. There's a bunch of companies in that space. And I believe Baidu is among the tier-one companies. And I believe Google is substantially ahead against everybody else. They started earlier and I have huge respect for Google as a company. They did a great job developing that technology.

Second, the technological foundation of a driverless car has lots and lots of components. It's a high-barrier business, because the depths of technology you need to develop is enormous.

Start with perception. Because to be able to perceive the road, the driving environment, as of today, you need to use Lidar, radar, cameras, a combination of sensors, fuse them together. And then you need to do mission-critical predictions about cars. Which cars are maneuvering and at what speed? How to prime our vehicles to maneuver in those environments? It's called planning control, and there's many different aspects of it.

If we're to take a perspective three years from now, five years from now, what's the determining factors—who will be ahead in five years? The deciding factor is the speed of iteration [or developing soft-

It's about writing software that learns. Data and algorithm and iteration is the game. The speed of iteration is verything.

I announced Project Apollo April 19. This is the key: Apollo is an open platform. It's open software, open services and open capability. We are going to open up our code. We're going to open up our capabilities for critical [proprietary technology]—very highbarrier [technology], very hard for any company to develop, it needs time to accumulate. That's number one.

Number two, by design, the Apollo is an ecosystem, with [original-equipment manufacturers], with tier-one suppliers, with any service providers. Because the name of the game is for people to participate and collaborate. Imagine, the ecosystem on any given day would drive more roads, see more situations. The ecosystem algorithm can turn around at a much faster pace than any single closed company. If you take that perspective, I would make a case that in three years or in five vears, the ecosystem-not Baidu as a company—the ecosystem of Apollo will be ahead of any single closed endeavors by one company.

MS. YUAN: Can you tell us who are going to be the OEMs who will be under Apollo and who are the startups, and why they want to be on this? Because I've talked to many industry people and they just don't believe that the big OEMs want to be on an open-source platform; first-tier startups want to be on this platform.

MR. LU: We will announce in the first week of July the number of partners that will participate. The feedback has been genuinely positive. Because this is genuinely winwin. Baidu's going to make money in areas we're good at-algorithms, data-we're not getting into their space. We're not a disrupter. We want to empower the OEMs. They will have access to technology. They can innovate at a faster pace. They can have better products to the market.

Moving Up the Market

Richard Liu, CEO of JD.com, says the Chinese retailer is going to have to diversify

Richard Liu is the chairman and chief executive of JD.com Inc., China's second-largest online retailer after Alibaba Group Holding Ltd.

He sat down with Li Yuan, The Wall Street Journal's China technology columnist, to discuss e-commerce in China and how his company plans to expand internationally. Edited excerpts follow.

Going upscale MS. YUAN: Where is the Chi-

e-commerce market headed and how much success do you predict you will have? MR. LIU: During the past decade, we have had a lot of success with logistics. The record speaks for itself. But now we have to diversify.

Five years ago, everybody was overwhelmed by the rocketing increase in the number of e-commerce orders. But now everybody is getting a share of the market. For courier companies that means you either have to control costs or you go away. So we are trying to diversify because that's the only way to survive.

MS. YUAN: You want to make inroads in the U.S. Are you going to recruit new brands to sell or just export what you already have?

MR. LIU: In the past, we have concentrated on small sellers and small suppliers. We tried to get business through cheaper prices, but we believe that things have gotten to a point where this has become quite unsustainable. If we keep selling cheap stuff, then people will only patronize us a few times and then leave us. And so we are going to move up the market. And the first step is we're going to introduce marquee Chinese brands into the U.S.

MS. YUAN: You recently said you were developing heavyduty drones to deploy in can do away with all blue-col-Shaanxi province. You also are lar workers. Right now maybe building up smart warehouses.

How do you plan to use technology to position yourself for the future? MR. LIU: From acquisition and procurement to warehousing to logistics, everything is now being placed under the control of smart technology. We plan to make use of artificial intelligence and robots to create a business model that is almost totally out of human control. This is going to cut our costs and improve our efficiency.

MS. YUAN: If you are going to resort to a lot of automation, what does that mean for your

staff? MR. LIU: I'm not saying that we

we need 10,000 customers to make even. But in the future we may only need 1,000 customers to break even or to make a profit due to automa-We aim to eventually have more than one million drones

to carry out our various operations. But we would need a huge team of maintenance staff to keep them up, so we will have to continue to train people.

Two channels

AUDIENCE MEMBER: What is your strategy for entering overseas markets?

MR. LIU: We have two channels. The first is to transplant our [Chinese business model] to developing markets such as Indonesia. That means deploying things like smart warehousing to keep costs low. This year, we definitely plan to make inroads in Indonesia.

The other channel is the European and the U.S. market. We believe it's only a matter of time before many Chinese brands such as Huawei Technologies and others become world-renowned. So we are going to concentrate on highend Chinese products and try to introduce them to developed overseas markets.

MS. YUAN: You already are locked in a fierce battle with peers in China. Won't you be stretched too thin if you open up a second battlefront in a place like Indonesia?

MR. LIU: When we were only doing \$12 million worth of business, Alibaba already was huge. We had no business competing with them. But after a decade, we can fight them on equal footing. Now, if we can make it in China, we can make it in many, many other places in the world.



discussed his vision for Baidu

with The Wall Street Journal's

China technology columnist, Li

Yuan. Edited excerpts of their

MS. YUAN: Baidu has had a

pretty tough year. How are

you going to move the com-

MR. LU: The focus is always on

driving innovation that leads

to a better user experience

and better overall economics

[for the company]. On the user

experience side, our focus is

more and better and better

content as part of search's

scope. For example, video,

particularly the emerging

short form of video. It can be

an extremely powerful new

medium, to transfer informa-

tion, to communicate.

One is adding more and

conversation follow.

Improving search

pany forward?

multifold.

The Wall Street Journal would like to thank the sponsors of D.LIVE Asia 2017 for their generous support.







Morgan Stanley SIXCAP



For more information, please visit DLIVE.wsj.com.

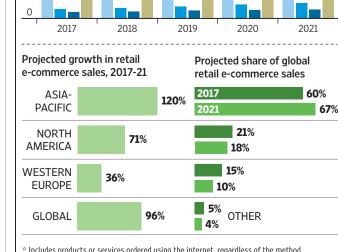
THE WALL STREET JOURNAL. Read ambitiously

© 2017 Dow Jones & Co. Inc. All rights reserved. 3DJ5590

Asia Leads a Boom Retail sales online are expected to surge in the next few years,







 $^{\pm}$ Includes products or services ordered using the internet, regardless of the method of payment or fulfillment; excludes travel and event tickets

THE WALL STREET JOURNAL.

Microsoft's Perspective On the Chinese Market

Alain Crozier explains why tech companies must change their mind-set to succeed in China

have had a turbulent relationship with China—particularly over issues concerning the protection of intellectual property. How does one of the biggest players handle it? The Wall Street Journal's Jason Anders spoke with **Microsoft** Corp.'s chairman and chief executive for greater China, Alain Crozier. Here are edited excerpts of the discussion.

Recent success MR. ANDERS: Microsoft has

High Profile

Western tech companies been doing business in China for something like 25 years, How would you say it's going? MR. CROZIER: It's going very well. In the past 10 days, as an example, we've done two very large announcements. First, we did the first world-wide launch of any product out of China with the new Surface Pro. That's a big sign that the Chinese market is very important for Microsoft. Most, if not all, products are launched out of the U.S. Already, this is our second-largest market for Sur-

face. If everything goes well, China is going to be the first market for Microsoft from a hardware standpoint.

The second one is also very important. We have now a Windows 10 government edition available for the Chinese government but also for the state-owned enterprises.

With another big piece of Microsoft's business, a cloud business, a joint venture that we started some time ago here in China, is experiencing very nice and very solid growth.

MR. ANDERS: I know this process involved some amount of sharing some proprietary code with your Chinese partners. Western companies have long been cautious when it comes to sharing technology in China. Was this something that you considered to be a risk?

MR. CROZIER: When you are a software developer and you put a lot of effort and research and development into code, it is clear that when you develop a solution or product, you want to keep the code for yourself.

And the reality is at some point you have to also decide what is best for customers, what is best for government and what is best also for Microsoft. And I think we've decided that now was a time to open up as a software company to initiatives like this one. Is there a risk? I'll tell you that in 10 years.

It's a decision that I know a lot of people don't really want to take. But I think a lot of things are changing in China, from an IP standpoint. I think there are also more reforms that really help companies like Microsoft make decisions like

THE WALL STREET JOURNAL. MR. ANDERS: With Windows

10, while Microsoft has said this software is as robust as the software anywhere else, this still puts some doubt in someone's mind that perhaps you weakened something like security to break into the Chinese market.

MR. CROZIER: Windows 10 is the most secure operating system Microsoft has ever built. When you look at how Windows 10 is used by all types of governments, including some very conservative governments, Windows 10 is by far the best operating system.

We have also been very transparent. If you are a government and you want to see exactly what's going on with Windows 10, our doors are totally open.

MR. ANDERS: I want to ask you more broadly about the experience of a Western company, especially a Western technology company, doing business in China in 2017. Obviously, Microsoft has a couple of decades of experience here. You've worked in a lot of places yourself. To be blunt, how level or not is the playing field today, for Western firms, especially technology firms? MR. CROZIER: The field is a great field. But the thing is, every company's built on some

values. You have some strict

values. You also have some strict principles. And we live in a world today where sometimes maybe some of those principles will evolve because the times are different and because the customers are different and because the competition may be different.

You have a lot of forces that at some point will maybe have you change your mind a little bit on how you want to do things.

A lot of players come and only have one play, which is an IP play. And it is, "I protect my IP, and I'm going after piracy.' And, "I'm fighting that on my own." As a software company, you have to change that. You have to, first of all, work with local partners, extensively.

So you have to potentially change the way you think. You have to change your business model one way or another and say, "Hey, you know what? I want to really do something in this country. I find a partner. I work with this partner. I share maybe more than I used to share."

A different mind-set

MR. ANDERS: We were talking about what it takes to be successful in China. And you were saying it takes a very different type of person, really, a different kind of mind-set than it does to work in Silicon Valley or Europe. Can you elaborate on that a bit?

MR. CROZIER: You have to be long-term focused when you come to this market. That's the first thing.

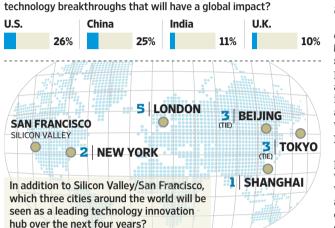
The second thing is, the people you hire to be in this market, they have to be longterm focused.

And for that, you need maturity. You need to be careful. When the wind is coming here or it's coming there or it's snowing or it's too cold, people start to say, "Hey, I don't like this weather. I don't like this. I don't like that."

So, you need to have people who have a certain maturity at saying, "Yeah, you know, this isn't going to be easy. But I need to stay put. And I need to make sure that when I come to China, I love the place."

Because I've seen too many people coming and saying, "Hey, I've been sent by my company to come here." And then a year later they say, "Oh, this place, I don't like.'

Why? Because it's very difficult. Because it's complex. Yeah, sure. But you know what? If you do well, if you have a long-term mind-set and if your company is committed to doing business in China, you'll experience a fantastic life, I can tell you that.



How technology industry leaders around the world answered some

questions on technology innovation in a KPMG survey

Which country shows the most promise for disruptive

Who is emerging as the top global technology innovation visionary?





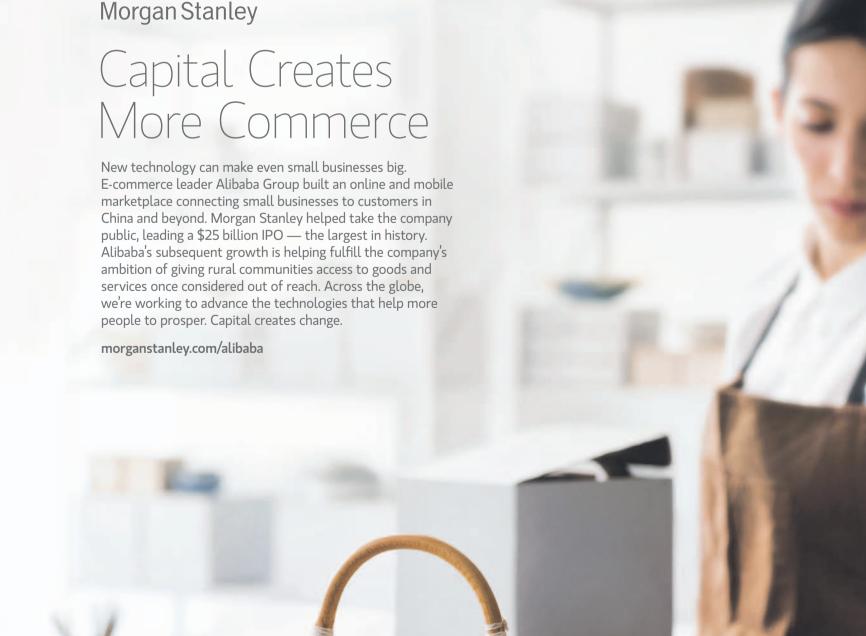
LARRY PAGE

SUNDAR

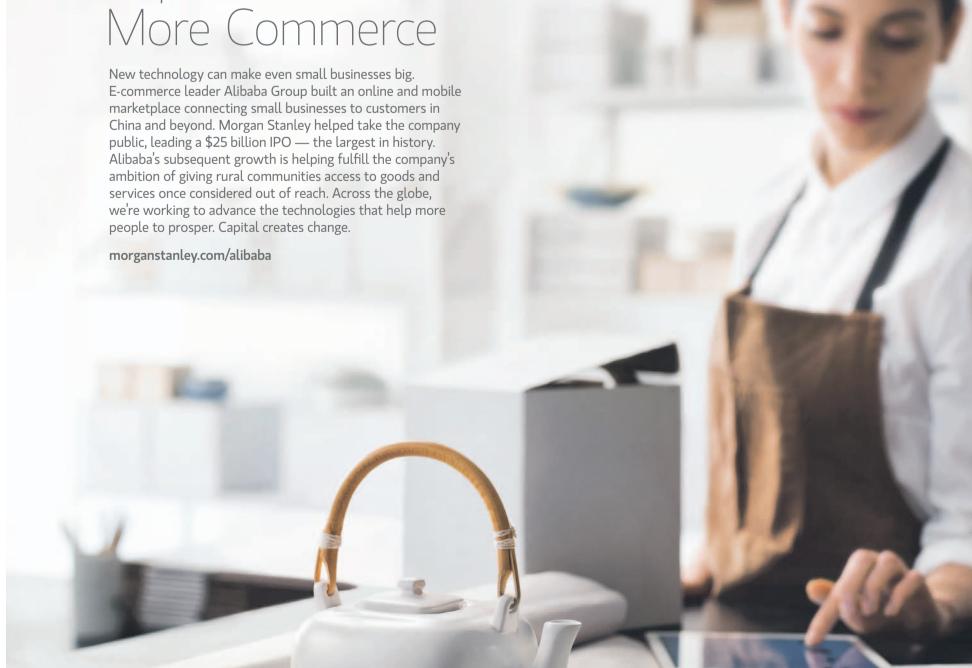
PICHAI

Source: KPMG Technology Innovation Survey of 841 C-Suite and other global technology





Morgan Stanley & Co. LLC. Member SIPC. CRC 1122237 04/15





Where VC Money Is Going in China

Connie Chan and David Su discuss venture-capital trends, and what investors can learn about products that come out in China first

Venture capitalists are often among the first to recognize big trends in technology, and, if they're lucky, to back the companies best positioned to profit from those trends.

Wall Street Journal reporter Rolfe Winkler sat down with two successful VCs familiar with China's tech market, Connie Chan, a partner at Andreessen Horowitz, and David Su, founding managing partner of Matrix Partners China, to find out where tech-and the money—are headed next. Edited excerpts follow.

MR. WINKLER: Where is venture capital flowing right now, in China and the U.S.?

MR. SU: Software services is a space we've been investing in over the last four years. Human capital is getting increasingly expensive in China. In the last four years we probably invested in about 30 companies in early to early growth stage. We're seeing tremendous growth in that space.

We're also looking at security. We're looking at enterprise-security, internet-security companies. MS. CHAN: A couple of years

ago my partner, Marc Andreessen, wrote an essay saying "software is eating the world." We think that same message holds true today. If you look now at all these traditional industries that were not software-led, they are doing whatever they can to build software teams, engineering teams. Look at the auto industry, for example.

We're seeing so much disruption happening. We're looking at a lot of areas where traditional industries are getting massively disrupted by software.

MR. WINKLER: Why doesn't Andreessen invest in China?

MS. CHAN: We have a strong operating-partner focus where we introduce networks of investors, engineers, product designers, marketing folks to all of our portfolio companies. And a large part of our network is centered in Silicon Valley. So our biggest valueadd is most likely to a company that has its headquarters in and is based in the U.S. Most likely Silicon Valley. We have made investments outside of the country. But that's definitely not the norm.

However, we do spend a lot of time thinking about China. I come to China, I come to Hong Kong quite frequently because I think there's so much to learn. There are so many portfolio companies trying to figure out their China strategy.

MR. WINKLER: We've heard many times that China is full of technology copycats. That has reversed a little bit. Give us examples where you've had a portfolio company learn something product-wise, rolled something out because they saw it here first.

MS. CHAN: Earlier this year we made an investment in Lime-Bike [a bike-sharing company based in San Mateo, Calif.]. After talking to lots of my Chinese investor friends who had invested in Ofo and Mobike, the two leaders in bike sharing an original investor in Ofo. I think you did the series A at about a \$30 million valuation? And now they're at \$2 billion, in what, 12 months?

MR. SU: It was just operating in several universities in Beijing. They were doing maybe 30,000 to 40,000 rides a day. As of last week we are doing, like, 20 million daily average rides. They have maybe seven million bikes in a hundred cities. So Ofo and Mobike now dominate the bike space. The growth has been phenomenal.

MR. WINKLER: Are these companies profitable?

MR. SU: Not vet. Ofo is going through this neck-to-neck competition with Mobike. Both are getting subsidies and waiving periods of usage. But eventually, when things settle down, I think the numbers will work.

MR. WINKLER: Payments is so strategic for some of these companies,

MR. SU: Yes. I think the next few years you will see lots and lots of innovation in payment on mobile that's going to drive a lot of consumption, change in behavior. I think all this is driving a lot of changes in consumers. And there's very minimal friction to using these services.

MS. CHAN: The way Chinese app companies think and the designers think is they want to grow deep, not just wide. Meaning, they want to control all aspects of your day from morning to night. It might just start with your transportation-but it can branch beyond

MR. WINKLER: Why do they want to control all that?

MS. CHAN: Because you get more of the users' time. You can send them to different services, different apps, you control distribution, you can do different kinds of advertising. You get more data around that consumer. So anything that's a daily-use, high-frequency app is very valuable. And I think China, with the super app design model, recognizes that biking is one of those companies.

MR. WINKLER: What companies starting today will be the next Baidu, Alibaba and Tencent? MR. SU: We were looking at software services and security. You know, this is a space we're very interested in. No. 2: all this micropayments. If you walk today in Shanghai and Beijing you are starting to see pop-up KTV [karaoke TV] booths with two or three seats. You scan your phone, you open the door, you go in and you can sing two songs, take pictures with your friends, capture the image and send it to whatever account you have. It's instant gratification. And that's all powered by mobile, powered by payment. Areas like that we are very interested in, where young consumers will be very interested.

Venture-Capital Flows

in China, I learned about the

unit economics of this model,

and I saw some very strong

product market fit. In many

ways, LimeBike is kind of a

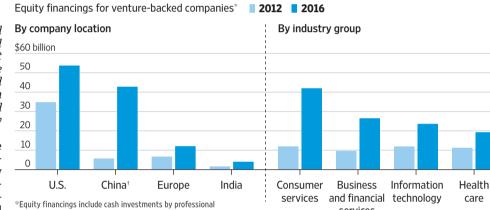
China copycat in the sense

that they're taking that Mo-

bike, Ofo model and bringing

MR. WINKLER: David, you are

it to the states.



venture-capital firms, corporations, other private-equity firms and individuals into companies that have received at least one round of venture funding

THE WALL STREET JOURNAL

Digital/McKinsey

Digital McKinsey is proud to partner with WSJ D.Live Asia

For our latest thinking on digital reinvention visit mckinsey.com and subscribe to receive our articles and reports. Or follow





What's Holding Back Fintech

Jonathan Larsen says it's partly customers, partly technology and partly regulators

Jonathan Larsen is the new chief innovation officer at Chinese insurance giant Ping An Insurance (Group) Co. of China Ltd. The former global head of retail banking at Citigroup Inc., Mr. Larsen now runs Ping An's \$1 billion Hong Kong investment fund, which is on the hunt for deals in the financialtechnology space. Mr. Larsen spoke with An-

drew Dowell of The Wall Street Journal to discuss where fintech is headed and what he thinks is holding it back. Edited excerpts follow.

MR. DOWELL: Why are banks

still so bad at technological innovation? MR. LARSEN: There's an enor-

mous amount of opportunity to overhaul banking and financial services generally. So why hasn't it happened yet?

I can tell you, it isn't an easy transition. First, clients are quite sticky in their preferences and their behavior, so while it may make sense to us to move everybody on to mobile instantly, there are plenty of people who are quite happy and comfortable with the way they're doing business. Second, most of these banks have layers and layers of technology. Simply wiping the floor and starting over is an option,

but it's a very challenging,

risky and costly option. And

third, regulators put brakes on institutions everywhere. Cloud computing is a really good example. There are very few regulators in the world who [truly understand] cloud computing and have clear guidelines about what is and isn't acceptable.

MR. DOWELL: How would you assess fintech's prospects? MR. LARSEN: This technology transformation is going to happen. But it's going to happen at different paces in different markets and in different areas of the business. Think of the functions that take place within financial-services institutions as being sort of decomposed or atomized, and then re-solved in a new way using technology.

And some of those things can scale to be business models. I think we've seen that clearly in mobile payments.

MR. DOWELL: Ping An also has a position in Chinese lender Lufax. Do you want to talk a little about what Ping An's interest is in fintech?

MR. LARSEN: In the last decade or so, Ping An has made a massive investment in technology. It has 20,000 technol-

ogy developers and scale plat-

forms that run on blockchain.

We're doing advanced re-

search into voice recognition

and facial recognition for all

kinds of different applications. Alongside that, [founder, chairman and CEO] Peter Ma has been able to incubate and create new platforms repeatedly. Lufax is a good example. We're talking about a \$19 billion company as of its last valuation round. GoodDoctor.com is another one-140 million registered users, consulting physicians via chat and image.

There are probably a dozen similar potential platforms that are at various stages of incubation within the group. And then there is a huge amount of effort around artificial intelligence and machine learning in particular. Our vision is that our busi-

ness will be a data business.

MR. DOWELL: What types of investments is the \$1 billion Global Voyager Fund seeking? MR. LARSEN: Our focus will be mostly strategic and our sweet spot is investments in the \$10 million to \$30 million range. That will naturally lead to bigger opportunities for companies that are in their rapid scaling phase. [We want to invest in] people we can learn from. We can access their capabilities through joint-venture agreements, distribution deals, technology deals, licensing. The cooperation can take many forms.

The Optimistic Promise Of Artificial Intelligence

Andrew Ng and Tong Zhang on how Al is going to be like electricity, transforming every industry

Artificial intelligence may most fun. The title of this be one of the technology world's current obsessions, but many people find it scary, envisioning robots taking over

Two top experts in the field—Andrew Ng, a **Stanford University** adjunct professor and former AI scientist at Alphabet Inc.'s Google and Chinese internet giant Baidu Inc., and Tong Zhang, executive director of the AI Lab at Tencent Holdings Ltd.—sat down with The Wall Street Journal's global technology editor, Jason Dean, to explain why they believe the opportunities associated with this technology far outweigh the bad.

Edited excerpts follow.

The new electricity MR. DEAN: Let's start with the panel refers to "the singularity," or the idea that artificial intelligence will become so powerful that robots will take over. Andrew, I know you're skeptical of that. What should we be worried about with AI and where are the biggest opportunities?

MR. NG: Worrying about evil AI robots today is a lot like worrying about overpopulation on the planet Mars. You know, some day we might get to Mars and we might actually overpopulate it and we'll need to worry about it then. But today, we haven't even landed on Mars yet, so I don't know how to productively work on that problem.

Having gotten the scarv stuff out of the way, I think AI is the new electricity. Whatscary stuff because that's the ever industry you work in, AI

will probably transform it, just as 100 years ago the rise of electricity transformed industry after industry—everything from transportation and communications to manufacturing to health care.

So I hope that whatever industry you're in, you'll figure out how to leverage AI, because I think it will create new winners and losers in almost every category.

MR. DEAN: Tong, do you share that basic optimism?

MR. ZHANG: Yes. Nowadays, AI can solve a lot of specialized problems, in some cases even better than humans. But there is no single solution for AI to solve all problems simultaneously.

It takes a lot of human effort to deliver a specialized AI system for medicine, for example. And that doesn't translate to other problems as easily as some people might think. That isn't singularity. That's far

MR. DEAN: Part of the hype around AI is that every company in the technology industry and even some that aren't are saying, "Oh, we're doing great stuff with AI." It can be hard to tell how much of that is real and how much of that is baloney. Where do you think there is more malarkey than actual substance in the AI talk?

MR. NG: Here is one pattern that might be useful for spotting when AI might affect your industry or some other industry you care about. First, the industry is digitized, meaning activity is moved to computers. That creates data, which gives AI an opportunity to come in and eat the data and automate decisions or do things more intelligently.

The single most lucrative application of AI today might be online advertising, or deciding what ad to show people. Because the online advertising realm has always been a digital realm, there is tons of data, and as a result the AI for that is very sophisticated today. The fintech industry is another area where a lot has moved to the digital realm. Health care is a bit further behind. So is construction. But you see this pattern where first comes digitization, which creates data, and then comes the AI.

Lifelong learners

MR. DEAN: Let's be predictive. My nine-year-old twins are in the phase now of coming to me and saying what they want to be when they grow up. What jobs should I tell them probably won't exist once they are adults? Radiology is one vou've mentioned before. What else is in the target zone?

MR. NG: If any of you have friends or children in medical school—AI is getting much better at reading radiology images, frankly. So if any of your friends are going through medical school and graduating with a degree in radiology, I think they might have a perfectly fine five-year career as a radiologist. Maybe 10 years.

Again, the broader pattern

lot of people are doing relatively routine, repetitive work, that creates a very strong incentive for AI teams to come and automate that task. There is one other rule of

thumb, which is that almost anything a typical human can do with less than one second of mental thought, we can probably now or in the near future automate using AI. Take a security guard look-

ing at a video feed and saying, "Are there people in this? Are they doing something suspicious?" That task is actually a lot of one-second judgment thoughts strung together, so I think a lot of it can be auto-I do think we're entering an

era in which lifelong learning is no longer optional. The old model of education, where you go to college for four years and coast through the next 40 makes no sense in today's rapidly changing world.

In IT, half the stuff we invent today will be obsolete in five years. The sands are constantly shifting. You have to keep learning. This is becoming much more pervasive elsewhere in our economy, too. So tell your children:

"Learn to be lifelong learners."

MR. DEAN: It seems like the U.S. and China are the two places where the most is happening with AI in terms of development and deployment of the technology. You both have worked in both places. What are the strengths and weaknesses in each?

MR. NG: The U.S. is very good at inventing basic technologies, a lot of the latest AI innovation.

I think the China ecosystem is very strong at taking things to market-it moves shockingly fast. In the U.S., when you launch a new product, it feels like you always have to fight market segment by market segment for users. And there are so many market segments.

China is a relatively homogenous society, so once you find that beautiful product market fit, you can scale really

The flip side of that, of course, is that if your competitors find product market fit, you can also lose share more rapidly than in the U.S.

MR. ZHANG: I think the U.S. has more innovations nowadays than China.

But Chinese companies, as well as universities, are trying to do more innovative research in terms of both quantity and quality. So I think it's happening, but the U.S. on this particular aspect is definitely



Thinking About Al How consumers in the U.S. feel about some aspects of the growing

use of artificial intelligence **HOPES WEIGHING THE**

63%

Agree AI will help solve complex problems that plague modern societies

59%

Agree AI will help people live more fulfilling lives

FEARS

46% Believe AI will harm people

by taking away jobs

23% Believe AI will have serious

negative implications Source: PricewaterhouseCoopers survey of

2,500 U.S. consumers and business leaders, conducted in February 2017

THE WALL STREET JOURNAL.

PROS AND CONS 80%

Say it's more important to have access to more affordable legal advice than to preserve the jobs of lawyers

69% Would rather have more affordable, convenient

and reliable transportation than preserve the jobs of taxi drivers

64%

Would rather have instant access to quality customer service than preserve the jobs of customer-service representatives





The Future of Messaging Apps

Kavin Bharti Mittal and Ji-Hoon Rim talk about how the apps are changing, and how they plan to take on the industry's leaders

In Asia, many smartphone users use messaging apps to watch videos, make calls, hail rides and play games. And U.S. giants WhatsApp and Snapchat are getting more competition from challengers from Asia. To get a glimpse of what the future may hold for messaging apps, Wall Street Journal senior editor Yun-Hee Kim spoke with Kavin Bharti Mittal, founder and chief executive of India's Hike Messenger, and Ji-Hoon Rim, CEO of South Korea's Kakao Corp.

Here are edited excerpts of the discussion.

What's ahead

MS. KIM: What is the next-generation messaging app going to look like?

MR. RIM: Artificial intelligence. I personally think that the next messenger is going be the

virtual personal assistant. MR. MITTAL: Yeah, absolutely. I'm a big believer that we're at a stage in the evolution of technology where humans are still forced to adapt to the way technology works. And I think AI's going to change that.

It's going to spin it backward, where technology can finally adapt itself to how human beings live their lives.

We're only using AI in small amounts of the application today in Hike. Based on the time of the

day, based on your location, based on the weather, we can change the recommendation of stickers [images people can send to other users] that you see in your palette. It's a very small example of what's possible with big data and AI inside messaging apps going for-

MS. KIM: How does Kakao plan to use artificial intelligence in its KakaoTalk messaging platform?

MR. RIM: It's going to be natural-language processing and understanding. In the mobile service right now, we're already connected to the biggest franchise deliveries like Pizza Hut, Burger King. All those things you can actually order on mobile right now, and get

If that's connected with AI and a conversational [user interface], rather than typing or touching the phone, you can just say, "Please order the same pizza that I did last week." Or "I want to go to Hong Kong Disneyland. Please call me a taxi."

I'm pretty confident that we could show how the future is going to be. Because Korea is relatively small. We can showcase how it really works.

The competition

MS. KIM: There are many other messaging apps globally that are offering quite similar services. The market is quite competitive. In terms of users, both Hike and Kakao trail WhatsApp, which has more than a billion monthly active users. So how do you take on a giant like that? Do you have ambitions to even attempt to compete with WhatsApp?

MR. MITTAL: In any realm of

industry, you try to sort of compete as little as possible. You go around the competi-

We focus on the youth. In India, about half a billion people are under the age of 24.

So we focus on our user base and deliver what is important to them. In India, given that you have so much diversity, it allows for people like us to exist, because we can solve very local problems at scale.

MS. KIM: But in India, Whats-App actually has double the amount of users as Hike. What are they doing right? And what do you guys need to do to catch up?

MR. MITTAL: We don't look at Hike as catching up at all. We've made it very clear that for us to win, WhatsApp doesn't have to lose.

As a matter of fact, people use WhatsApp and Hike very, very differently together on their phones.

Hike is used with seven,

eight. 10 close friends. Whereas WhatsApp is used with your parents, your driver, your colleagues, your plumber.

The more pervasive Facebook and WhatsApp are, the more the need for Hike. Because in a market like India, there is a very large divide between the older, conservative population and the younger youth who are much more liberal. As a result of which, people need a space to be themselves. And Hike is that application.

MS. KIM: Kakao hasn't really gained much traction overseas. What went wrong?

MR. RIM: I don't want to say it was wrong. Actually, it was a path that we chose. We realized that it's going to be very tough for us to compete as a messenger globally, because they were big companies.

We chose a path where we'll do platform business in Korea, since we're a dominant player, and we'll do content business globally. Content here means offering music, gaming, entertainment and comics.

MS. KIM: Do you have plans to take Hike outside of India? MR. MITTAL: Not yet. We feel that the market is very big. There is enough and more for us to work on in India.

Do we foresee ourselves going outside the country? Well, we'd hope so.

There are many countries out there like Bangladesh, Sri Lanka, Africa as well, that have a very similar characteristic to India. Where data's tricky, where smartphones are cheap.

Maybe in the next 12 to 18 months, we'll consider one of these markets.

Where the money goes

MS. KIM: You've raised more than \$250 million from investors. What are you using the funding toward? Is it improving your features or expanding perhaps outside of your home

MR. MITTAL: Definitely improving the product. We're big believers that as consumers get used to technology, consumer

needs grow. So you can't stay stagnant in the technology space. You have to keep evolving and improving your prod-

uct 24/7. We've been working on a lot of stuff that we've launched in the last six months. Hike, by the end of

2017, will look very different. Because we have the funding, and more important, we have a lot of access to people like Tencent [a Chinese company that created the messaging app WeChat and backs Hike].

There are a lot of insights we've got around what WeChat's doing with the platform, or what they're doing with messaging, what they're doing with photos, what they're doing with videos, what they're doing with calling, payments and a bunch of other stuff. We've definitely used that to improve our own set of tactics and strategy in

MS. KIM: In light of the terrorist attacks in Europe and the U.S., there has been a lot of debate about whether messaging companies like yourselves should give away data of their users to government agencies. I wanted to hear your thoughts on that issue.

MR. MITTAL: One thing that we do well with Hike is we actually don't store any messages. We just don't do it. We don't plan to change that over time. But I think it's not wrong for the governments to ask for data if the situation is right.

I can only speak for India. The internet is so new in India that the government's also trying to figure out what the rules are in the online world. What does it mean to have security and privacy online in the virtual world?

Because now people spend four hours of their day on average on the internet. In a country like India, one day you'll have a billion people accessing the internet through their smartphones. So time will tell.

MR. RIM: Privacy of data is very important. And Kakao puts in every effort to keep it



HONG KONG FINTECH WEEK

23 - 27 October 2017 Hong Kong Convention and Exhibition Centre



Dive in the insightful discussions on FinTech with entrepreneurs, investors, regulators, start-ups and more from Hong Kong, networking opportunities throughout the Week.



Sign Up for Latest Updates:

🎧 fintechweek.hk 🛮 🔀 fintech@investhk.gov.hk 🔝 💆 @HongKongFinTech

MR. TAN: The payments experito any of the e-commerce

The Ride-Sharing Boom Anthony Tan and Doug Parker on where the industry—and driverless cars—is heading in Asia sites, I can get you access. Do

world have been as bruising as the global ride-sharing wars. Who will come out on top? In Southeast Asia, Singa-

pore's GrabTaxi Holdings Pte. is slugging it out with Uber Technologies Inc. and others for dominance. Grab is now in 55 cities across the region. It launched a mobile-payments business known as GrabPay, recently bought an Indonesian e-commerce firm and is teaming up with Cambridge, Mass., startup nuTonomy Inc. to test self-driving cars in Singapore.

Grab co-founder Anthony Tan and Doug Parker, chief operating officer of nuTonomy, sat down with Jason Anders, The Wall Street Journal's global business editor, to discuss where the industry is headed in Asia. Edited excerpts follow.

Perfect complement

MR. ANDERS: Ride sharing is booming, especially here in Asia. Anthony, Grab is focused on Southeast Asia, on letting folks hail private cars, taxis and motorbikes. But lately, vou've been pushing pretty aggressively into mobile payments and other businesses.

Few battles in the tech ence and the entire ride-sharing experience—they are perfect complements, right? Today we do about 2.5 million rides a day. That's a lot of small transactions, ranging from \$3 or \$4 to \$11. And you just sort of use GrabPay all the time. That frequency builds a habit. That habit then becomes something you're comfortable with. Our credit wallet, because of that, has grown about 80% month on month.

> MR. ANDERS: You recently bought Kudo in Indonesia, which helps consumers who don't have internet connections, or even bank accounts. buy things by connecting them with local agents who they can deal with face-to-face. What does that have to do with ridehailing?

MR. TAN: Think about the digital divide. In Southeast Asia there are about 630 million people and a lot of them still don't have a bank account. They don't have smartphone penetration. It's growing very fast but is far from where it needs to be. GrabKudo has about 400,000 agents. They

are community guys and they

come up to [people] and they

say, "Hey, if you want access

big step change in experience from the taxicab drive of the 1990s in New York City to the taxicab or Uber, Grab or Lyft drive of today. Autonomous [driving] is the next big step change. Your experience today is about 10 times better than the old taxicab ride, but there are things you probably don't like about it. Maybe I would like to sit in the front. I'd like to look out a front window, control the radio myself, control the temperature.

you want to sign up as a Grab

driver?" They have been sign-

ing up thousands of drivers on

MR. ANDERS: So Doug, nuTon-

omy is looking to make the

case that not only do we not

need to own cars, we actually

don't need drivers. How do

you convince ride-hailing com-

panies that this is where they

MR. PARKER: There has been a

should be investing?

a daily basis.

Autonomous is also going to be a safer ride. Something like 1.4 million people die every year in auto accidents. That's equivalent to 10 747s crashing every day. You would never let United get away with

something like that, or Boeing. Please see TAN page R7

The Technology Battle Raging in Indonesia Nadiem Makarim and William Tanuwijaya

on the targeted market—and how to tap into it

booming in Southeast Asia, thanks in part to the growing adoption of smartphones and other technologies that make it easier to shop for goods and services and to pay for them.

Indonesia, with the world's fourth-largest population, is a market where local tech companies and regional giants alike are focused on tapping the potential of e-commerce.

Nadiem Makarim, founder and chief executive of Go-Jek Indonesia, which started with motorcycle-hailing service and has expanded into other online services, and William Tanuwijaya, co-founder and CEO of Indonesian online marketplace Tokopedia, discussed the opportunities and challenges in their home market with The Wall Street Journal's technology editor, Jason Dean.

Following are edited excerpts of their conversation.

MR. DEAN: In the past the In-

Feeling Good

Consumer spending is donesian tech market has been somewhat overshadowed by other regional giants like China and India. But it's hecoming a real battleground. Let's start with why. William, Tokopedia is an online consumer-to-consumer marketplace. What makes Indonesia an attractive market for this business, especially given how fragmented it is and relatively poor?

> MR. TANUWIJAYA: The beauty of Indonesia is that you can really predict the future, by learning what happened in the past from the U.S. market, China market, Japan market, India market.

It's very similar with China in 2008.

Indonesia's GDP per capita last year is the same as China's in 2008. We also have 3G, 4G now in Indonesia. So we can see the boom that will happen if in the next five years we can follow that pat-

Level of optimism in the fourth quarter of 2016 ■ ■ Percentage-point change from the first quarter

Philippines and Thailand and in the region overall

Consumer confidence grew last year in Southeast Asia, with

optimism increasing in all three measures of confidence in the

SOUTHEAST ASIA PHILIPPINES THAILAND Immediate spending intentions Personal Job

Source: Nielsen Co. survey of nearly 3,000 consumers in Southeast Asia, including nearly 500 each in the

THE WALL STREET JOURNAL.

Branching out

MR. DEAN: Nadiem, you started out with ride sharing for motorcycles and you've expanded into food delivery, package delivery, on-demand beauty and cleaning services, and payments.

What's driving your expansion into so many different ar-

MR. MAKARIM: First and foremost, as William said, the opportunity in Indonesia is really

I think that the risk is actually in not diversifying. We are big students of China, India and other regions. And it's very obvious that it is difficult to defend a single vertical. The dynamics of competition always dictate that someone with a lower price will always come in, et cetera.

But what is defensible, from what we've seen in China's case, is a platform. A platform is basically a mind-set, it's a thinking of your business that follows the consumer's need as opposed to what you think the business is.

So that is the primary philosophy of Go-Jek, to go where the consumer goes and to be ruthlessly obsessive about customer needs and the problems they face.

So for us, diversification is a matter of not only survival, but thriving and being able to defend ourselves as an overall platform.

MR. DEAN: How do you decide then what to move into and what not to?

MR. MAKARIM: We target all of the highest-frequency middleclass transactions that a person does in their daily life and move it to your smartphone.

So let's look at how a person lives in Indonesia in the

middle class. highest-frequency Your transactions are transportasending stuff tion, food, around, buying [cellphone] air time, and then paying for stuff at a store. And then of course you've got utilities, bills. And so our goal is to cover that gamut of transactions so that you will not be required to transact outside of your smartphone.

William Tanuwijaya and Nadiem Makarii

And that's why Go-Pay is now one of the biggest focuses of Go-Jek, because it's the glue that ties the platform all together. In a country where you've got 70% of the population that is unbanked and the remaining 30% is severely underbanked, it's practically an open market for this kind of innovation.

What we call the four unicorns within our business are transportation, logistics, food and payments. Those are our four kind of core pillars.

Sizing up the market MR. DEAN: Indonesia's total

population is about 260 million. How much of that is really addressable for both of

Not everybody, right? You mentioned the middle class you're targeting. What is the

size of the middle class within that total number?

MR. MAKARIM: The middle class is kind of the fattest chunk. You've still got this middle-lower to lower class that's quite big as well. In our business, we are necessity products in many ways, both William's company and my

Everyone needs food. Everyone needs to get around. Everyone needs stuff. So the addressable market really is not so much the income level, it's how many people have an Android. IOS as well, but IOS is in the higher end of the spectrum.

MR. DEAN: So what is that now? What is the penetration of mobile phones or smart-

MR. MAKARIM: I believe right now smartphone penetration is at around 70, 80 million.

MR. TANUWIJAYA: Google last year announced that Indonesia already has 100 million internet users. But from that 100 million internet users, only perhaps 40 million have a bank account, 3% have a credit card.

We see this gap between people that are already online but they cannot transact online. And we see this opportunity to innovate.

So, for example, the past two years we're building cash collection points at stores in Indonesia. People can buy online and pay in cash through their nearby store.

Looking abroad? MR. DEAN: What about the

idea of going beyond Indonesia? Do you think about that now at all? MR. MAKARIM: We think about

it all the time. We have two principles.

One is you cannot win Southeast Asia without winning Indonesia. We have to be comfortable across all verticals before expanding.

The second principle is we do not believe in just expanding for the sake of expanding. We believe in partnerships with locally founded companies.

MR. TANUWIJAYA: We are sort of the same school.

In the past eight years, Tokopedia is only focused on the Indonesian market. And we think that it's big enough.

Our vision is to really democratize commerce technology. That done, and then we'll consider to expand in other

Milner

prospects

Continued from page R1 what I'm saying is that in order for all of us to reap the benefits of AI, for example, as soon as possible we need a certain amount of concentration of capital so that those projects get funded.

A separate setup

MR. BAKER: Can China go on, in political terms and from an investment perspective, to continue to develop its own separate internet companies? And Facebook and everybody else will just have to deal with the rest of the world?

MR. MILNER: The interesting

byproduct of these massive companies that have been created is that the employees and the founders of those companies, obviously they reap the benefits of the success. And the byproduct of this is the creation of a very vibrant angel community.

From the angel community follows a VC community. And then a VC community is followed by growth stage, late stage and then public stage [companies]. In order to create a Silicon Valley-type phenomenon, an angel community is critical. And an angel community is really very dependent on those massive success stories. So that's how the cycle gets going.

MR. BAKER: Our opening poll question was about finding intelligent life. Some people would be happy if we found more intelligent life on Earth first rather than finding intelligent life in the rest of the uni-

You've got a very strong interest in this. You've put up money for a prize. Why is this something you regard as so *important?*

MR. MILNER: We should be looking beyond the horizon. I truly believe that we collectively as a civilization should allocate a small fraction of our resources to try to solve existential questions. "Are we alone in the universe?" is one of those existential questions.

Continued from page R6

So once you have big compa-

nies taking on this role of driving the cars, we are going to end up with a safer, more comfortable, more efficient

MR. ANDERS: You've worked with Grab on a test in Singapore. And you just announced you're going to collaborate with Lyft on a similar test in Boston, with real-world riders. What are you learning from these tests?

MR. PARKER: When you start putting people [in self-driving cars] who aren't roboticists or scientists, what they tell you is amazing. They have a lot of fear when they first get in, when the car starts driving itself. But after five minutes, they're playing with their phones. So there is this very fast adoption curve. But when the car goes to make a turn at a busy traffic light for the first time, it is a little scarv.

It's kind of like people who are scared of flying. They aren't scared of the engineering, or that the plane won't fly. It's that they have no control. It's the same thing with autonomous cars. We have to get used to the fact that the car is going to make the right choice. Every time.

MR. ANDERS: How long will it be before I hail a car, and it picks me up without a driver in it?

MR. PARKER: We will still have a safety driver in the car for a number of years. There is a long process to convince regulators that this is safe. We have to find the right way to prove, through on-road tests, that this is entirely safe to take the driver out. Part of that is we're going to have remote safety officers who will monitor the cars and take over if there is a problem.

'Brothers in this'

MR. ANDERS: NuTonomy is working with different ridehailing partners and auto makers. Many of these companies are locked in some pretty bitter blood feuds. How do vou stav neutral?

MR. PARKER: Right now, we're trying to work with the good guys—the Grabs and the Lyfts of the world that really want to drive a better experience for people. But also, at this point, Grab and Lyft aren't competing with each other. We actually have three partnerships with ride-hailing companies. We haven't announced the third one yet.

MR. ANDERS: You haven't announced the third one yet? Here we are. Let's have it. MR. PARKER: I know. It's a great forum. But...

MR. ANDERS: Anthony, let's talk about competition. Uber gave up the fight with Didi [Chuxing Technology Co.] in

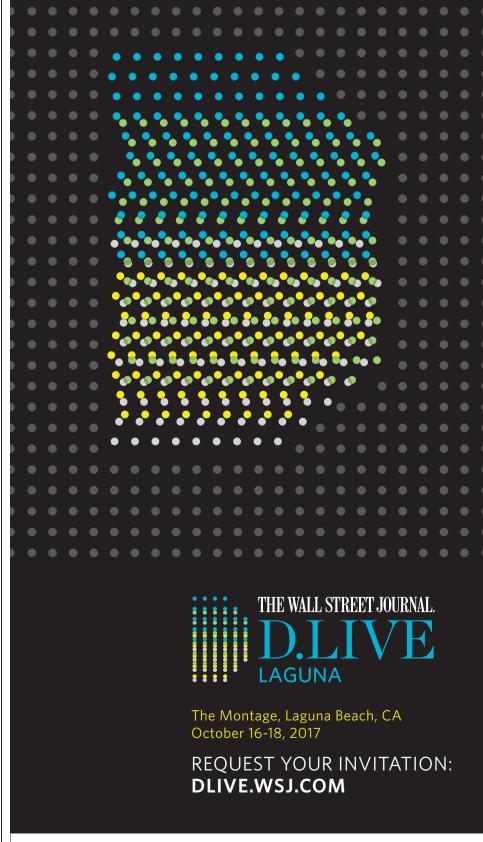
China, and I know Didi is one of your investors. How are you going to avoid one of these really protracted, and wildly expensive, battles in Southeast Asia?

MR. TAN: It is very different in Southeast Asia. For one thing, Grab embraces the taxi world. In Singapore, Grab combines all the taxis, all the cars, with one touch of a button. And because we work so closely with the Singapore government, they have allowed us to be the first company with the ability to price dynamically for taxis. which is essentially a public utility vehicle. So with just Grab, you now get taxis that can have dynamic pricing at peak hours, and be cheaper than the meter during off-peak

MR. ANDERS: If Didi wanted to acquire Grab outright, would vou be open to it?

MR. TAN: Right now, we work hand in hand. They aren't types who say, "I want to be the boss, and that's it." They are much more like, "We're brothers in this. How do we make sure that we win this local style, respecting the local nuances.'

They realize that Southeast Asia is a fragmented market. The countries are similar in many ways but still so different in terms of language, religion, etc. The ability to embrace that fragmentation but also see the common patterns is what Didi respects about us.



Proudly supported by:

NETJETS

ULYSSETNARDIN

© 2017 Dow Jones & Co., Inc. All rights reserved. 3DJ5599

