

## 踹： <br> EDEN MANOR

高 爾 夫－御 苑

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- Overlooking the golf course at The Hong Kong Golf Club at Fanling* - this is the location for noble families, renowned and the elite. - Situated near The Hong Kong Jockey Club's Beas River Country Club, the 2008 Olympic Equestrian Venue^ and Fanling Lodge. - Designed by Ronald Lu and Partners, world-renowned Hirsch Bedner and Associates Limited and CL3 Architects, "Eden Manor" comprises of 25 exclusive mansions and 8 apartment towers. The saleable areas of the exclusive mansions range from 2,601 sq.ft.* to 3,063 sq.ft.**, while the diversified residences include 3-bedroom and 4-bedroom apartments with saleable areas ranging from 960 sq.ft.** to 1,314 sq.ft.** Studio, 1 -bedroom and 2-bedroom with saleable areas ranging from 276 sq.ft." to 487 sq.ft."
- "Eden Manor" offers a total of approximately $57,000 \mathrm{sq} . \mathrm{ft}$. of resident's clubhouse and communal garden or play area for resident's use ${ }^{4}$. The clubhouse offers an extensive array of facilities including multi-function rooms, stylish lounge, indoor swimming pool, spa, sauna, steam bath, Elite Men's Zone, Ladies Zone, gymnasium and yoga room. An approximately 28 ft . tall magnificent crystal spiral staircase connects the two levels of the clubhouse, highlighting its luxurious decoration and impressive style.
- Seamless connectivity to China - around 9 minutes' drive to Lo Wu Control Point ${ }^{+}$, around 7 minutes' drive to Lok Ma Chau Control Point ${ }^{+}$, and around 5 minutes' drive to Sheung Shui Station ${ }^{+}$


Note This map has been simpilfed

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"'THOUGH I AM 32, IN TERMS OF EXPERIENCE I FEEL CLOSER TO 50."
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## Bull in China's Shop

In the generally benign global economy of 2017, one worry has stood out: a Chinese hard landing. Aspects of this qualm keep resurfacing: heavy debt, shadow-bank "products", malinvestment, aging population, fouled environment, curtailed dissent. The Communist Party backtracks on reforms, and Moody's issues a largely symbolic downgrade. At least one financial essayist poses


Lee and associates were hosted by Forbes Media CEO and Executive Chairman Mike Perlis (left). the murmurings bluntly in a booklet: Will China's Economy Collapse? (No, author Ann Lee answers.)

Beijing policymakers have responded not only by revving up many familiar state stimuli but also by crowning these with the Belt and Road projects across Eurasia, involving huge loans to support infrastructure work by Chinese state companies. Official celebration of this effort has been stepped up even as, say some reports, the spending has retreated. There's still plenty afoot to keep big, old-line companies busy.

Mainland stock indexes-which don't capture much of China's economy-haven't joined in the recent global equity rise. Some think wary domestic investors have chased bitcoin instead-and of course the reheated property market. All of which adds to fear that the world's primary growth engine is sputtering and could fail.

A vastly different view is usually on offer from Chinese businesspeople, who keep seeing activity and opportunity. A special source of that perspective is Kai-Fu Lee, a longtime Web pioneer and now a sizable venture capitalist concentrating on China. In a visit to our U.S. offices he spelled out a wave of artificial-intelligence innovation over the coming decades and why China is well-placed to lead it (see p. 18).

A Taiwan native with plenty of American flavor, Lee has to square the shortcomings of China’s relatively closed system with its quality and quantity attributes and comes out clearly bullish. The breakthroughs already happening in digital software (and hardware) in the People's Republic lend support to the notion of a technological juggernaut-even with information flows crimped.

China's talent has trekked in the tens of thousands to Silicon Valley and its connected schools to pursue their options. If Lee is right and most return-indeed, if the U.S. pushes them out-that will hasten the rise of Chinese output. Doubters, beware.


Tim Ferguson
Editor, Forbes ASIA globaleditor@forbes.com

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## June 2017 • Volume 13 • Number 5

FORBES ASIA (ISSN 1793 2181) is published monthly with additional special issues in September and November. FORBES ASIA is printed at Times Printers in Singapore. Singapore MCI (P) 086/12/2016. Malaysia KDN PPS 1411/01/2013 (022902). All rights reserved. Title is protected through a trademark registered with the U.S. Patent \& Trademark Office. Forbes Asia is a trademark of Forbes Asia. Copyright © 2013 FORBES ASIA.
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## FORBES ASIA

## READERS SAY

## CONVERSATION


"ALIA BHATT makes it to the Forbes 30 Under 30 list, and we can't keep calm! The actress is also doing a Forbes Instagram take over. Way to go girl!" exclaimed India's Inuth.com about our list of young talent making waves in Asia (May, p. 40). Pinkvilla.com added: "Alia has indeed come a long way. In just a span of five years, the gorgeous lady has made it to the prestigious Forbes list. Yes, you read that right!" Ms. Bhatt sounded like an elder stateswoman and tried to downplay the excitement in India's Pune Mirror: "One has to be conscious about what you say and do. You develop a sense of responsibility, which comes with being in the limelight. I no longer feel as young as people make me out to be." India's IANS.in noted that Srikanth Bolla, founder of Bollant Industries (maker of eco-friendly packaging), said that making the 30/30 list is just the beginning: "Visually challenged Srikanth Bolla is in no mood to celebrate. His goal is to get into the Forbes list of richest persons. 'That is when I will celebrate.'" Malaysia's femalemag.com congratulated Neelofa and Vivy Yusof: "You've heard them, you've seen them and you know them. Congrats to our very own Malaysian stereotype-breaking fashionistas for being in the elite list of Forbes." Tweeted Neelofa: "Dreams do come true-thanks."

## THE INTEREST GRAPH

Our look at Asia's entrepreneurial youth movement easily led the way in hits from the May issue:

30 Under 30 Asia: Meet the Class of $2017 \quad 39,672$ page views


South Korea's 50 Richest 2017: A Year of Trouble and Trials


From Syria to France: Billionaire Mohed Altrad's Rags-to-Riches Tale



# conservation in Action 

# INDISPENSABLE BOOK ABOUT AN INDISPENSABLE MAN 

BY STEVE FORBES, EDITOR-IN-CHIEF

## George Washington:

The Wonder of the Age-by John Rhodehamel (Yale University Press, \$32.50)—is a masterpiece, a concise, fluidly written and well-grounded biography. Rhodehamel, who edited two highly acclaimed books for the renowned Library of America series of great American writers (one, naturally, of Washington's writings and the other of writings from the American Revolution), has executed an accurate and revealing portrait of a man who, more than any other, made possible the creation and subsequent success of the United States. Indeed, Washington emerges as one of a handful of giants in human history.
"George Washington was a revolutionary, for a quarter-century the central figure in a radical revolution that aimed at nothing less than the transformation of Western civilization. . . . When Washington died, in 1799, the eighteenth century was coming to a close, while the age of hereditary power, the very notion of government-by-birth, had been started down the road to extinction. And the United States of America, overleaping its small beginnings on the margins of European civilization, would one day thrust itself into the forefront of world history. The little republic would become a gigantic continental democracy-a nation unlike any that had come before. . . . American success marked a fundamental turning point in human affairs."
The radical nature of what Washington vigorously sought and wrought is obscured by his image as a remote leader, heroically astride a horse, a marble figurehead who in later life wore wooden teeth. He was "said to have countless admirers but not a single friend."

Rhodehamel capably and compellingly chronicles Washington's rise, how he engaged in "self-invention" by, for instance, copying out and taking to heart the 110 "Rules of Civility and Decent Behaviour in Company and Conversation," maxims that had been compiled 150 years


before by French Jesuits. Despite rare lapses, Washington came to control his volcanic temper. He learned to cultivate patrons and mentors, his "steely will" masked by being "courteous, deferential, soft-spoken." He relentlessly educated himself. He became an outstanding horseman and-important to Virginia colonial society-a superb dancer. He made himself an excellent and prolific writer. His height and majestic bearing helped as well.

Washington also possessed a boundless energy and extraordinary courage. In battle he constantly put himself in harm's way, amazing colleagues that he was never felled by a bullet.

As a militiaman, Washington fired the first shot in what became a global conflict, the Seven Years' War-or, to Americans, the French and Indian War. He was a leading figure in much of the frontier fighting between the British and French and their various Native American allies. It was an often harsh learning experience, politically and militarily. Washington made mistakes. And he saw firsthand how politics can affect military campaignsparticularly the exasperating tardiness of governments in recruiting the necessary numbers of troops and adequately supplying them. Washington fought well enough and emerged from it all with an imposing reputation that made him the logical leader of America's rebel army in 1775. His previous experiences would be indispensable in navigating the unprecedented and treacherous situation he faced.

Britain was determined to suppress the rebellion and sent over a formidable army, supplemented by thousands of hardened and brutally disciplined Hessian mercenaries.

Washington's military performance was not flawless. Rhodehamel notes that he won two battles and lost five, and one was a draw. But that's like saying the American forces won every battle in the Vietnam War. As Rhodehamel notes, Washington held the army together, and its overall performance improved.

Keeping an effective fighting force in the field at that time was miraculous: Few troops had enlisted for the duration, and the Continental Congress was abysmal at providing equipment, clothing and food. The legend of the deprivations of the winter at Valley Forge is no myth: About one-fourth of the soldiers died of disease, hypothermia and starvation. Many were reduced to wearing rags. There were other hard winters, including one worse than that at Valley Forge.

The war was won with a decisive American-French victory at Yorktown, but the formal peace treaty was signed nearly two years later. Washington demonstrated his profound republican principles when he single-handedly defused a mutiny of his army at Newburgh, New York. The army was set to march on the Continental Congress in Philadelphia to forcibly demand it make good on its routinely broken promises, primarily regarding the army's pay (the Continental paper money with which the men had been paid was virtually worthless). With a persuasive speech and a brilliant piece of theatrics, Washington got them to back down. The principle was set: No matter how incompetent, corrupt or petty, the civil government reigned supreme over the military. Washington was no Caesar or Napoléon. He went back home.

As it became clear that the United States' first constitution, the Articles of Confederation, was a disaster and that a real federal government was vital, Washington lent his immense prestige to assemble the Constitutional Convention in

safe. During his second term, he supported a highly unpopular treaty with Britain, feeling it contained some very useful concessions and would keep the peace.

Washington believed strongly in the western expansion of the country and pursued policies to that end. After two terms, Washington exemplified his belief in the
principle of limited power by voluntarily stepping down from office, even though he could easily have stayed on until the day he died.

As he got older, Washington became deeply disturbed by slavery. In his will he freed the slaves he owned and demanded that his heirs ensure their education so as to better their chances at earning a decent living (Virginia negated this provision).

Thanks primarily to George Washington, the American Revolution and the subsequent American experiment succeeded. Rhodehamel rightly notes that this is monument enough.

## Great Show on the Great War

World War I (1914-18), rightly called "Armageddon" by Winston Churchill, was history's greatest man-made cataclysm. It undermined faith in Western civilization and the optimistic idea of progress, while bringing in its wake the police-state totalitarian horrors of communism, fascism and Nazism. (Ample traces of those ideologies' poisonous brews can be found in many of the scribblings of today's Islamic terrorists.)

An excellent way to begin to fathom what the world underwent a century ago is to watch a series on YouTube appropriately entitled The Great War. Each week there's a 9 - to 10 -minute segment, ably hosted by Indiana "Indy" Neidell, which covers the battlefield as well as the political and diplomatic events that were occurring exactly 100 years ago. Neidell, an actor and musician who was raised in Texas but has been a resident of Stockholm for 20 years, not only does the narration but also conducted most of the prodigious research involved. In addition to the weekly episodes, Neidell and his crew turn out numerous specials on weaponry, culture, aspects of trench life, notable individuals and much more.

This is quite an impressive achievement. Take a look-and then help out financially.

## Forbes

# HOW LONG OF A REACH? 

## Pro basketball's Asian appeal is obvious, but it struggles to seed NBA talent here.

The NBA, while a "national association," conducts a large part of its basketball business on international soil. The brand has grown especially popular in Asia, a region that carries the NBA's second- and third-largest revenue markets in China and the Philippines, respectively.

And yet, despite Asia making up roughly $60 \%$ of the world's population, in a class of 113 foreign players to break camp with an NBA squad this season, not one hailed from that continent (unless you count Australia).

In recent years, the league's dedicated offices for China, India and six other Asian markets have launched initiatives, including newly opened academies, to establish the game across all levels of play.

For the NBA to reach its full potential in Asia, the region is going to need stars its fan bases can identify with. Players with full or partial Asian heritage (see Jeremy Lin) obviously help, but having a high-level player born and raised in Asia is key.

Yao Ming, an eight-time All-Star for the Houston Rockets from 2003 to 2011
and a recent Basketball Hall of Fame inductee, did wonders for the game in China. But the since the 7 -footer's retirement in 2011, the country of nearly 1.4 billion has failed to produce any standouts. The Rockets' 2016 second-round pick Zhou Qi is the country's most promising prospect in years, but his ceiling is probably closer to that of Yi Jianlian, whose NBA career fizzled out after five seasons.

Satnam Singh is the only Indian player to come close to gracing the NBA hardwood, but the 2015 second-rounder has floundered with the Dallas Mavericks' DLeague affiliate. The Philippines, where basketball borders on religion, has yet to produce any NBA-caliber talent.

The league's remedy? Nurture the sport, and its participants, as soon as the latter are physically possible. "There may be nothing more important than having players come out of that region and be in our league," said Mark Tatum, NBA Deputy Commissioner, chief operating officer and leader of all NBA international efforts. "What we're hoping to do is provide the coaching, the training and the compe-
tition required to develop an All-Star-caliber player."

It's been just over four years since the league first introduced "Jr. NBA" to Asia, adapting to China, India and its Southeast Asian markets its American youth program designed to impart fundamental skills and core values. The program has garnered participation from over 5.5 million youths, parents and coaches in the region. "To use a basketball expression, we're employing a full-court press behind youth development," NBA China CEO David Shoemaker says. "It starts with a partnership we have with the Ministry of Education, where we teach basketball as part of the physical education curriculum in elementary, middle and high school."

Jr. NBA's success has afforded the program an advisory council for Greater Asia, featuring Basketball Hall of Famer Dikembe Mutombo and business leaders (including Forbes Asia CEO William Adamopoulos). It has also led to the formation of sister programs like the NBA Yao School, an afterschool league for teenagers that, above all else, emphasizes playing basketball for the sheer enjoyment of it.


Strong to the hoop and American shores: Zhou Qi, the Houston Rockets' 2016 second-round pick.
"Yao himself believes that what has been lacking in China is the number of people that have played sports for the fun," Shoemaker says. The NBA icon has lately assumed the presidency of the China Basketball Association (CBA), a national league of teams.

India has followed suit. With Jr. NBA in 19 of its cities across the country, it made sense for Mumbai to become the site of the league's first NBA Basketball School, which opened its doors this spring. The tuition-based program is for youths to age 18 .

Taking it a step further, prospects with professional basketball aspirations now have the opportunity to enroll in one of the newly formed NBA Academies. The hope is that these global hubs - including three in China, one in India and one in Australia that all launched this yearwill turn Asian national team players into legitimate NBA hopefuls.
"We have government-funded academies in a lot of sports, but in terms of that level of facility, it's the first," says NBA India Managing Director Yannick Colaco. "We're creating a legacy through this knowledge transfer with local coaches."

Supporting local pro basketball leagues will prove just as essential to the
"With [Yao] at the helm, I believe that many of the old practices will eventually fall by the wayside," Shoemaker says of China's professional-player development.

India's situation is even more problematic, as that nation currently lacks a clearcut professional league due to reported infighting within the Basketball Federation of India (BFI).

But there's an effort to change. "Our focus is growing the game of basketball... in that sense, we're completely aligned," Colaco says of NBA India's relationship with the BFI. "Everything we do, we do in correlation with the federation."

The long-tenured Philippine Basketball Association is having its own problems filling stadiums, but a newly opened NBA office in Manila should present more opportunities for collaboration.

Japan, which had an NBA office in Tokyo from 1994 to 2011, is also back on the pro basketball map after launching a new league with backing from the domestic sports authority. With the Summer Olympics coming to the country in 2020, Tatum of the NBA hints at renewed ties.

Few could question the region's underlying spirit for the game. Unlike most of the NBA-viewing public, Asian fans are forced to catch games in the morning-
> 'YAO BELIEVES THAT WHAT HAS BEEN LACKING IN CHINA IS THE NUMBER OF PEOPLE THAT HAVE PLAYED SPORTS FOR THE FUN."
sport's reach. But the NBA not having a direct hand in how it conducts business and handles its talent has presented some clear challenges.

Many CBA officials, for example, double as investors in the Chinese league, leading to top domestic talent being coddled and barred from leaving the country to play in Europe, a prime entry point to the NBA. National Team participation is mandatory, even when it leaks into the CBA season. The fundamental structure of the league-from outdated arenas to a three-month schedule to an overreliance on American imports-has left the majority of its teams in the red.
either on their commute or, for many, when they're already at work. But despite occupying a bad block for programming, viewership has steadily climbed across all major markets, due in large part to advances in live streaming.
"Their fans are sophisticated," Tatum says. "In those time zones, they're watching our games on our mobile platforms, our digital platforms . . . there's a consumption habit now that's been built there because we're making the product readily available, easily accessible to them."

Lucrative rights deals have been signed across broadcast and social media in several Asian nations, as well as videogames.

No surprise, Asia's also a priority for the league's most marketable players. Kevin Durant, who toured China last summer, will grace the hardwood of the NBA Academy in India this off-season. Fellow international "endorsement AllStars" like LeBron James (Nike, Tencent, Intel), Stephen Curry (UA, Vivo) and James Harden (Adidas) now make annual trips across the globe.

While individual player appearances are met with fanfare and mobs, the NBA's Global Games-preseason exhibitions involving two NBA teams or one NBA team and a foreign club - have arguably been an even bigger hit. "It's almost treated like an All-Star game when we go there," Deputy Commissioner Tatum says. "Last year, we sold out both games in a matter of hours."

This, despite the games not even counting toward the teams' win-loss records, is a true testament to the region's interest in the league's live-event experience. Actual regular-season games in Asia would obviously do big business, but that hasn't been attempted since a 2003 visit to Japan. "Frankly, I don't see us playing reg-ular-season games today in that part of the world", Tatum says, citing "jet lag and the potential impact it might have with their performance on the court."

Though the Global Games have made stops in the Philippines, Taipei and Macau, China has served as the exclusive Asia host for the past few years. That is to continue in 2017, with the league strategically selecting the country's top mer-chandise-selling team, the Golden State Warriors, to play the Minnesota Timberwolves, who sold a minority ownership stake to Chinese businessman Lizhang Jiang last summer.

Markets like Indonesia and the Philippines are beginning to lay the groundwork to follow in China's footsteps, but cricket-mad India may actually offer the most surprising upside in hoops. Its national team upset China in Asia tournaments in two of the last three years. "We know its qualities resonate with Indian youth," says Colaco, the NBA man there. "We believe it can be the number-two sport in the country . . . maybe in five to six years." (5)

## Hello, Dollars!

## BY MICHELA TINDERA

EVEN BILLIONAIRES think there's no business like show business. These six produced or coproduced Broadway shows this year, and four have Tony-nominated hits. The headliner: Len Blavatnik (with trophy, below), who financed the most shows by far, putting money into seven productions. The Great White Way has long run on the dollars of the ultrarich-even a young Daddy Showbucks named Donald Trump produced a 1970 show called Paris Is Out! It was a flop and closed in less than three months.


ALL BOX OFFICE FIGURES ARE FOR 2016-17 (THROUGH APRIL 30)
SOURCE: THE BROADWAY LEAGUE.

# Aggregating ¥¥¥ 

# China's Jinri Toutiao is breaking news to millions on their mobiles. 

## BY YUE WANG

With Facebook increasingly playing the role of people's daily news source, news-aggregation apps like Flipboard are losing their appeal. In China, where Facebook is banned, one such app has achieved staggering early success. Jinri Toutiao, operated by Beijing ByteDance Technology, has surpassed traditional news portals to become the information source of choice for tens of millions of users. The app, whose name means "today's headlines," doesn't have staff writers and editors, using instead artificial intelligence to tailor each newsfeed. Absorbing a user's location, smartphone model and click history, Toutiao's algorithm sorts through news, commentaries and video from more than 4,000 partner sites to find the best matches. And in a bid to attract the younger generation, a good portion of what it provides is bite-size, Buzzfeed-style stories, along with comics, GIFs, live-streaming shows and interactive Q\&A channels for entertainment.

Toutiao has 80 million daily active users, who spend an average of 76 minutes reading and watching the apps fare, making it the number-one news offering in China's iOS App Store, according to App Annie, a market intelligence firm. More than 70\% of its users are under 30, says Toutiao. The level of engagement beats Facebook's global average of 50 minutes a day, according to 86 Research analyst Zhang Xueru in Shanghai.

Zhang estimates that company revenue, mostly from online advertising, grew fivefold to more than 6 billion yuan ( $\$ 869$ million) last year. It is unlikely to turn a profit this year as it invests in content and operations, according to Zhang. (It pays for some video, for example.)

Investors, too, like what they see. Beijing ByteDance was valued at a whopping $\$ 11$ billion in a recent fundraising round that included Sequoia Capital China and


Founder Zhang Yiming has users spending 76 minutes a day at his app.

CCB International, the investment arm of China Construction Bank. That represents a huge leap from its $\$ 500$ million valuation after a 2014 round. The 34-year-old founder, Zhang Yiming, is said to hold $30 \%$.
"Investors in China like plat-form-based companies," says Ken Xu , a partner at Shanghai venture-capital firm Gobi Partners. "Toutiao has stable traffic and a sticky user base. People are willing to put a lot of money in a startup like that."

Zhang wasn't available to Forbes Asia, but the company says the idea of news aggregation came to him in 2008 when he was helping run social site Hainei.com. Zhang thought China's market was dominated by state-run media and other news sites that offered only lengthy, often stilted text.

After Hainei failed to take off and his partner Wang Xing went on to found Meituan, now China’s largest local-services platform, Zhang found his way to launch Toutiao in 2012. "When Toutiao started to do personalized content, other Chinese media companies were still focusing on very serious writing," Gobi's Xu says. "But the younger generation wanted more lighthearted stuff, and Toutiao very much catered to that."

Competition is growing. China's technology trinity-Alibaba, Baidu and Ten-
 search's Zhang says. Uber's China unit. atic content. (F)
cent-are all developing personalized news services. Traditional news portals such as Sina and $163 . c o m$ are catching up by adding feeds in their apps, based on users' browsing.

What's more, rivals are suing. In April, Tencent and Sohu alleged that Toutiao used their content without permission. They are seeking "millions of yuan" in damages. A Toutiao spokeswoman says its intellectual-property protection system is "far superior" to its competitors', adding that the company recently sued Tencent for IP infringement. "Competition is a major risk for them," 86 Re -

To find fresh growth opportunities, Zhang is expanding overseas. ByteDance has invested in media platforms in India and Indonesia. In February, the company acquired Flipagram, a U.S. video app, for an undisclosed amount. That deal was overseen by Liu Zhen, who previously headed

China still commands most of the company's attention. Regulators are tightening their grip on online media, and ByteDance has been repeatedly summoned over pornographic and illegal content that pops up across Toutiao's live streaming and Q\&A platforms, even behind the Chinese firewall.
"We provide stringent screening measures to ensure [content from providers] is compliant and meets our rigorous standards," the company says. It uses a combination of manpower and machines to police the platform, but relying on outsiders means it has to play whack-a-mole with problem-

# Dutertenomics 

# China-fueled spending in the Philippines could create a world of hurt. 

## BY ANDERS CORR

This online post drew much notice in Manila. Finance Minister Carolos Dominguez minimized China's role in infrastructure borrowing and said new tax revenue would cover it.-Ed.

According to the South China Morning Post on May 12, "Philippine Secretary of Budget and Management Benjamin Diokno estimated some US $\$ 167$ billion would be spent on infrastructure during Duterte’s six-year term, under the slogan ‘Build! Build! Build!'" That could increase current Philippine national government debt of approximately $\$ 123$ billion, to $\$ 290$ billion. But that doesn't include interest. According to my analysis, at $10 \%$ interest the new debt could go to $\$ 452$ billion, bringing Philippines' debt/GDP ratio to $197 \%$, making it the second worst in the world. That understates the burden to the Philippines, as existing national government debt would also accrue interest over that time that was not included in the analysis. Dutertenomics, fueled by expensive loans from China, will put the Philippines into virtual debt bondage if allowed to proceed.

Duterte and his friends and business associates could each benefit with hundreds of millions of dollars in finder's fees, of $2 \%$ to $7 \%$, for such deals. Duterte reportedly sought to fast-track some deals and has publicly mooted the possibility of declaring martial law for a wide range of issues, including drugs, traffic and the situation on Mindanao. Debt imposed on the public through corruption, fast-tracking or under martial law should be considered odious debt and not repayable. The only way to stop such unjust debt is for the terms to be entirely transparent to the Philippine pub-


Duterte and his administration have been less than transparent.
for the Philippines, the public should assume, to forestall a worst-case scenario, that the rate would be somewhere between $10 \%$ and $15 \%$. Over ten years, that could cause Philippines' debt/GDP ratio to balloon to as high as $296 \%$, the highest in the world.

At any likely interest rate, the Philippines will have to give political and economic concessions to China in order to repay interest or renegotiate such a large quantity of debt. That could include political conces-sions-for example, giving up territory or oil rights in the South China Sea, or it could include economic concessions, like selling China its national companies or agreeing to below-market rates on exports to China.

In the worst-case scenario, China would deem the Philippines too risky as its debt grows and stop such renegotiations, and another country, like Russia, could step in with even stiffer terms. This is currently happening to Venezuela, where people are starving and dozens have been killed in antigovernment riots. Venezuela took extensive loans from China and could not repay them when the price of oil dropped. Venezuela's President Maduro, who depends on the highinterest loans to keep his government in power, is so indebted that China will no longer extend significant capital. To repay China, Maduro is seeking new loans from Russia. This is rightly resisted by Venezuela’s National Assembly, which wants the right to approve loans. Maduro tried to shut down the Assembly in response and has been able to continue to seek the Russian loan against the Assembly's wishes. Something similar could happen to the Philippines in ten years. Buyer beware.

Anders Corr is a contributor to Forbes.com. and founder of Corr Analytics, which provides political risk analysis to commercial, nonprofit and media clients.

# China's AI Advantage 

# Veteran researcher and investor Kai-Fu Lee believes that the U.S. is destined to lose its lead in the artificial intelligence race. 

BY ALEXANDER KONRAD

Kai-Fu Lee watched the U.S. beat China to global internet leadership during the dot-com bubble from the inside. Now with what he sees as an even greater technological revolution taking place in the fast-growing field of artificial intelligence, Lee doesn't expect China to take a backseat a second time. "China started slow, and American companies went international," Lee says during a May visit to Forbes Media's headquarters. "But simple math says China has a larger GDP. The market will be bigger."

When Lee talks about AI, he speaks from firsthand experience. The Taiwan native developed the first speaker-independent phone recognition program as a Ph.D. student at Carnegie Mellon in the late 1980s, before stints at Apple and as an executive at Microsoft and Google in China-in fact, he was founding president of Google China.

Google and its peers were ultimately thwarted in their ambitions to carve out leadership stakes in the Chinese market, in part due to cultural differences among consumers as well as privacy clashes with the Chinese government. When Lee returned from working at Google's Mountain View, California, headquarters to launch his own VC fund, Sinovation Ventures, he came back to a China firmly entrenched in what he now describes as a duopolistic global tech economy. U.S. internet software continued to lead the English-speaking world, while a group of Chinese companies, famously led by Baidu, Alibaba and Tencent (B-A-T), controlled their domestic market and exerted increasing influence in Southeast Asia and developing markets.

With companies on both sides of the Pacific racing to develop applications of AI, China's scale can prove a decisive advantage, Lee believes. The country boasts perhaps $43 \%$ of the world's trained AI scientists, Lee says, with Microsoft alone training about 50,000 Chinese scientists in processes critical to the field starting in 1998. Overall, this doesn't represent the cream of talent in the field-that is still found in the U.S., Canada and Britain, he says-but China's legions are good.

China's political leadership continues to invest heavily in re-
search and technology. And developers may not face the same regulation when it comes to pushing real-world trials, such as with autonomous vehicles, or in mass data collection that would be viewed as intrusive or a privacy violation in the West.

In driverless cars, the U.S. has about a two-year head start, according to Lee. But each minute American tech companies find themselves mired in a regulatory battle or hobbled by objections from transportation incumbents, the Chinese can close that gap.

What's more, he says, top-down rule in China will countenance a long stretch of data-gathering experience in which the casualty rates from autonomous-vehicle use steadily drop-by orders of magnitude, Lee hypothesizes. Even relatively safe records may not pass muster in democracies.

Not only do Chinese companies have the advantage of a hypercompetitive market in which the leading players typically compete across a range of applications and use cases (compared with more specialized leaders in the U.S.), the Chinese government continues to invest in R\&D while unstable visa policies could encourage more academics to return to China after attending universities in the U.S. Even a language barrier can work in China's favor: Baidu's recently departed AI chief Andrew Ng told The Atlantic in February: "China has a fairly deep awareness of what's happening in the English-speaking world, but the opposite is not true."

Lee's odds on China are contested by at least one top American voice in the field. "The leading AI researchers, university departments and research labs are still in the U.S.," says Oren Etzioni, CEO of Seattle's Allen Institute for Artificial Intelligence. "However, China is moving fast. As long as we continue to have an open society and strong immigration, we will remain ahead."

The race to AI leadership is crucial because what we know as AI will greatly exceed direct technological applications, Lee argues. Industries ranging from banking to insurance, health care and media will all face massive transformations from automation. Lee is fond of telling the story of how he pitted his personal banker against computer-run trading algorithms. The machines produced a return that was eight times better. "Anything with

"Whoever has the most data wins": Kai Fu Lee sharing intelligence in mid-May with Forbes Asia editorial staff.
a feedback loop will give way to AI," Lee says. That could include scanning hundreds of insurance claims or mortgage applications, shipping orders and even evaluating patient X-rays. "In most cases it's okay to be mostly accurate," says Lee.

The small comfort for logistics managers, doctors and mortgage officers: a tiny percentage-Lee guesses about $10 \%$-of decisions will remain so mission-critical or life-and-death that a company can't take the chance the machine is wrong or its communications are off. "Robotics can fake some empathy, but compassion isn't there," Lee says. "With $10 \%$ wrong, you can still lose all trust."

Even near accuracy would still mean a massive displacement of workers, pushing the jobs to managerial or quality-control roles or putting a "last mile" human face on interactions. Lee and his team frequently invoke a 2013 Oxford research paper by Carl Benedikt Frey and Michael A. Osborne that predicted that 47\% of jobs in the U.S. economy would be threatened by automation. Lee is not impressed by recent developments such as Facebook's announcement that it would hire 3,000 moderators to help its systems flag and take down inappropriate videos. "That's a tiny number," he says. "Look at what percent of global internet users Facebook is reaching" relative to the number of people who will be paid to monitor them, he says. "It's noise."

The rising AI economy, meanwhile, won't look like the B-A-T companies or the de facto American hegemony of Apple, Facebook, Microsoft and Google. Lee believes the AI economy will be spread out across practices within tech companies and large corporations as well as sold as a contract service by specialists. Through his $\$ 1.2$ billion fund-building to $\$ 2$ billion-Lee is investing in applications that can benefit from AI , including, in America, SuperFlex, a company building exosuits for disabled
and elderly people, and Wonder Workshop, which makes robots to teach children computer science. (He's skeptical about humanistic service robots like Softbank's Pepper, however.)

Lee says he's investing about $95 \%$ in China and only $5 \%$ in the U.S. One brutal reality of training any machine-learning program, he notes, is that the more the system processes information, the better trained it gets, meaning the more it's used the smarter and more accurate it gets. And no research hub has more users at its fingertips than China. Says Lee: "Whoever has the most data wins." (B)

## FACEBOOK IN CHINA?

Google famously pulled its search engine out of China in 2010 and despite months of reported off-and-on discussions with the Chinese government has yet to return. To its former president of Google China, Kai-Fu Lee, Google is no longer the most intriguing U.S. internet company to the Chinese market. That's now Facebook, the leading social network and Instagram and WhatsApp owner led by billionaire Mark Zuckerberg. In April, Xiaomi's high-profile former vice president Hugo Barra joined Facebook to lead its virtual-reality efforts; Lee believes Facebook's VR hardware Oculus will launch in China in the coming months. But success for Oculus wouldn't increase the likelihood of Facebook's core platform appearing in China, which now has a host of social media alternatives. "Facebook has the best chance" when it comes to mainstream adoption in China, says Lee. "But no one has a chance." -A.K.

## A startup's life and death Down Under.

## BY RYAN MAC

In November 2015, Joanna Riley stood in front of an audience at a Dublin technology event exuding confidence. Dressed in a vanilla tuxedo jacket and clutching a black remote to toggle between presentation slides, she paced back and forth onstage while delivering a speech about ignoring rejection, a skill she employed many times while starting her company. "I started 1-Page in my pajamas in my apartment three and a half years ago, and today it's public for over half a billion dollars," she said.

For Riley, it was a moment of pride. A year earlier, 1-Page had used a little-known financial maneuver to become the first Silicon Valley technology company to go public in Australia, turning a no-name recruiting software startup into an Australian Stock Exchange (ASX) darling. In the 12 months after its initial offering, 1-Page's stock would rocket up more than $2,700 \%$ from its public debut price, propelled by an investor frenzy that would provide validation for its cofounder and chief executive. Riley's appearance at Web Summit, one of the most well-attended tech events in the world, was just deserts. She thought she had made it.

But San Francisco-based 1-Page was built on a combination of hot air, false promises and an unworkable product. Riley was the ultimate saleswoman who took 1-Page public and fed a dot-com-esque hype cycle that ended up destroying the company. In mid-May, its board voted to cease company operations after consistent quarters of unprofitability, missed targets and a dizzying drop in share price that erased more than $90 \%$ of the
company's value. The board also voted to remove Riley from the company she cofounded. "I didn't know anything going in," Riley said about taking 1-Page public in an interview with Forbes three days after being unceremoniously dumped. "I see it now. After raising every dollar the company has ever had and building it with, you know, complete hope, it's been taken away by someone."

Unlike the hundreds of startups that are unable to find funding and fizzle out every year, 1-Page flourished by taking advantage of a reverse merger, acquiring the dormant shell of an ASX-listed mining company and going public despite having no profits and less than $\$ 1$ million in revenue. Initially, the financials didn't seem to matter. 1-Page played up its Silicon Valley founding story, and Australian investors, whose economy is heavily linked to natural resources, suddenly had access to an American technology firm on the ASX. Enthusiasm created a bubble and turned 1-Page into one of the best-performing stocks on the ASX in 2015, allowing it to raise more than $\$ 43$ million in two separate offerings and ballooning its market cap to a peak of about $\$ 512$ million in September 2015.

Forbes interviewed ten former employees, who spoke on the condition of anonymity due to confidentiality agreements with 1-Page, and most agreed that 1-Page lacked a coherent product. According to them, clients ranging from Starbucks to Under Armour were signed up on trial periods and promised software that could comb through social networks and diverse data sets to source hard-to-find candidates for job positions. The soft-

"There are differences between being a CEO of a private company and a public company. I wasn’t told about those," says 1-Page cofounder and ex-CEO Joanna Riley.
ware couldn't do what Riley and 1-Page's sales team promised; most of the clients bailed after their free or discounted test runs were over.

In at least one all-hands meeting, according to two people who attended, Riley told her employees to "fake it until you make it," alluding to the idea that her salespeople could promise undeveloped features that might eventually be added to the software in order to close a deal. Riley told Forbes she was joking and was simply repeating a phrase that was often used by a now-departed board member. "She was so disconnected from reality and from what the actual product was," said one former staffer. "What they were selling was essentially vaporware." Riley told Forbes there was not enough time to test a beta product since the company was already in the public spotlight. "We were public, and we had to launch with our clients," she said. "We said [to them], 'We want you to be our beta.'"

But, critics wondered, why was 1-Page public to begin with? It had no track record, little revenue and a pipe-dream product. "There is no way a company like this should be listed on any stock market," said Merchant Funds Management's Andrew Chapman, an activist shareholder on 1-Page's board who led the effort to shut down the company and remove Riley. "It was just hype at the end of the day."

## "FLAKY DEALS"

The Australian Stock Exchange is littered with the shell companies of inactive mining and natural resources operations. These shells, sometimes referred to in Aussie investment circles as "cash boxes," typically trade at low volumes in line with the value of their remaining capital, adjusted for any leftover assets or liabilities.

Reverse mergers were not uncommon on the ASX but became more prevalent in 2014 when the exchange relaxed its rules on minimum share prices for listings. Foreign technology companies like 1-Page took notice, with at least 28 reverse takeovers taking place that year, up from 16 the year before. In 2015, there were 59 backdoor listings on the ASX, the most since 2000.

Introduced to the reverse-merger idea by her then-husband (they've since divorced), Riley merged her startup with InterMet Resources, a nonfunctioning nickel-mining company, and became the first Silicon Valley CEO to go public Down Under. In spite of the business' short life span Riley had already achieved what many technology executives spend their careers chasing: an exit. "The world tells you your valuation, not VCs, whose valuations are more art than science," she told the San Francisco Chronicle in November 2014. "We're a still very young company. An exit is a big deal."

Skirting the traditional venture capital route in raising money for a tech company is typically not a good sign, according to Scott Dettmer, a partner and startup advisor at law firm Gunderson Dettmer. He notes that reverse mergers sometimes
create companies that attract "fraudsters and bad actors," where thin trading volumes can allow for heavy influence by a few traders and huge swings in stock price. "In the [information technology] space, or basically across the board, these are flaky deals for companies that could not raise money in any other fashion," Dettmer says.

Riley disagreed. While she had raised about $\$ 3$ million in angel investments, she said she did not look to raise additional cash from venture capitalists before engaging in the backdoor listing. She added that she'd do it again, as 1-Page provided an example for "the hundreds of companies that followed us." (Forbes could not find evidence of "hundreds" of companies using backdoor listings on the ASX after 1-Page.) "I would have done it differently," she said. "I was the first-time CEO of a publicly listed company. There are differences between being a CEO of a private company and a public company. I wasn't told about those."

When Forbes reminded her that it was ultimately her decision to go public, she deflected attention away from herself and blamed her board and short-sellers, who, she said, weighed heavily on the company. And when asked if she thought
> "SHE WAS SO DISCONNECTED FROM REALITY AND FROM WHAT THE ACTUAL PRODUCT WAS. WHAT THEY WERE SELLING WAS ESSENTIALLY VAPORWARE: ${ }^{\square}$
a software-as-a-service product to recruiters, billing it as a platform for potential hires to pitch why they would be ideal for a certain position. Early employees didn't recall much traction. In the 13 months beginning January 1, 2014, the company recorded operating revenue of about $\$ 105,000$ and a loss of about $\$ 9.3$ million.

After taking 1-Page public in October 2014, she was profiled in business publications like Fortune and Fast Company, given business awards and invited to speak at tech conferences. As the spotlight and stock price increased, former employees say it increased pressure on them to close deals to generate meaningful sales or deliver new product features. And that's when it started to fall apart, as Riley did everything she could to prop up the stock price. "For Joanna, it was not a desire to deceive," said Patrick Riley, her father and cofounder, who eventually became dismayed with the direction of the company and was fired as an employee late last year. He abstained from voting in the mid-May referendum on whether to keep or remove his daughter from the company they had created together. "It was the desire of an overambitious person to perform," he added.

## KANGAROOS AND UNICORNS

1-Page's fundamental problem was its dysfunctional product. A year after its reverse takeover, the company pivoted to focus on a product called Source, a software interface that was supposed to create pools of candidates for customers looking to fill open jobs. Source was initially built on top of a database compiled by BranchOut, a formerly high-flying startup that raised $\$ 49$ million on the idea that it could comb Facebook and map personal connections for professional networking.

After Facebook changed its terms of service and cut off BranchOut's access-effectively forcing it out of businessRiley scooped up the company's database in a fire sale for $\$ 2$ million and 7.5 million 1-Page shares, hoping it would give her company a proprietary edge for Source. At least two former employees, however, said the database was useless. Facebook sent 1-Page a cease-and-desist letter threatening legal action if the company employed the BranchOut data, which had been improperly collected. LinkedIn would also later block 1-Page's IP address, preventing the company from crawling its website for employee information.

Former workers also cited Riley's lack of technical background as a major problem. In pitches to prospective customers, Riley drilled her sales team to say that the company had powerful algorithms powering the candidate search on Source. "This was entirely a lie," said one employee, pointing to the fact that workers at the company were manually searching databases and putting together candidate pools after obtaining job criteria from clients.

Investors, however, were fed a narrative that extolled Riley's merits as a Silicon Valley CEO and underscored the potential for 1-Page to be a massive business. In a report entitled "An American Unicorn in Kangaroo's Clothing?" two analysts for Vancouver investment bank Canaccord Genuity initiated cov-
erage on the company by setting the expectation that it could be a billion-dollar business. The analysts based their research on the company's own projections. When asked about these projections, Riley said she had no responsibility for the opinions of analysts and that 1-Page never made revenue projections, even though the report noted that the company guided Canaccord with its numbers. She added the document "was not a published report" and was not widely distributed, despite the fact it is still available for download from the ASX website.

Investors, including large institutions, took those projections at face value and bought into the company. In October 2015, 1-Page held a secondary offering, selling about \$36 million of shares to institutional investors like Fidelity, which amassed a $6.7 \%$ position in the company by the end of November 2015. A year later, the $\$ 36$ million worth of shares sold to investors were worth less than $\$ 3.5$ million.

## A HOSTILE TAKEOVER

As the irrationality that propelled 1-Page up the ASX subsided, gravity set in, as did the realization that the company could not live up to its lofty sales expectations. While it displayed plenty of logos on its site and issued press releases about relationships with companies like Starbucks and Amazon, those familiar with the company's sale process said that most clients never signed up beyond a brief trial period. Among them was Under Armour, whose logo is still on 1-Page's site to this day, despite ending their brief relationship in early 2016. The sportsapparel company agreed to a $\$ 10,000,30$-day trial and gave the company multiple "at-bats" to find candidates for certain positions, said Chris Hong, Under Armour's vice president of talent. Others at Under Armour who worked directly with 1-Page's sales team, said they got "zero return" on their investment and that the candidates they received could have easily been found on LinkedIn.

Sales for the 12 months ending January 31, 2016, while improved, were just $\$ 290,000$, compared to Canaccord's earlier expectation of $\$ 4.1$ million. 1-Page's net loss escalated to about $\$ 10$ million, up from $\$ 9.3$ million the previous year. As the stock continued to fall through 2016, executives and board members left, the company attempted to downsize to save costs and an activist shareholder vacuumed up shares to mount a hostile takeover. On December 23, Riley resigned as CEO but kept her board seat, hoping that a new executive could appease the markets.

The move did not quell the negative sentiment. After the activist, Merchant's Andrew Chapman, joined the board, he soon convinced its other members, sans Riley, that the best way to proceed would be to save the company's remaining cash by shuttering operations and turning it into a shell. In midMay, that decision came full circle. Public investors voted more than two-to-one in favor of removing Riley from the 1-Page board. Two days ahead of her 35th birthday, she boarded a plane from Sydney to San Francisco.

Her Australian adventure was over. (F)
With reporting from Sue Radlauer.

# Google Slayer 


#### Abstract

Starting with \$15,000, Jorn Lyseggen built a version of Google Alerts before Google Alerts. And despite the big-foot competition, Meltwater has found the talent to forge a $\$ 300$ million company.


BY ZACK O'MALLEY GREENBURG

Adecade ago, with Google and Yahoo lumbering onto its turf, Jorn Lyseggen's fledgling media-intelligence company, Meltwater, faced an existential challenge. Getting clients to pay Meltwater to track press mentions suddenly became a lot harder when Google Alerts began offering the same service for free. Rather than cut back, Lyseggen went on a recruitment bingeinterviewing 3,000 job applicants face-to-face in a dozen or so countries over a span of five years.

To find unorthodox solutions, he brought on an eclectic cast of characters. There was executive director Kaveh Rostampor, an Iranian refugee who arrived in America via Sweden. Another hire, Sebastian Geides, had been a competitive handball player on the verge of finishing a theology program. When Lyseggen asked him why he would choose Meltwater over the priesthood, Geides responded that Meltwater's product was easier to sell.
"Talent is talent, everywhere," says Lyseggen, 48. That philosophy has helped him not only survive the challenges from Google and Yahoo but also transform Meltwater into a company that produces annual revenue approaching $\$ 300$ million, with an estimated profit margin of $15 \%$. Meltwater, based in San Francisco, has 25,000 clients-from Harvard Business School to the Denver Broncos-all paying for what's essentially a souped-up Google


Alerts. It notifies clients about media mentions but also offers tools that, for example, can distinguish positive mentions from negative ones. Prices for Meltwater range from \$5,000 to \$25,000 a year.

Lyseggen didn't have to look far for proof that talent is talent everywhere. Born in South Korea in 1968, he was adopted by a Norwegian family and raised in a tiny farming village near the Swedish border. "When people meet me, they're a little surprised that I don't look tall and blond and dashing," Lyseggen says. "I was pretty much a red-

neck kid. I didn't know much about the world. I have friends that still are pumping gas."

He went a different route, enrolling at the Bergen University College of Engineering in 1988, where he spent nearly all of his student-loan money-roughly $\$ 10,000$ - to buy the fastest personal computer available and began to design software. After graduating, he went to work for the Norwegian Computer Center, where he grew fascinated with Java. He then quit and
founded an internet-consulting outfit, EU Net Media. In December 1995, with Lyseggen's help, Norway's first online transaction was recorded. Two years later, he sold the consulting firm for $\$ 7$ million; he then launched a similar firm and got $\$ 40$ million for it in 1999. He started yet another and watched it go public in Sweden and soar to a market cap of $\$ 500$ million, only to see the share price plummet during the dot-com bust.

Raised in Norway by adoptive parents, Jorn Lyseggen says people are often surprised he isn't tall and blond. He was photographed in Ghana at his school for entrepreneurs.

## GOING, GOING, GHANA

The bridge on the outskirts of Accra, Ghana, looks like something from an Indiana Jones movie: a series of creaky wooden planks suspended by rope over a fetid stream. Towering palm trees and tin-roofed shacks dot the overgrown landscape. Appearances can be misleading. The span was designed and built by engineers trained by the Meltwater Entrepreneurial School of Technology, a program created by Meltwater founder Jorn Lyseggen to help West African entrepreneurs learn how to launch companies. Annual funding from Meltwater: \$2 million.

The creek separates the two buildings that constitute the school's headquarters: on the near side, classrooms; on the far side, airconditioned offices connected by a spiral staircase adorned with quotes from Bill Gates, Warren Buffett and Nelson Mandela. The bridge reduced the trek between the edifices from 20 minutes to 2 . Inside, entrepreneurs-in-training create startups from scratch and workshop them with other students and faculty. The final exam is a pitch session in front of Lyseggen and other investors, with up to $\$ 200,000$ in funding on the line.

Successful pitches move on to the school's incubator. Among them: Kudobuzz, which amplifies companies' positive ratings online; it has taken $\$ 190,000$ in investment capital from Meltwater and 500 Startups. Claimsync, a platform that processes medical claims, raised more than $\$ 100,000$ before getting bought for an undisclosed sum. Tress, a hairstyle app, "became the only place to find out what Ghanaian, Nigerian or black women in London . . . have on their head," says cofounder Priscilla Hazel. It also earned a $\$ 20,000$ grant from Y Combinator. -Z.O.G.

Lyseggen forged ahead and founded Meltwater in 2001, seeding it with just $\$ 15,000$ and opening a tiny office in an Oslo ship-yard-because, he says, he was pouring money into other startups that excited him more and didn't want to subsidize a struggling business for long. But he believed in Meltwater's premise. At that point, Google was just three years old and hadn't yet launched Google Alerts. In Lyseggen's view, the world was drowning in information, and he wanted to find a way to use software to help simplify things. "The sell was a subscription to the service that monitored all the news that was published online," he says. "Whenever news that was relevant to them was published, the clients would be notified."

Initially, Lyseggen and his very small sales team pitched Meltwater to 1,500 companies. The answer from 1,499 was no, with one maybe. Lyseggen told his team they couldn't pitch the service until they got a sense of their clients' pain points. Only with that context in mind were they permitted to proceed with the hard sell. He also required that all subscription fees be paid up front for the entire year so he could continue bootstrapping the business. Both moves worked: By the end of 2003, Meltwater had signed 1,000 clients and revenue had reached seven figures.

The following year, it expanded into Sweden. Warming up to his own company, Lyseggen brought new hires to Oslo and trained them for three months before returning them to Stockholm to open a new office, which was cash-flow-positive after two weeks. He repeated the process as he spread Meltwater across northern Europe, and by the end of 2005, annual revenue had reached $\$ 11$ million.

As Meltwater continued to expand, Lyseggen unfurled his ex-haustive-and exhausting-approach to recruiting: the 3,000-interview binge. With his human resources teams, he concentrated on top universities, trying to hire only candidates with management potential-as well as intelligence, drive and wit. The new hires helped Meltwater compete as Google Alerts and Yahoo News
inundated the media-intelligence space in the Web 2.0 world. Lyseggen cast his new competitors as entry-level versions of his superior service-while constantly trying to improve Meltwater's once-clunky product. Says Ben Hunt, director of digital media for the Denver Broncos, "The interface has come a long way."

When Coca-Cola asked for an analytics solution that made it easier to spot trends affecting competing brands, Meltwater built it. Other clients found new applications on their own. The CEO of a Swedish window company told Lyseggen he used Meltwater's hyperlocal media tracking to pinpoint burglary spikes so he could market more heavily in the areas affected.

During this period, Lyseggen began pondering what African youngsters might do with high-speed internet and computers like the one he had bought as a college student. "I concluded that if I wanted to do something impactful," he says, "I needed to do something that was built on my core expertise."

In 2008, Lyseggen established the Meltwater Entrepreneurial School of Technology, an all-expenses-paid program that helps African entrepreneurs learn how to launch companies. He selected Accra, Ghana, as its home (see box). He raced around the globe, doing 200 interviews with NGOs, colleges, software companies and potential students. Today the program accepts some 60 of 6,000 applicants a year. Instructors start with basics: how to write a business email, how to connect on LinkedIn. Then come units on coding, marketing, accounting and pitching investment ideas.
"Africa could be a place where companies all over could find software developers," Lyseggen says. "It's a population of a billion people. It's going to double and triple in the next few decades. Some people might think that's scary, and of course, there are concerning things around that as well, but if you think of it from a talent perspective, what a phenomenal talent pool."

In the meantime, Lyseggen is happy to tap that pool for Meltwater. He recently hired a handful of graduates from the entrepreneurial technology school to work on his mobile team. (F)

## One for Mickey's Mantel

Disney's $\$ 19$ billion megadeal for Capital Cities/ABC in 1995, pairing the Mouse and friends with SportsCenter, was the rare big-media consolidation that actually worked.

## BY ANTOINE GARA

CASH of THIE TIIANS
The July 31, 1995, merger combined ABC's nationwide broadcast channels and, crucially, ESPN with Disney's film studios and theme parks. Just over a decade later, before Disney's next big acquisition push, revenue had jumped more than 70\%; earnings per share increased $50 \%$.

## THE THRILL OF VICIORY

In 1984, ABC took control of ESPN for just $\$ 188$ million. By 2005, the combined companies' cable networks (ABC Family among them) were generating $23 \%$ of sales and $53 \%$ of operating income. Today ESPN struggles amid cord cutting; it lost 2 million subscribers in 2016 alone.

The Walt Disney Company
Capital Cities/ABC, Inc.
abc

We acted as financial advisor and rendered a faimess opinion for The Walt Disney Company in this transaction.

Bear, Stearns \& Co. Inc.
January 4, 1996

The deal wouldn't have occurred-at least not as soon-without Warren Buffett, then the largest Capital Cities/ABC investor. During a chance meeting in mid-July 1995, Buffett helped Cap Cities CEO Tom Murphy and Disney head Michael Eisner solve their biggest dispute: whether an acquisition would be all cash (as Disney preferred) or stock (Cap Cities' wish). Murphy and Eisner agreed to compromise, and the deal was put together in only two weeks.

WARRENS WINNING BET Buffett had invested in television and radio broadcaster Capital Cities in 1985 to help it finance its $\$ 3.5$ billion pickup of much larger $A B C$. In the end, Buffett's Berkshire Hathaway received $\$ 1.2$ billion cash and $\$ 1.3$ billion in Disney stock, realizing a $\$ 2.2$ billion gain.

TURMOLL AT TH: TOP Murphy and Capital Cities president Dan Burke were nearing retirement when Disney made its move. The Mouse was changing, too: In 1994, CEO Michael Eisner fired studio chief Jeffrey Katzenberg; onetime "superagent" Michael Ovitz would leave the company in 1997 after a brief tenure as president. Cap Cities COO Robert Iger replaced Eisner as Disney CEO in 2005 and has since presided over a fourfold increase in company stock.

# The Wizards From Oz 

> Enterprise software giants use armies of salespeople to hawk imperfect products and endless updates. The two Australian billionaires behind Atlassian have built smarter tools that sell themselves. Just ask Tesla, Snapchat, NASA and the entire Ivy League.

Fresh off the red-eye from San Francisco, Mike Can-non-Brookes enters a rented office space in Midtown Manhattan to seal the biggest deal in his company's history. Dressed in a Detroit Tigers T-shirt and blue baseball cap, he greets the room in an undulating Australian twang. Seated around a conference table are executives from his collaboration-software firm, Atlassian, which is in the final push to acquire Trello, a smaller competitor whose founder, Michael Pryor, is also present. For four hours, Can-non-Brookes relentlessly sells the importance of achieving scale and the benefits of uniting their rival firms.

Pryor is convinced. One month later, in January 2017, Atlassian will officially acquire Trello in a $\$ 425$ million deal that will help send company shares up $47 \%$ in four months and add $\$ 820$ million to the fortunes of Cannon-Brookes and his cofounder, Scott Farquhar. The 37 -year-old Aussies, who dress more like off-duty surfers than top-flight executives, are worth $\$ 2.6$ billion each.

That ascent has vastly outstripped the pair's humble objective when starting Atlassian in 2002: dodging a lifetime of corporate IT drudgery. "Our aspirations were literally just to not get a real job," Farquhar admits, "and to not have to wear a
suit." Those aims thoroughly satisfied, they have managed to reach a few extra milestones as well: a blockbuster IPO in 2015, annual revenues approaching $\$ 600$ million and status as one of the most successful technology startups in Australian history.

The founders, who serve as Atlassian's co-chief executives, freely acknowledge the improbability of their meteoric rise. "I
 think we're completely underskilled and under-experienced for the job that we're in," Can-non-Brookes deadpans. But despite the self-effacement, they have unquestionably built a highly disciplined business with a continually expanding global footprint. What began as Jira, a bug-tracking tool for software developers, has since morphed into over a dozen collaboration products used by many of the world's most prominent innovators, including NASA, Snapchat, Twilio and Spotify.

Atlassian has 85,000 customers, who pay as little as a few


Mike Cannon-Brookes (left) and Scott Farquhar started Atlassian to avoid getting "real jobs" after college. Half of Australia's comp sci grads apply to their company.
dollars per person per month for access to its software. Confluence, its knowledge-sharing app for teams, is its most popular after Jira. Other products include Bitbucket, an online repository for storing code; Bamboo, a technical-workflow interface; and Hipchat, a messaging service that competes with Slack. Trello, the latest addition, is a project-management tool that helps Atlassian further appeal to individuals and smaller, less technical teams.

In essence, Atlassian has taken on the unsexy mission of bridging organizational and communication gaps. If the backend seems dry, the applications are anything but. When Elon Musk was developing the software underpinning Tesla's electric car, he turned to Atlassian. SpaceX is using its software to coordinate coding teams and rocket scientists, and NASA relied on it to help plan the Curiosity Rover's mission to Mars. The customer list extends further: Airbnb, BMW, BlackRock, Sotheby's,

Paypal, all eight Ivy League universities and $85 \%$ of the 100 largest companies in America.

That success has come despite Farquhar and CannonBrookes' insistence on skirting industry norms. Atlassian has no sales staff, unheard of in the hypercompetitive world of enterprise software. And in an era when some tech leaders helm more than one multibillion-dollar venture (Jack Dorsey, Elon Musk), the cofounders are the conspicuous duo leading a single entity.

Growth has come easily so far, but the pressure is on for Atlassian—which posted just a $\$ 4.4$ million profit last yearto prove it deserves its $\$ 8$ billion market cap. And as it ventures further from its technical core competency, competitors are anything but idle. Smaller startups like Slack and Asana are nibbling away at market share, while industry giants like Microsoft pose a persistent threat from above. With the U.K.'s Clearvision, it is active in India against local rivals Zoho and Freshdesk.

Farquhar and Cannon-Brookes, unified in their drive to fend off such dangers, began their lives on disparate trajectories. Cannon-Brookes, the son of an English investment banker, spent much of his youth caroming between Sydney and a ritzy British boarding school. He bought his first computer using airline miles and decided to pursue a career in technology on a whim after being accepted into a prestigious business and computer science scholarship program at the University of New South Wales.

Farquhar, meanwhile, was raised in a home with much more modest means. His mother worked at Target and later McDonald's, his father at a service station, and he acquired his first computer-a barely functional Wang model-after his dad's
third-party support for a Swedish software firm. Farquhar, eager to avoid another consulting stint, was the only person to sign on.

After graduating, they huddled in their respective bedrooms, working to cultivate clients under the banner Atlassian-named for the Greek titan Atlas, who holds up the heavens. But the third-party-support model proved difficult to scale, so they testdrove a number of other projects: a mail-archiving tool, a knowl-edge-management product and Jira, designed to help coders track bugs.

Jira was the first to gain traction, so they scrapped the other ideas and went all in. There was only one possible business model. "Our software didn't do very much to start with, so we couldn't sell it for much money," Farquhar explains. "If you aren't going to sell it for much money, you need to sell a lot of it. To sell a lot, it needs to be sold globally. And if you sell globally, it's got to sell itself online."

So Atlassian put Jira on the Web and largely let customers find it on their own. Among their first clients was American Airlines, which bought a thousand dollars' worth of software without ever speaking to the Atlassian team. "American Airlines was the first company that just sent us some money and said, 'We want the software,'" Cannon-Brookes says. "That was a pretty big moment. Obviously, we've continued to see that model."

That low-cost approach gave the company a positive cash flow from the get-go, allowing Cannon-Brookes and Farquhar to make outsize investments in research and development and to pay early hires in cash rather than forfeit equity.

Buoyed by organic growth, Atlassian took no outside capital until 2010, when Accel Partners invested $\$ 60$ million at an estimated $\$ 400$ million valuation. By the next funding rounda $\$ 150$ million infusion led by T. Rowe Price in 2014-its valuation had soared to $\$ 3.3$ billion, and its unassuming, shaggy-haired co-CEOs were billionaires. The following year, the company went public with a $\$ 4.4$ billion market cap, and their fortunes swelled even more.

The founders downplay their riches, citing job creation as a more meaningful metric. But belying their low-maintenance public personas are some decidedly ten-figure trappings. Cannon-Brookes speculates in Bitcoin and invests in sci-fi passion projects like nano-satellites. In March, he sought to alleviate South Australia's power crisis with the help of Elon
business threw it away. He too landed at UNSW as part of the same scholarship cohort, one of a few dozen standout students offered an annual stipend of roughly $\$ 9,000$.

Despite their differences, the pair developed a fast affinity. "He just seemed like a really good bloke," Cannon-Brookes recounts with signature nonchalance. Nevertheless, they spent most of their college years working on separate projects: Can-non-Brookes on a couple of mildly successful startups, and Farquhar, like many of his classmates, as an unhappy intern at a technology consulting firm.

They finally teamed up during their last year as undergraduates after Cannon-Brookes sent an email to a handful of classmates seeking partners for a new startup. The company would provide

Musk, engaging in a round of high-profile Twitter diplomacy in a bid to import a 100 megawatt-hour Tesla battery farm (a plan that, for myriad reasons, has so far gone nowhere). For his part, Farquhar recently paid $\$ 52$ million for a 154 -year-old sev-en-bedroom New South Wales estate that features a harborside tennis court, reportedly Australia's priciest home purchase ever.

With a lifetime of cash already stockpiled, the two are focused on making Atlassian an indispensable tool of enterprise that will catalyze many of the next generation's most profound innovations. The Trello acquisition, then, is simply phase one of a master plan. "In ten years' time we'll still be very young and doing the job at 47," Cannon-Brookes says. "We think about the world in decades."

## November 15, 1952: Blades of Glory

BY ABRAM BROWN


NOTABLE \& NEWSWORTHY Lights, Cinerama, Action!
As a young man, Lowell Thomas had helped turn T.E. Lawrence into Lawrence of Arabia by filming and photographing the British Army captain during World War I. Now stock in Thomas' new company, Cinerama, was soaring after it debuted a new style of widescreen cinematography that would later be used by such directors as John Ford and Stanley Kubrick.

TWO DECADES HAD passed since the death of King C. Gillette, but his razor manufacturer still ruled its industry. Half of the razors sold in America were Gillette, sales of which topped $\$ 100$ million annually (over $\$ 900$ million today). Company president Joseph Spang had run things smoothly for the previous 14 years, displaying the same knack for advertising and promotion as the business' legendary founder. Under Spang, Gillette's marketing budget had grown almost sevenfold to $\$ 7.5$ million (about $\$ 70$ million in 2017).

Gillette's business practices had some sharp edges, though. Its blue-collar employees described a highly stratified environment despite a professed egalitarian workplace. "We're peasants!" one told Forbes. The company didn't think too highly of its public shareholders, either, leaving investors to "ponder skeleton statements cloaked in consolidated mystery for 'competitive reasons.'"


EPILOGUE
Sharp-Tongued
When Gillette made the cover again in February 1991, its chief, Colman Mockler, wasn't a fan of the way we illustrated him. He had fended off four takeover bids in two years but took umbrage at our depiction of the aftermath: a bloody handprint on his white shirt. He didn't have much time to dwell on it. He died the month the issue hit newsstands.

## EDITOR'S DESK <br> We Liked Ike

For the first time in nearly 25 years, America had a Republican president:
Dwight D. Eisenhower. Malcolm Forbes partly ascribed the ex-general's victory to his being "outstandingly equipped to deal emphatically with Communism at home and abroad."

## SIGN OF THE TIMES

 The TriplicatorThe Three Unit Copy Typist was a trio of typewriters linked by an electrical-pneumatic mechanism and sold by the American Automatic Typewriting Co. Whatever was typed on the so-called "master" machine was simultaneously reproduced on the other two.


## AMAZING ADS

## Steeling the Spotlight

U.S. Steel's many jobs added up to $\$ 3.1$ billion in sales, some $\$ 28$ billion today. It's far less busy now, doing only about a third as much revenue.

# How the West Was Won 

# Despite making a series of smash-hit games for its home Asian market, NCSoft struggled to translate to America-until its billionaire founder put his MIT-educated wife at the controls. 

BY DAVID M. EWALT

In 1998, a startup called NCSoft launched one of the most popular videogames of all time, although you've probably never heard of it. The game has earned more than $\$ 2.6$ billion in revenue, including $\$ 330$ million in 2016, 18 years after it hit the market. But you probably don't know anyone who has played it.

Two decades after it was founded, South Korea-based NCSoft is one of the biggest game companies on the planet, with a long list of hits and successful franchises, yet it remains largely unknown across the Pacific. Games like its flagship title, Lineage, were blockbusters in Asia but failed to catch on with Western players. Repeated attempts to expand the business into the United States never gained traction.

But Kim Taek-Jin, the company's billionaire CEO, is determined to change that. In the past two years, NCSoft has built a new game studio in California, pivoted toward a risky mobile strategy and begun developing new properties for Western audiences. Kim is so committed to translating NCSoft's success that he has even bet his family on the project: His wife, Yoon Songyee, an accomplished executive and neuroscientist known as Genius Girl in Korea, moved to California in 2014 with their kids to run the company's U.S. subsidiary.
"We've been keeping our eye on the Western market for a long time, and it's important to us," says Yoon, the CEO of NCSoft West. "We have a big presence in Asia and Korea, but that's not enough. We want a global audience."

Kim founded NCSoft in March 1997, when he was a 30 -yearold engineer who had worked for Hyundai Electronics in R\&D and in the division that operated Korea's first internet provider. NCSoft was initially positioned as a systems-integration company, but Kim and several key employees were enthusiastic gamers and quickly realized their networking know-how could be used to power videogames with thousands of simultaneous users. In September 1998, NCSoft launched Lineage, one of Korea's first massively multiplayer online role-playing games, or MMORPGs,
in which players fight and explore their way through a medieval fantasy setting. The game was a hit: Three years later, it had more than 3 million subscribers paying about $\$ 25$ a month.

Kim quickly tried to repeat that success in America. In May 2000, the company launched NCSoft Interactive, a subsidiary in Austin, Texas, and just over a year later released an English-language version of Lineage in North America. But Western gamers were much less enthusiastic than their Korean counterparts. The game was built for Asian consumers who often played with groups of friends, in internet cafes, on relatively underpowered computers. Americans played solo, at home, on newer PCs, so the game seemed difficult, repetitive and dated.

Lineage struggled in the U.S., but NCSoft didn't give up. In 2001, the company acquired Destination Games, also in Austin, but the studio took six years to release its first title, the MMORPG Tabula Rasa, which sold so poorly that NCSoft shut it down after just 15 months. In 2002, NCSoft acquired Seattle developer ArenaNet, and that deal went better: ArenaNet's 2005 Guild Wars remains one of NCSoft's few hits in North America. Yet back in Korea, NCSoft prospered. Today the company has more than 3,000 employees, operates seven successful MMORPGs and had worldwide sales in 2016 of more than $\$ 860$ million. "They are a major company in Korea, where they generate most of their revenue," says David Cole, CEO of market research firm DFC Intelligence. "In the U.S. they are a one-trick pony."

If NCSoft is going to fix that problem, the responsibility will fall on NCSoft West's Genius Girl chief executive. Korean newspapers gave Yoon the nickname after she earned a Ph.D. in computational neuroscience from MIT in 2000, when she was 24, and then quickly climbed the ladder at McKinsey \& Co. and Seoulbased wireless giant SK Telecom. In 2007, she married Kim and, a year later, joined him at NCSoft.
"I studied electrical engineering, computer science, artificial intelligence and brain sciences, without knowing that I would be working in the game industry," Yoon says. "But everything is
so related." As NCSoft's chief strategy officer, she pushed the company into AI (to keep customers paying and playing) and oversaw the development of Guild Wars' successful sequel. Yoon was made CEO of NCSoft West in November 2011.

In May 2015, Yoon launched Iron Tiger Studios, a new mobile-gaming division, based in San Mateo, California. NCSoft had only dabbled in mobile games before. The company's main products were games that were huge, complex and expensive to make, a far cry from the small and inexpensive games that dominate the mobile market.

It's a risky strategy. Plenty of game companies in the U.S. have tried and failed to translate their products to the mobile market. But mobile is also an "untapped frontier with fewer built-in biases," says Michael Pachter, managing director of equity research at Wedbush Securities. "I think that some of their properties will work better in the West on mobile."

If they do, the rewards could be significant. According to market research firm Newzoo, mobile is the largest and fastest-growing segment of the $\$ 100$ billion global game market, with revenues estimated to climb $19 \%$ in 2017 to $\$ 46.1$ billion.

NCSoft built out Iron Tiger quickly. It will reach 150 employees by year's end, and the studio's first game (Aion: Legions of War) is expected to be released in the next few months. Meanwhile, NCSoft West is also working on building better Westernizations of its existing Korean games-not simply translating the in-game language but adjusting art to Western styles and tweaking the action for Western gamers.
"Bringing games directly from Korea to just translate and publish them taught us what works and what doesn't", Yoon says. "Western players pay attention to narratives and their experience within the game . . . but don't necessarily spend a lot
$\stackrel{山}{\mathbb{W}}$ 訔 of time trying to understand the saga and legend behind it." Americans also like being heroes, she says, and are more likely to play solo.

So far, the strategy is working. In January of last year, NCSoft West released a Westernized version of its martial arts game


NCSoft West CEO Yoon Songyee, an accomplished neuroscientist known as Genius Girl in Korea, wrote her Ph.D. thesis on a new method for designing virtual creatures with realistic personalities and emotions.

## GLOBAL 2000

## THE WORLD'S BIGGEST COMPANIES



China holds on to the top of the 2017 Global 2000, our annual ranking of the world's biggest and most powerful listed companies. The Industrial \& Commercial Bank of China and the China Construction Bank take the No. 1 and 2 spots for the fifth consecutive year. Twelve percent of the companies in the top 500 are from China-Hong Kong, up from just $2 \%$ on our inaugural list in 2003. Asia-Pacific leads this year's Global 2000 with 763 companies and a combined market value of $\$ 13.2$ trillion. Companies from the region make up $38 \%$ of the list compared to $23 \%$ in 2003. Global 2000 companies are ranked using four criteria: sales, profits, assets and market value. Total market value increased by $10 \%$ over last year. In comparison, global GDP grew by 3.1\% in 2016.

THE TOP 100

| 1 | - | ICBC |
| :---: | :---: | :---: |
| 2 | - | CHINA CONSTRUCTION BANK |
| 3 | - | BERKSHIRE HATHAWAY |
| 4 | A | JPMORGAN CHASE |
| 5 | A | WELLS FARGO |
| 6 | $\nabla$ | AGRICULTURAL BANK OF CHINA |
| 7 | - | BANK OF AMERICA |
| 8 | $\nabla$ | BANK OF CHINA |
| 9 | $\nabla$ | APPLE |
| 10 | - | TOYOTA MOTOR |
| 11 | - | AT\&T |
| 12 | - | CITIGROUP |
| 13 | $\nabla$ | EXXONMOBIL |
| 14 | - | GENERAL ELECTRIC |
| 15 | - | SAMSUNG ELECTRONICS |
| 16 | - | PING AN INSURANCE |
| 17 | $\nabla$ | WAL-MART STORES |
| 18 | $\nabla$ | VERIZON COMMUNICATIONS |
| 19 | - | MICROSOFT |
| 20 | - | ROYAL DUTCH SHELL |
| 21 | - | ALLIANZ |
| 21 | $\nabla$ | CHINA MOBILE |
| 23 | - | BNP PARIBAS |
| 24 | - | ALPHABET |
| 25 | - | CHINA PETROLEUM \& CHEMICAL |
| 26 | - | TOTAL |
| 27 | $\nabla$ | AXA |
| 28 | $\nabla$ | DAIMLER |
| 28 | $\nabla$ | VOLKSWAGEN |
| 30 | - | MITSUBISHI UFJ FINANCIAL |
| ASIAN COMPANIES ARE IN RED TYPE. |  |  |

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BANCO SANTANDER
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PROCTER \& GAMBLE
HSBC
GOLDMAN SACHS
SIEMENS
BMW

INTEL
POSTAL SAVINGS BANK OF CHINA
SBERBANK

COMMONWEALTH BANK A
MORGAN STANLEY



## METHODOLOGY

THE FORBES GLOBAL 2000 IS A LIST OF THE WORLD'S LARGEST PUBLIC COMPANIES AS MEASURED BY REVENUES, PROFITS, ASSETS AND MARKET VALUE AS OF APRIL 7, USING DATA FROM FACTSET RESEARCH SYSTEMS. WE WEIGHT THE FOUR METRICS EQUALLY TO COME UP WITH A COMPOSITE SCORE. NOT INCLUDED ARE EMPLOYEE- OR COOPERATIVE-OWNED ENTITIES SUCH AS HUAWEI OF CHINA AND FONTERRA OF NEW ZEALAND. COMPANIES STRUCTURED AS LIMITED PARTNERSHIPS, SUCH AS SOME LARGE PRIVATE EQUITY FIRMS, ARE EXCLUDED FOR ACCOUNTING INCONSISTENCIES. LATER ACTIVITY NOT REFLECTED.

$\triangle$ UP $\quad$ DOWN

- UNCHANGED NEW


# "WE MUST TRANSFORM 

> Midea makes more refrigerators, air conditioners and other appliances than any other company. Now, with the advantage of its low-cost Chinese labor disappearing, it's entered the robotics business.

## BY MICHAEL SCHUMAN

T
he chief executive of the world's largest appliance company had arrived from China and stood in front of a tough crowd in Augsburg, Germany. Some 3,000 employees of robot-maker Kuka had gathered to meet their new boss. Paul Fang runs Midea Group, and a few days earlier he had finalized its $\$ 3.9$ billion acquisition of the proud German company. The deal had sparked controversy from the shop floor all the way up to the highest ranks of the European Union. Would he shutter the German factories, lay off all its workers and walk off with Kuka's homegrown technology? Was it wise for Germany to sell a company with such advanced technology to China in the first place?

Fang's task in that January town hall meeting was to soothe these fears. With thousands of skeptical eyes boring into him, he tried to sell the acquisition as a "win-win" for both companies. "We will work together to develop the market, help Kuka to grow," he says he told the audience in a short address. "What's wrong with that?"

Back in his headquarters in Foshan in southern China, a more relaxed Fang was still not certain he convinced the doubters. "When I was standing on the stage, I understood perfectly well that the majority of these people may not be willing to accept the current situation," he told Forbes Asia. "I tried to think from their perspective, how they feel. It's not something one meeting can solve."

But solve it Fang must—not just for the future of Midea, but also

AUTOMATIC DATA PROCESSING autonation AUTOZONE AVALONBAY COMMUNITIES AVERY DENNISON
AVIC CAPITA
AVIS BUDGET
AVIVA
AVNET
AXA
AXIS BANK
AXIS CAPITAL
AYALA CORPORATION BABCOCK INTL BAE SYSTEMS


BCV (BANKING)
bDO UNIBANK
BECTON DICKINSON
BED BATH \& BEYOND
BEIERSDORF
BEIING CAPITAL DEV BEIJING SHOUGANG BEKB-BCBE (BANKING) BELLE INTERNATIONAL BENDIGO \& ADELAIDE BANK BERKSHIRE HATHAWAY BEST BUY
BHARAT PETROLEUM BHARTI AIRTEL
BHARTI AIRTEL
BHP BILLITON
BID CORP (DIVERSIFIED FIN)
BID CORP
BIOGEN
BIOMARIN PHARMACEUTICAL
BLACKROCK
blom bank
BLUESCOPE STEEL
BM\&F BOVESPA
bMCE BANK
BMW
BNK FINANCIAL
BNP PARIBAS
boe technology BOEING
BOHAI FINANCIAL INV
BOK FINANCIAL
boliden
bombardier
BORGWARNER
BOSTON PROPERTIES
BOSTON SCIENTIFIC
BOUYGUES
BOUY
BP
BPER BANCA
BRAMBLES
BRASKEM
BRE (FOOD, DRINK, TOBACCO)
BRIDGESTONE
BRILLIANCE CHINA AUTO
BRISTOL-MYERS SQUIBB
BRITISH AMERICAN TOBACCO
BRITISH LAND
BRITISH SKY BROADCASTING
BROADCOM
BROOKFIELD ASSET MGMT
BROTHER INDUSTRIES
BROWN-FORMA
BT (TELECOM)
BUNGE
BUNZL
BURBERRY
bureau veritas
'AN AIR CONDITIONER IN WHICH THE PART THAT BLOWS THE AIR IS IN THE ROOM AND THE CONDENSER IS SEPARATE.
SOURCE: EUROMONITOR INTERNATIONAL.
for the entire Chinese economy. China’s miraculous growth over the past 30 years has been propelled to a great degree by low costs, which attracted all those factories that churn out the clothes, toys and electronics that fill the world's store shelves. But as the economy gains in wealth, wages have increased dramatically, eating away at industrial competitiveness. Meanwhile, the local market, once exploding with growth and opportunity, is maturing and slowing down. That leaves Chinese companies with only one way forward-become more innovative, produce more-advanced products and compete on a global scale.

Fang stands on the front lines of this great transformation. With $\$ 23.9$ billion in sales and $\$ 2.2$ billion in net profits last year, Midea is already one of China's most prominent companies, ranking No. 335 on the Forbes Global 2000. Last year, Midea sold more consumer appliances-from air conditioners to rice cook-ers-than any other company. Its global market share, at $5.5 \%$ last year, is up from $3.9 \%$ four years earlier, estimates research firm Euromonitor International. In fact, you may have a Midea product in your home and not even know it. The Chinese firm manufactures microwave ovens and other products for famous brands, and it has a batch of joint ventures making air conditioners with Carrier.

But Fang is fully aware that this is not nearly enough. He is striving to upgrade Midea's product lines, buff its brand image and expand internationally. Though he's scored some successes-the Kuka deal, for one-Midea's experience also illuminates the challenges that await Chinese companies in their efforts to become global competitors for top U.S. and European firms. "The direction is very, very clear. We
must transform from a labor-intensive to an innova-tion-driven company," he says. "We want to be a global company. There is still a long way to go."

Midea has already come quite a long way. The company was founded in Foshan in 1968 when He Xiangian collected 5,000 yuan-the equivalent today of $\$ 725$-and opened a small factory making plastic and glass bottles with 23 villagers. Later, after organizing itself into a commune, the company shifted into other products: auto parts, engines, fans and, in 1984, air conditioners. He, now 74, retired in 2012 and passed the reins to Fang. The founder still owns $34 \%$ of the publicly traded company, and FORBES ASIA estimates his net worth at $\$ 13.4$ billion.

Fang, 50, hails from even humbler origins. Born in a ten-family village in a mountainous region of impoverished Anhui Province in central China, he spent his childhood fetching water from wells and chopping firewood. He was saved by his smarts, performing well enough on the country's tough college entrance exam to gain admission to East China Normal University in Shanghai, where he studied history. After graduating, he landed a job at a state-owned factory that made cars and trucks but found the atmosphere stifling. Inspired by a 1992 tour of the country's south by then-paramount leader Deng Xiaoping, orchestrated to energize a new wave of economic reform, Fang quit his job and moved to that region in search of opportunities.

He discovered one at Midea, which hired him to edit the company newsletter. Fang describes the Midea he joined as a "small village enterprise," but he found the environment much more exciting. "The sense of entrepreneurship was really different in a private enterprise than a state-owned factory," he recalls. "There was a lot to do, and I didn't have time to do everything I wanted."

Midea didn't stay small for long. As Chinảs economy surged, Midea went along for the ride. Rising household incomes gave the average Chinese family the cash to purchase refrigerators, washing machines and other modern conveniences. And with a population of more than 1.3 billion, there was no shortage of kitchens and living rooms in need. Midea's sales are roughly 400 times larger today than when Fang joined the company 25 years ago.

But as Chinese families grow richer, the market becomes tougher. Appliances once considered luxuries are now necessities, so roughly nine out of ten families have a refrigerator-freezer, for instance, while more than three-fourths own air conditioners. That means growth is slowing. Euromonitor forecasts that the volume of appliances sold in China will increase by $3.6 \%$ a year to 2021 , much less than the $6.5 \%$ annual clip
from 2011 to 2016. Consumers are also becoming more sophisticated and demanding. Since many are now replacing old appliances, they are looking for upgrades in performance and quality. Globally, too, the industry is changing, with growing demand for new types of products, such as Wi-Fi-connected appliances. "The market is evolving very quickly," says Dinesh Kithany, principal analyst for the home-appliance industry at London-based consulting firm IHS Markit. "Companies need to differentiate their products, and that will come only through innovation."

Fang has been handed the task of navigating Midea through these new realities. Executives describe him as a hands-off type, who leaves the nittygritty details to his top lieutenants while focusing on big-picture strategy. Zachary Hu , president of Midea's corporate research center, says Fang has visited his office only twice in the past couple of years, trusting him with the day-to-day management of his department. "Instead of listening to a bunch of specialists, he will try to figure the business out by himself and set the direction of the company," says Hu. "He is forward-thinking. Even in the good times, we started thinking about the risks facing us down the road and what changes we should make."

Hu is a key part of those changes. Lured to Midea from Samsung Electronics five years ago, he is now spearheading the company's efforts to create a more effective research-and-development program. Since 2012, Midea has more than doubled its R\&D staff to 10,000 (out of 120,000 employees overall). In April, Midea opened a research center in San Jose, California, and plans to spend $\$ 250$ million on it over the next five years.

But Hu cautions that more resources alone don't immediately translate into innovation. Like many manufacturing firms, he explains, Midea was fixated on improving efficiency and notching quick returns, a management focus ill-suited to fostering creativity. "If you try to drive product leadership, you have to invest for the long term," he says. "The company culture was not designed that way. They built up [R\&D] teams, but they were not doing much. The company had to have a mind-set change to deal with the risk of it. That was a huge challenge for us internally."

Hu started slowly. Rather than assigning his new staff to ambitious endeavors, he first told them to find and fix problems with Midea's product line. His engineers, for instance, made washing machines quieter and
more durable, with better capacity for their size and an easier-to-use detergent dispenser. Such enhanced designs, added to Midea's especially wide-ranging product offerings and some strong online distribution, has helped boost the company's market share in China in major household appliances-such as washing machines and refrigerators-to 13\% in 2016 from 8.7\% four years earlier, according to Euromonitor data.

Then Hu pressed his teams to create new products. The results included a light, versatile fan and a combination rice cooker and microwave oven. Still, Hu believes that Midea has a long way to go before it invents something completely original. "To try to have a revolutionary product-we're not there yet. We are still at the beginning of the journey to our final goal."

That's true with Midea's international expansion as well. The company's global gains have been helped by an expanding presence in key, high-growth emerging markets, such as Vietnam and Indonesia. The company is now investing $\$ 160$ million in India; a new factory is scheduled to open there at the end of next year. Andy Gu, Midea's vice president, says the goal is to capture young entrants to the middle class. "They have no preconception of brands, and they need a quality product," he says. "That is really the message."

Midea has also grown through acquisitions. Last year, Fang snapped up majority stakes in the appliance operation of Japan's Toshiba for $\$ 500$ million and Italy's air-conditioner maker Clivet for an undisclosed sum,

## RAPID RISE ON THE GLOBAL 2000

THE NUMBER OF CHINESE COMPANIES ON OUR LIST IS MORE THAN FIVE TIMES WHAT IT WAS IN 2003.


GLOBAL
2000


ASIAN COMPANIES ARE IN RED TYPE

| chugoku bank | JA 1630 - | dASSAULT SYStemes | FR 1321 - |
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| CHUGOKU ELECTRIC POWER | JA 1331 - | datang intl power | CN 1124 |
| Chunghwatelecom | TA 720 - | davita | US $662 \triangle$ |
| CHURCH \& DWIGHT | US 1572 | DBS (BANKING) | S1 245 |
| CIC (BANKING) | FR 525 | dCC (CONGLomerate) | IR 1379 - |
| CIELO | BR 1103 | DEERE \& COMPANY | US 260 |
| CIGNA | US 209 V | delek | 15 1877 - |
| CIMB | MA 671 | dell technologies | US 608 |
| CINCINNATI FINANCIAL | US 1001 V | deLphi automotive | UK 637 |
| CINTAS | US 1321 | delta air lines | US 183 |
| CIICO SYSTEMS | US 58 | delta electronics | TA $1134 \bullet$ |
| CIT | US 1272 | delta loovd | NE 1303 - |
| CITIC PACIFIC | HK 72 | denso | JA 233 V |
| CITIC SECURTIES | CN 394 | dentsply sirona | US $1400 \pm$ |
| CITIGROUP | Us 12 | dentsu | JA 703 V |
| CIITIZNS FINANCIAL | US 551 | deutsche bank | GE $441 \pm$ |
| CIIRRX SYSTEMS | US 1461 - | deutsche boerse | GE 704 |
| CITY DEVELOPMENTS | 51779 | deutsche lufthansa | GE 513 |
| CJCHEILIEDANG | K0 1601 - | DEUTSCHE PFANDBRIEFBANK | GE 1649 |
| CJ (FOOD, DRINK, TOBACCO) | K0 1226 - | DEUTSCHE POST | GE 196 |
| CK HUTCHISON | нк 125 | DEUTSCHE TELEKOM | GE 77 |
| CLOROX | US 1102 | DEUTSCHE WOHNEN | GE 965 |
| CLP (UTLITIES) | нк 469 V | devonenergy | US 888 |
| CME | US 577 | dexia | BE 1240 |
| CMS Energy | US 937 | dgb financial | K0 1765 |
| CNH INDUSTRIAL | UK 736 | diageo | Uk 261 V |
| CNO FINANCIAL | US 1598 | digital realt trust | US 1329 - |
| CNOOC | HK 529 | discover financial services | US 317 |
| CNP ASSURANCES | FR 292 | discovery communications | US 781 |
| CNPC CAPITAL | CN 1670 | DISH Network | US $393 \pm$ |
| COACH | US 1440 | dixons CARPHone | UK 1645 |
| COALINDIA | [ 541 | DKSH | Sz 1982 |
| COCA-COLA | US 86 | dNB (BANKING) | No 313 |
| COCA-COLA EURO PARTNERS | UK 734 | doha bank | QA 1932 |
| COCA-COLA HBC | SZ 1443 - | DOLLAR GENERAL | US 612 |
| COGNIZANT TECHNOLOGY | US 537 | DOLLAR TREE | US 590 |
| COLGATE-PALMOLIVE | Us 472 | dollarama | CA 1961 |
| COLOPLAST | DE 1430 | DOMINION RESOURCES | US $283 \pm$ |
| COLRUYT | BE 1393 V | DONG ENERGY | DE 685 - |
| comcast | US 31 | dongbu insurance | K0 1002 - |
| COMERICA | US 968 | DONGFENG MOTOR | CN 550 |
| COMMERCE BANCSHARES | US 1967 | doosan | K0 1289 |
| COMMERCIAL BANK FOR INV \& | EV | dover | US 1168 |
| OF VIIETNAM | VE 1682 - | dow Chemical | us 113 |
| COMMERCILL BANK OF qatar | QA 1843 | DP WorLD | AE 883 |
| COMMERCIAL INTL BANK | EG 1699 | DR HORTON | US 808 |
| COMMERZBANK | GE 663 V | dR PEPPER SNAPPLE | US $1000 \pm$ |
| COMMONWEALTH BANK | AU 58 | DSM (CHEMICALS) | Ne 913 - |
| COMMUNITY HEALTH SYSTEMS | US 1253 | DSME (CAPTAL GOODS) | K0 1687 |
| COMPALELECTRONICS | TA 1531 | dSV (TRANSPORTATION) | DE 1521 - |
| COMPANHIA BRASILEERA |  | dTE ENERGY | US 566 |
| de distribuicao | BR 1545 | dUBA I ILAMIIC Bank | AE 1013 - |
| Compass | UK 486 | DUFRY | SZ 1712 - |
| CONAGRA BRANDS | US 938 | duke energy | US 154 |
| CONCHO RESOURCES | US 1586 | dvb bank | GE 1964 - |
| CONCORDIA FINANCIAL | JA 1507 - | dxC technology | us 1311 - |
| CONOCOPHILLIPS | US 519 | E.ON | GE 607 - |
| CONSOLIDATED EDISON | US 390 | E.SUN FINANCIAL | TA 1384 |
| CONSTELLATION BRANDS | US 595 | EADS | NE 166 |
| CONTINENTAL | GE 206 | EAST JAPAN RALLWAY | JA 217 - |
| CONTINENTAL RESOURCES | US 1541 | EAST WEST BANCORP | US 1278 |
| CORE-MARK | US 1788 | EASTMAN CHEMICAL | Us 826 |
| CORNING | US 433 - | EASYet | UK 1607 |
| CORPORATION BANK | [ 1854 | EATON | IR 322 V |
| COSCO SHIPPING | CN 1281 | Ebay | US 407 A |
| COSMO ENERGY | JA 1441 | ecolab | US 505 |
| costco wholesale | US 179 | ECOPETROL | CO 559 - |
| coty | US 1259 | EDF (UTILTIES) | FR 146 |
| COUCHE TARD | CA 517 | EDISON INTERNATIONAL | US 367 - |
| COUNTRY GARDEN | HK 273 | EDP-ENERGIAS DE PORTUGAL | PO 488 |
| CP ALL (FOOD MARKETS) | TH 985 | EDWARDS LIFESCIENCES | US 1298 |
| CPFL ENERGIA | BR 1735 | efg international | SZ 1554 - |
| CR BARD (HEALTH CARE EQUIP) | US 1354 | EIDU PONT DE NEMOURS | US $220 \pm$ |
| CREDICORP | PE 761 | EIFFAGE | FR 803 - |
| CREDIT Agricole | FR 151 | EISAI | JA 1304 - |
| CREDIT SAIISON | JA 1779 - | el puerto de liverpool | MX 1301 - |
| CREDIT SUISSE | SZ 491 V | Electric power dev | JA 1348 |
| Credito emilano | 17 1786 | Electrolux | sw 1135 |
| CRH (CONSTRUCTION) | IR 317 | electronic arts | US 983 - |
| CROWN CASTLE INTL | US 1052 | eletrobrás | BR $610 \triangle$ |
| CROWN | US 1359 | ELLILLY | US $221 \pm$ |
| CROWN RESORTS | AU 1738 | EMAAR PROPERTIES | AE 801 - |
| CRRC (CAPITAL GOODS) | CN 235 | E-MART | K0 1446 |
| CSC FINANCIAL | CN 1220 | emera |  |
| CSL (PHARMA \& BIITECH) | AU 806 | emerson electric | Us 439 |
| CST Brands | US 1688 | emirates integ telecom | AE 1917 |
| CSX (TRANSPORTATION) | US 354 | EmiRates nbd | AE 573 - |
| Ctrip.com international | CN 1268 | EMPIRE | CA 1675 |
| CULLEN/FROST BANKERS | US 1762 - | ems-Chemie | SZ 1525 - |
| Cummins | us 533 | Enbridge | CA $212 \triangle$ |
| CVS HEALTH | US 66 | enbw-energie baden | GE 1012 |
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| DAI-CHH LIFE INSURANCE | JA 191 | ENI | 17431 4 |
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| DAIKIN INDUSTRIES | JA 434 | ensco | UK 1552 - |
| DAIMLER | GE 28 V | entergy | US 874 |
| DAISHI BANK | JA 1731 - | Eog resources | US 831 |
| DAITO TRUST CONSTRUCTION | JA 971 A | EQT (OIL\& GAS) | US 1692 |
| DAIWA HOUSE INDUSTRY | JA 389 | Equifax | US $1426 \pm$ |
| Daiwa securities | JA 705 | Equinix | US 1439 - |
| DALI FOODS | CN 1842 | EQUITY RESIIENTIAL | US 1294 |
| DAMAC PROPERTIES | AE 1792 | ERICSSON | SW 710 |
| DANA | US 1656 | ERSTE BANK | AS 429 A |
| DANAHER | US 229 | ESSEX PROPERTY TRUST | US 1376 |
| DANGOTE CEMENT | NI 1500 | ESSILOR International | FR 744 |
| DANoNe | FR 252 | estée lauder | Us $678 \pm$ |
| DANSKE BANK | DE 230 | ETISALAT | AE 320 |
| dagin rallway | CN 767 | E-TRADE FINANCIAL | US 1032 |
| DARDEN RESTAURANTS DASSAULT AVIATION |  | EURAZEO | FR 1987 GR 1640 |

as well as picking up the Eureka vacuum-cleaner brand from Electrolux. Midea's sales outside of China surged nearly $30 \%$ last year, compared with only $5 \%$ growth in China.

But Midea faces serious constraints to building a global brand. Midea is wary of upsetting its partners by introducing its own, competing product lines in markets where they have a strong presence. Management is also all too aware of the shoddy image that China-made goods have among many consumers, which has caused ap-pliance-rival Haier and other reputable Chinese companies to struggle in many markets. "We're being very careful with our brand-building initiative," says Gu. "You have all these small and medium-size Chinese companies that export lousy products. To overcome that perception takes time."

Midea's most ambitious global undertaking by far is its acquisition of Kuka. Midea's management team got the idea to enter robotics from its own troubles keeping factories running at home. Even with wages rising precipitously, recruiting enough staff to fill assembly-line jobs in an economy bursting with opportunities has become a stiff challenge. So Midea has had to rely more and more on automation. One plant in the central Chinese city of Wuhan, where Midea has invested more than $\$ 70$ million on automation and information technology since the beginning of last year, has more than tripled the amount produced per worker. "We find it is getting more and more difficult to get people to work for us," says Gu. "We feel there is a strong need in China for automation, and we found that very few Chinese companies are capable of providing that capability. We have to find some way to fill that gap."

That led to an interest in selling the robots that Chinese factories need-and in Germany's Kuka. Fang and his executives argue that their savvy in China could help Kuka's top-notch industrial robots capture more of that burgeoning Chinese demand. "They can grow, but we can help them grow faster," says Gu.

Some politicians in Europe fret that selling a high-tech outfit such as Kuka to the Chinese will undercut the competitiveness of the region's economy. Günther Oettinger, then-European Commissioner for Digital Economy \& Society, told a German newspaper last year that Kuka is "a successful company in a strategic sector that is of key importance for the digital future of European industry" and called on its existing shareholders or other companies in Europe to step up and keep it out of Chinese hands. Germany's vice chancellor, Sigmar Gabriel, who has openly criticized China for failing to reciprocate the free-market openness of the West, reportedly tried to organize just such an alternative bid.

Fang attempted to ease such concerns by agreeing to maintain Kuka's plants and workers in Germany until 2023. He has also kept management in place and intends to operate the robotics company as a separate unit. Though Gu is now chairman of Kuka's supervisory board, he visits only once a month for meetings, and Midea has posted no Chinese staff full-time to Augsburg. "It is a very different environment, different culture," he says. "We leave them alone to run the business."

Still, Midea's managers realize they have bridges to build. "There is this China monster that comes to your country, that grabs your jobs-that perception is still there everywhere," says Gu. "You cannot change it overnight." Fang knows as well that Midea's experience in Germany is part of something bigger and more daunting for a Chinese company with global ambitions: rising economic nationalism. Yet he believes that this sentiment will eventually pass. "There are antiglobal trends now, but you have to look at things from a long-term perspective," he says. "Globalization is a major trend and cannot be stopped by any individual or any country."

That leaves Fang confident about the future of Midea-and China. "Chinese companies are going global", he says, "and this trend will not change." (F)

With reporting by Yue Wang.


Baidu's billionaire founder, Robin Li.

# THE NEXT FRONTIER 

## Baidu veers from its core business to gamble on artificial intelligence.

## BY YUE WANG

HINESE SEARCH-ENGINE OPERATOR BAIDU, DUBBED THE GOOGLE of China, is betting big that smart machines will disrupt industry after industry. Of the $\$ 3$ billion Baidu spent in research and development over the past two and a half years, the majority has gone to artificial intelligence, says Wang Haifeng, the company's vice president and head of the AI group.
In the past quarter alone, $\mathrm{R} \& \mathrm{D}$ expenses went up by $35 \%$ from a year ago, to $\$ 412$ million, according to Baidu's latest financial results. Like Google, Baidu wants to use the technology to refine its search algorithms, develop voice assistants, produce self-driving cars and build augment-ed-reality tools that may soon have broader applications in marketing, tourism and health care.

To Baidu, however, AI means more than frontier research. The company needs AI-enabled services to bring in new revenue, as its core online-advertising revenue faces mounting pressure from government restrictions, particularly in health care ads. What's more, advertisers are flocking to e-commerce and social media platforms such as Tencent's messaging app WeChat and Alibabas Taobao marketplace. According to consultancy eMarketer, Alibaba accounted for 29\% of Chinas $\$ 42$ billion digital-advertising market in 2016, with Baidu's share falling to $21 \%$ from $28 \%$ in 2015.

In the past quarter, Baidu's operating profit declined by $9 \%$ to $\$ 291$ million, after going down $14 \%$ last year. Its other diversification efforts have produced mixed results. The company invested billions of dollars in online-to-offline services a few years ago, betting that it would earn healthy commission fees from cinemas, restaurants and other local services using its products to connect to nearby customers. But that plan didn't gain much traction, as the Tencent-backed

EVERBRIGHT SECURITIES EVEREST RE
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EXXONMOBIL
EZDAN
F5 NETWORKS
FABEGE
FACEBOOK
FAIRFAX FINANCIAL
FALABELLA
FANNIE MAE
FANUC (CAP GOODS)
FAR EAST HORIZON
FAR EASTERN NEW CENTUR
FAST RETAILING
FASTENAL
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FIRST PACIFIC
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FIRST REPUBLIC BANK
FIRSTENERGY
FIRSTRAND
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FLEETCOR TECHNOLOGIES
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FOOT LOCKER
FORD MOTOR
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FOUNDER SECURITIES
FRANKLIN RESOURCES
FRASERS CENTREPOINT
FREDDIE MAC
FREEPORT-MCMORAN INC
FRESENIUS
FRESNILLO
FRONTIER COMMUNICATIONS
FUBON FINANCIAL
FUJIFILM
FUJITSU
FUKUOKA FINANCIAL
FULLSHARE
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GAIL INDIA
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GALP ENERGIA
GAMESTOP
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GARANTI BANK
GARMIN
GAS NATURAL FENOS
GAZPROM
GAZPROM
GD POWER DEVELOPMENT
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GEBERIT
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GEELY AUTO
GEMDALE
GENERAL DYNAMICS
GENERAL ELECTRIC
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AUP V DOWN

- UNCHANGED - NEW

ASIAN COMPANIES ARE IN RED TYPE
IES US 818

CN 1210 V
BU 920 V
US 614
GE 626 v
US 237 V
IT 417 V
US 1063 V
US 1409 V
IR $1122 \triangleq$
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US 13 V
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US 1979 -
SW 1897 -
US 119 A
CA 941 V
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Meituan Dianping now holds $80 \%$ of this $\$ 100$ billion market, according to Beijing consultancy Analysys International. IQiyi, its online-video unit that just inked a streaming partnership with Netflix, remains popular but is facing rising content costs.

Baidu has amassed a 1,700-member AI team and built four research labs in China and Silicon Valley, with the second Silicon Valley lab ready to accommodate 150 scientists, the company announced in March. In January, it hired Lu Qi, a Microsoft veteran, as its president and chief operating officer overseeing Baidu's AI research. The company has one advantage: Its online search app boasts 665 million monthly active users, whose behavioral patterns can be harnessed for deep learning, a branch of AI that teaches machines to learn by themselves. And because search encompasses so many different topics, Baidu has more diversified data tranches than other Chinese tech giants, says Wang Shengjin, a professor at China's prestigious Tsinghua University.

And there has been real progress in this area. The company, which claims a 97\% accuracy rate in voice recognition and $99.7 \%$ rate in facial recognition, has won many international competitions in speech-text interaction with its DuerOS platform, including one where its software achieved a typing speed three times as fast as humans'. It has also been appointed by China's National Development \& Reform Commission to lead a national AI lab, as Beijing seeks to transform from a manufacturing economy to one driven by advanced technologies.

In perhaps the clearest articulation of Baidu's ambition, its billionaire founder, Robin Li, said at last year's World Internet Conference in Wuzhen that, "The age of the mobile internet is over. Future opportunities lie in artificial intelligence."

But not everyone is convinced of that prospect. In voice recognition, which is the most commercialized aspect of AI, other tech giants are catching up. Earlier this month, Tencent launched Dingdang, a voice-interaction platform that is a direct competitor of Baidu's DuerOS. DuerOS now counts speaker manufacturer Harman as well as smartphone companies Lenovo, Xiaomi and Vivo among its customers, according to Baidu.

When it comes to driverless cars, commercialization is still decades away, partly because all relevant players need to collect far more data, says Yang Qiang, a professor at the Hong Kong University of Science \& Technology. "Current data collected for autonomous driving isn't reliable enough," according to Yang. "And we have to figure out how to use those cars. Is it in car-sharing or logistics-or something else? We have no idea yet."

That means Baidu's biggest advantage is still in online search, since it has plenty of related data to write better algorithms, Yang says. In addition to adding voice and image search functions, Baidu is using AI to develop personalized news feeds in its mobile search app, which Nomura Securities analyst Shi Jialong estimates will bring 6 billion yuan (nearly $\$ 900$ million) in revenues in fiscal year 2017.

Baidu also faces talent competition. After the company's chief scientist, Andrew Ng, resigned in March, Zhang Tong, director of Baidu's big data lab, was poached by Tencent. In the same month, Baidu's senior vice president, Wang Jing, resigned to build his own autonomous driving startup. Baidu's Wang acknowledges the fierce battle for brains: "AI represents an enormous opportunity-but to seize this opportunity, we need access to the best R\&D talents in China and globally," he said. "There is fierce competition throughout the industry to both find and retain these talents."

But the commercialization of AI is still in its very early stages, and Baidu may still stand out in the end, HSBC analyst Chi Tsang says. "Any market where there are tremendous amounts of data and the inability to process data is applicable to AI," Tsang said. "The building blocks of AI that Baidu has can enable them to enter a lot more markets other than advertising." (F)

# $\Delta$ ? 



The Forbes Under $\mathbf{3 0}$ Summit Asia will bring together current and previous honorees from our "30 Under 30 Asia" list, industry leaders and other distinguished guests, for an exciting day of inspiring stories and networking opportunities. With panel discussions, live demonstrations and performances from entertainers, the summit will showcase the best of Asia's young talent.

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GLOBAL 2000

# THE TOLL COLLECTOR 


#### Abstract

While Wall Street wasn't looking, accountant Bruce Flatt became a billionaire by assembling one of the world's largest portfolios of office buildings, power plants and infrastructure projects-and making Brookfield Asset Management the safest growth stock on the planet.


## BY ANTOINE GARA

JUST OFF A 14-HOUR COMMERCIAL FLIGHT from Dubai, Brookfield Asset Management chief Bruce Flatt stares into a gaping hole in the ground that looks like open-heart surgery performed on an entire city block in Manhattan. Piles of beams, mazes of scaffolding and even active railroad tracks crisscross each other endlessly.
"The amount of steel here is enormous," Flatt shouts over a cacophony of honking car horns, grinding cement mixers and moving cranes at one end of the notoriously clogged Lincoln Tunnel. More than 17.2 million pounds of steel, to be precise, enough to anchor a 67 -story glass office tower. Two more towers are also going up, along with a 30 -floor boutique hotel and a 16 -story trapezoidal glass office building with 26 -foot-high ceilings and floors the size of football fields-much of it suspended over railroad yards. Dubbed Manhattan West, this 7 -million-square-foot, $\$ 5$ billion project encompasses two square city blocks.

And yet it's completely invisible in the public consciousness-the vast majority of New Yorkers have never heard of it. Most people assume it's part of the adjacent Hudson Yards development, a $\$ 25$ billion project from billionaire Stephen Ross and his Related Companies that

"The amount of steel here is enormous": Bruce Flatt at his \$5 billion Manhattan West project.


JETBLUE AIRWAYS
JFE (MATERIAL JG SUMMIT
JIANGSU EX
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KROTON EDUCACIONAL KROTON EDUCACIO KRUNG THAI BANK KT\&G (FOOD, DRINK \& TOBACCO) KUBOTA
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- UNCHANGED - NEW

ASIAN COMPANIES ARE IN RED TYPE
will feature 16 skyscrapers and 18 million square feet.
That's fitting. The high-profile Stephen Ross has an oceanfront Palm Beach mansion, owns the Miami Dolphins and travels in the same circles as Donald Trump. Bruce Flatt is an accountant from Manitoba who lives in a quiet Toronto neighborhood and often commutes by subway.

But if you're comparing their portfolios? It's not even close. Brookfield quietly owns entire city skylines in places like Toronto and Sydney. It's the biggest office landlord in London and downtown Los Angeles. In Berlin it owns Potsdamer Platz and, in London, Canary Wharf, two of the biggest real estate developments in Europe. It has 14,200 hotel rooms, including Atlantis in the Bahamas and the Diplomat in Florida, and scores of shopping malls courtesy of divisions like Rouse Properties and General Growth, and several high-end Brazil shopping centers. In all, Brookfield owns some 400 million square feet of commercial space.

And that's just the real estate. Flatt's true passion is infrastructure, which he sees as a $\$ 35$ trillion opportunity that, like Manhattan West, is hiding in plain sight. "Infrastructure will be an enormous asset class for institutional investors in the coming 25 years," Flatt insists.

Brookfield owns 218 hydroelectric plants on 82 river systems in North and South America. In France, Brookfield has the largest independent owner of cell towers. In Chile its electric power lines serve $98 \%$ of the population. In Ireland it owns 20\% of the country's wind-farm capacity. It owns 36 ports in the U.K., North America, Australia and Europe, and in India and South America it manages 3,600 kilometers of toll roads. All told, Brookfield has 2,000 projects across 30 countries on five continents, encompassing $\$ 250$ billion in assets and 70,000 employees. President Trump talks about an infrastructure plan-Bruce Flatt is actually executing one.

And Wall Street loves it. Despite Brookfield's low profile, its stock has returned $1,350 \%$ since Flatt took the helm in 2002, versus $183 \%$ for the S\&P 500-that's a Buffettesque 19\% annual average, buoyed by assets that generated some $\$ 25$ billion in revenues last year and net profits of $\$ 3.3$ billion. With a $\$ 36$ billion market cap, Brookfield is the size of KKR, Apollo, Carlyle Group and Colony Northstar combined. "Bruce is not afraid to make large bets when he sees an opportunity," says Jonathan Gray, Blackstone's real estate chief and a possible heir to Blackstone chief Stephen Schwarzman. "He buys high-quality, long-duration assets-be they pipelines or electric grids or large pieces of real estate. Between the combination of yield and appreciation, they generate strong returns over time." At 51, Flatt just joined the Forbes Billionaires list, with a net worth of $\$ 1.3$ billion.

Flatt has been called Canada's Warren Buffett not only because he's a contrarian, long-term investor but also because his investment strategy relies less on price than on patience and the power of compounding income streams. "We will pay more for quality because in the fullness of time, real assets will generally always go up in value," Flatt says. "We'd rather earn a $12 \%$ to $15 \%$ net return over 20 years than a $25 \%$ return over three."

In fact, if ever there were a collection of sleep-well-at-night investments that might one day rival the safe-haven status of U.S. Treasury bonds or gold, you could argue that it's the well-diversified trove of real assets in Brookfield's $\$ 250$ billion portfolio. And it's about to get far bigger.

IF FLATT IS TRYING to cultivate the Buffett comparisons, his Toronto digs encourage it. Modest home? He lives in a two-story brick townhouse barely set back from the sidewalk. Humble office? A drab cubicle, positioned against a window looking onto a courtyard of an office complex that Brookfield owns. Contrarian outlook? The only piece of art visible from Flatt's desk is a framed cartoon depicting a herd of white sheep moving toward a cliff as a single black sheep heads in the opposite direction.

## THE WORLD IS FLATT’S

WHEN IT COMES TO GLOBAL DIVERSIFICATION AND GROWTH, BROOKFIELD'S COLLECTION OF REAL ASSETS IS UNRIVALED. IN REAL ESTATE, BROOKFIELD OWNS ENTIRE SKYLINES IN CITIES LIKE TORONTO, SYDNEY AND BERLIN, PLUS MALLS, APARTMENTS AND SELF-STORAGE. BUT INFRASTRUCTURE AND RENEWABLE ENERGY COULD BECOME EVEN BIGGER. GLOBALLY, THE COMPANY ALREADY HAS 36 PORTS, 218 HYDROELECTRIC PLANTS, THOUSANDS OF KILOMETERS OF PIPELINES AND RAIL NETWORKS, PLUS CELL TOWERS, WIND FARMS AND TOLL ROADS.


His break came early. His father was an executive at a mutual fund company in Manitoba, and Flatt, numerically inclined, joined an accounting firm in Toronto out of college.

In 1990, at 25, he was hired at Brascan, a conglomerate controlled by Peter and Edward Bronfman. He rose to become vice president of its merchant bank and gained a seat in the engine room of one of Canada's largest companies, with holdings like Labatt Beer, the Toronto Blue Jays and millions of acres of timberland. Then came trouble. Brascan's interests were built by Peter Bronfman and a South African investor named Jack Cockwell, who financed its am-
bition through a web of intermingled corporate holdings. The structure faltered during the early 1990s downturn, and troubled Brascan was forced to sell its beer, baseball and forestry interests.

Flatt and a number of young partners began to rebuild Brascan. Its stock was deeply depressed, and by the mid-1990s Bronfman had stepped aside, selling his shares to a partnership that distributed stock to the company's upper ranks. For Flatt, it was a billion-dollar opportunity: By borrowing, he was ultimately able to gain control of a large number of shares with a chance for immense wealth if he and his partners could devise a better strategy.

## GLOBAL 2000

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> HALF OF BROOKFIELD'S FUNDING NEVER HAS TO BE RETURNED TO INVESTORS, ALLOWING IT TO COMPOUND INVESTMENTS AND BUILD MUSCLE AND FLEXIBILITY.
that a severe recession was imminent. Hedge fund manager Bill Ackman railed against a new Wall Street creation called CDOs, which he predicted would soon implode. But when the young chief executive of Canada’s Brookfield Asset Management got up to speak, he turned the topic to infrastructure-a $\$ 35$ trillion opportunity hiding in plain sight.

Forget the gloom. Pipelines, wireless towers, power generation, ports and toll roads-the backbone of the global economy-would soon become the holy grail investment product for trillions of dollars stagnating in pension funds and savings. "David [Rosenberg's] presentation is probably about the next six months," Flatt told the doomsday-obsessed audience. "Mine is more relevant to the next 25 to 60 years."

Recession or not, this market could be bigger than real estate-and Flatt was ready once again to exercise his penchant for buying during desperate times.

First up: Australian construction and real estate giant Multiplex, suffering heavy losses after massive cost overruns in building London's Wembley Stadium. Brookfield acquired it for a bargain $\$ 3.8$ billion, gaining a global construction business, $\$ 6.6$ billion in real
estate and an operating toehold in Australia. Next, in 2009, Brookfield spent $\$ 1.1$ billion acquiring a major stake in the bankrupt infrastructure giant Babcock \& Brown, control of Britain's third-largest port operator and a $50 \%$ interest in the world's largest coal-export terminal in Queensland, Australia, adding $\$ 8$ billion in infrastructure assets.

A year later, Brookfield, with Ackman, led the recapitalization of bankrupt mall operator General Growth, ponying up $\$ 2.5$ billion for a $26 \%$ stake, one of the seminal investment scores of the crisis. So far it has yielded Brookfield and its investors $\$ 10$ billion in profit. Flatt remains chairman of General Growth, and Brookfield is a 35\% shareholder. "We didn't get in trouble before the crisis, so we were able to continue to grow and we were running fast coming out," Flatt says. "We could move money where money was needed."

As brilliant as Flatt's purchases were his exits. Beginning in 2008, he took each of his divisions pub-
$\qquad$

Flatt forged an investing style to capitalize on the miscalculations of others. "We were young in our careers and watched very difficult markets in the late 1980s and early 1990s," he says. "That was quite impressionable on us to how we run the business-never put yourself in a situation where you have to sell something in an environment where you should be buying."

The opportunity came quickly. Another humbled Canadian giant, Olympia \& York, filed for bankruptcy in 1992 after heavy losses in developing London's Canary Wharf. Flatt scooped up O\&Y senior debt and organized a plan with creditors, including Hong Kong billionaire Li Ka-shing, beating out Apollo and Tishman Speyer. When the dust settled, Flatt controlled the World Financial Center-and a block on the West Side of Manhattan that he would sit on. Flatt listed the real estate trove on public markets in 1997 under the name Brookfield Properties. He then proceeded to buy out his minority partners. The stock quickly soared, reviving parent Brascan.

History repeated ahead of the next downturn. On 9/11, Flatt sprang into action, first reassuring investors that the World Financial Center had been mangled but not toppled. Then he hopped in a limousine and traveled from Toronto to Lower Manhattan to check on his workers and buildings. Alongside executives like John Zuccotti, a former deputy mayor of New York, Flatt and his team organized a months-long cleanup. When the crisis passed, he was anointed CEO by Brascan's partner-
ship, capping a dramatic ascent for the 36 -year-old.
Once in charge, Flatt streamlined Brascan's sprawl-
ing operations into three lines: real estate, renewable energy and infrastructure. On top of these divisions would sit an asset-management unit to invest out-
side funds-including co-investments from sovereign would sit an asset-management unit to invest out-
side funds-including co-investments from sovereign wealth funds-designed to generate fees and have capital ready for market dislocations.

And those dislocations kept coming. After the Enron debacle, for example, Flatt's renewable-energy business acquired hundreds of hydroelectric plants. By 2005, Flatt decided to rebrand the whole Brascan operation under the Brookfield name.

## ON THE EVE OF THE FINANCIAL CRISIS in

2007, hundreds of skeptical investors gathered at the New-York Historical Society for a one-day conference on the fragile state of the global economy. Bear-
ish Merrill Lynch economist David Rosenberg warned ence on the fragile state of the global economy. Bear-
ish Merrill Lynch economist David Rosenberg warned
lic on the NYSE (separate from the already public real estate arm, now known as Brookfield Property Partners). First, infrastructure (Brookfield Infrastructure Partners), then renewable energy (Brookfield Renewable Partners), then the private equity arm (Brookfield Business Partners). All this in addition to the holding company itself, Brookfield Asset Management. Collectively, Brookfield's five public entities carry more than $\$ 70$ billion in public market value.

The holding company's stakes in the four derivative companies range from $30 \%$ to $75 \%$, forming a byzantine structure that feeds the parent with a perpetual and growing stream of cash, since it gets fixed fees plus a $1.25 \%$ annual management fee based on the value of its listed partnerships and performance fees of $15 \%$ to $25 \%$ based on the level of the dividends. Fold in its dozens of private funds, and Flatt's flagship found itself generating $\$ 1.1$ billion in fee revenues.

Besides the annuity of charging people to manage their money, this structure also carries a big tactical advantage. Because permanent capital is built into its public vehicles, roughly half of Brookfield's funding never has to be returned to investors, allowing it to compound investments and build more muscle and flexibility than almost any investment firm on earth. "These are lifelong entities," Neuberger Berman's Charles Kantor says. "I think that was brilliant."

ONE DISTINCT DIFFERENCE BETWEEN Brookfield and Berkshire Hathaway: While Buffett's annual shareholder meeting is a carnival of capitalism, Brookfield's annual investor meeting is a sober gathering of suits. There are no members of the press or doeeyed fans, just financial analysts and money managers ready to absorb head-spinning financial math that is both Brookfield's strength and its Achilles' heel.

At the start of his presentation, Flatt strolls to a podium: "There's really nothing different that we're doing or we're proposing to do with this company, and essentially nothing has changed." But this humility is a ruse. Brookfield had a banner 2016, and he's brimming. "The numbers are bigger, money has been raised faster, and therefore the returns should be higher and come quicker," he says.

First the money: Infrastructure has become Wall Street's hottest product-in 2016, $\$ 62.5$ billion was raised at 59 infrastructure funds-and Brookfield has first-mover advantage. Over the past year, Brookfield closed $\$ 27$ billion in private funds, one of the biggest gatherings of cash in the history of Wall Street, led by $\$ 14$ billion for infrastructure investments and driven by Brookfield's network of 450 sovereign wealth investors, pension funds and endowments.

There were also more deals: $\$ 18$ billion was spent mostly in markets where investors see calamity but Brookfield's flexibility allows it to buy. Brazil, roiled by a recession and a corruption scandal, has been a key Brookfield target. So far, Petrobras sold it NTS, the country's pipeline giant, for $\$ 5.2$ billion-Brookfield's ability to close without financing conditions was the key to the deal. Then it agreed to buy a $70 \%$ stake in the nations largest private water and sewage company, Odebrecht Ambiental, whose holding company CEO was carted off to jail in 2016 . Some $\$ 6.9$ billion was spent alongside partners to buy Australias biggest railfreight and container-port operator. Berlin's Potsdamer Platz, once a no man's land by the Berlin Wall, was acquired for a reported $\$ 1.4$ billion.

All told, Brookfield is on a 100 -transaction-a-year pace, fed by 700 global deal scouts. Flatt presides over small teams that review each deal. He boasts that he hardly ever turns down a pitch because the firm's strict underwriting standards have been institutionalized over many decades. These executives forgo immense overnight riches that partners sometimes get at private equity firms and take the slow-but-steady path, gained by appreciation of its stock. In this model, Flatt and his team, unlike at so many funds, are largely aligned with their investors. Insiders own roughly $20 \%$ of Brookfield Asset Management; Flatt's $\$ 1.2$ billion in holdings is the largest stake, while others, like former CEO Jack Cockwell, hold interests in the hundreds of millions.

Despite its long-term call on global productivity and growth, Brookfield carries risk. During the crisis in 2008 and 2009, as Flatt was doubling down, Brookfield's stock plunged more than $70 \%$. Bribery and corruption remain an issue for a company running so many arteries in so many countries. In 2012, for example, Brookfield was hit with a civil lawsuit in Brazil, as well as an SEC and Department of Justice investigation for alleged bribery by some of its employees. The SEC and DOJ investigations closed with no charges.

There are also geopolitical risks. The $\$ 5.2$ billion pipeline deal was suspended in February by a Brazilian court; lawyers challenged the injunction and had it overturned. And events like Brexit roil projects like Canary Wharf, which Flatt took control of in 2015.

But Flatt figures to have a solid two-decade time line to see his projects through and a corporate mandate that matches such patience. "Brexit may happen over the next ten years. But London is still going to be one of the great cities of commerce," Flatt says, noting that a high-speed railway will soon connect Heathrow to Canary Wharf in 40 minutes. "Over the next 20 years, we are going to make an enormous amount of money." (1)

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SAMPO
SAMSUNG C\&T SAMSUNG ELECTRONICS

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# BREAKING THE CLASS CEILING 

# By reimagining the way it operates in India, Mercedes-Benz is back on top of the country's luxury car market. 

BY N. MADHAVAN

$\square$he year 2012 was a particularly bad one for Mercedes-Benz in India. Its performance hit its nadir, and the company dropped to third, in terms of sales, in the luxury-car market, behind compatriots BMW and Audi. The Stuttgart carmaker, which had reentered India in 1994 and dominated the market for a decade and a half, posted a rare loss as well.
Its problems began with the entry of BMW and Audi into the Indian market in 2007. The duo, being late entrants, unleashed a product offensive with attractive prices. Like Daimler subsidiary Mercedes-Benz, their vehicles had the famed German-engineering DNA. But what caught the fancy of customers was their modern design and styling. Mercedes-Benz, on the other hand, had a more dated design. Plus it lacked a strong SUV portfolio. Its traditional communication strategy and approach did not suit the changing customer profile, and soon the brand was perceived as one suited to older people. BMW, Audi and other nameplates such as Jaguar Land Rover and Volvo gained in reputation and customer attention. In 2009, BMW overtook Mercedes-Benz, and Audi followed suit in 2012. The fact that Mercedes-Benz had lost the crown globally to BMW in 2005 did not help, either. With the parent itself facing strong headwinds, the ability of the Indian operations to react strongly to the altering market environment was impaired.
"We got complacent. We were the only player in the market, and in a monopoly situation you do not satisfy customers as you should. The year 2009 was a wake-up call," Roland S. Folger tells Forbes India in an interview in Pune. Folger, who took over as managing director and CEO of Mercedes-Benz India in October 2015, recalls how the poor performance sent the MercedesBenz India management team into introspection mode to understand what had hit them and what needed to be done to regain market leadership. The company labeled 2013 "The Year of the Offensive."

Results followed in a couple of years. By 2015, Mercedes-Benz had regained



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SHAW COMMUNICATIONS SHENGJING BANK SHENWAN HONGYUAN SHENZHEN OVERSEA SHENZHOUINTL SHERWIN-WILLI SHIGA BANK SHIMANO SHIMIZU SHIN KONG FINANCIAL SHIN-ETSU CHEMICAL SHINHAN FINANCIAL SHINSEI BANK SHIONOGI SHIRE
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SINO LAND
SINOHYDRO
SINO-OCEAN LAND
SINOPAC FINANCIAL
SINOPEC OILFIELD SERVICE SINOPHAR
SK (IT SOFTWARE) RU 1481 V SK HYNIX (SEMICONDUCTORS) KO 349 SK INNOVATION (OIL \& GAS) KO 437 SK NETWORKS (TRADING COS) KO 1740 SK TELECOM SKANSKA SKF (MATERIALS) SKYWORKS SOLUTIONS SL GREEN REALTY
SMC (CAPITAL GOODS) SMITH \& NEPHEW SMITHS SMURFIT KAPPA SNAM (OIL \& GAS) SNAP (IT SOFTWARE) SNAP-ON SOCIÉTÉ GÉNÉRALE SODEXO SOFTBANK s-OIL
SOJITZ
SOLVAY
SOMPO
SOUTH32
SOUTHERN CO
SOUTHWEST AIRLINES
SPECTRUM BRANDS SPIRIT AEROSYSTEM SSE (UTILITIES)
ST GALLER KANTONALBANK ST JAMES'S PLACE STANDARD BANK STANDARD CHARTERED

GLOBAL 2000

| Standard life | UK 556 | V | textron | US 707 |
| :---: | :---: | :---: | :---: | :---: |
| STANLEY BLACK \& DECKER | US 656 | V | thal beverage | тH 1107 |
| STAPLES | US 1563 | V | THAI OIL | тн |
| starbucks | US 370 | $\triangle$ | thales | FR 497 |
| STARWOOD PROPERTY TRUST | US 1361 | $\checkmark$ | THE PRICELINE | US 416 |
| STATE BANK OF INDIA | IN 244 | V | THERMO FISHER SCIENTIFIC | US 251 |
| State street | US 274 | $\triangle$ | THOMAS COOK | UK 1946 |
| Statoil | NO 461 | V | THOMSON REUTERS | US 470 |
| STEEL AUTHORITY OF INDIA | IN 1930 | V | 31 | UK 124 |
| STEEL DYNAMICS | US 1437 | - | 3M | US 197 |
| Steinhoff INTERNATIONAL | NE 456 | V | THYSSENKRUPP | GE 629 |
| StMicroelectronics | SZ 1499 | - | tian an china investments | нк 1971 |
| STOCKLAND AUSTRALIA | AU 1413 | V | tiffany | US 1602 |
| Stora enso | 1033 | , | TIME WARNER | US 153 |
| storebrand | NO 1478 | V | tingyl | CN |
| strabag | AS 1631 | , | TJX $\operatorname{COS}$ (RETALING) | US 401 |
| STRYKER | US 446 | $\triangle$ | тоно валк | JA 1690 |
| subaru | JA 333 | V | тоно | JA 1901 |
| SUMITOMO CHEMICAL | JA 800 | $v$ | TOHOKU ELECTRIC POWER | JA 756 |
| SUMITOMO CORP | JA 322 | $\triangle$ | tokio marine | JA 143 |
| SUMITOMO ELECTRIC | JA 561 | - | TOKYO CENTURY | JA 1173 |
| SUMITOMO METAL MINING | JA 1593 | V | TOKYO ELECTRIC POWER | JA 536 |
| SUMITOMO MITSUU FINANCIAL | JA 84 | V | Tokyo electron | JA 1017 |
| SUMITOMO MITSUU TRUST | JA 413 | $\nabla$ | ToKYo GAs | JA 865 |
| SUMITOMO REALTY | JA 621 | $\triangle$ | TOKYO TY FINANCIAL | JA 1725 |
| SUMITOMO RUBEER | JA 1891 | V | токуи | JA 935 |
| SUN ART Retall | HK 1154 | $\triangle$ | toky fudosan | JA 1676 |
| SUN HUNG KAI PROPERTIES | HK 223 | $\triangle$ | TOMONY | JA 1927 |
| SUN LIFE FINANCIAL | CA 239 | $\triangle$ | TONGLING NONFERR METALS | CN 1856 |
| SUN PHARMA INDUSTRIES | 1023 | $\triangle$ | TONGYANG LIFE INSURANCE | K0 1695 |
| SUNAC CHINA | CN 1266 | $\triangle$ | TOP FRONTIER INVESTMENT | PH 1228 |
| SUNCOR ENERGY | CA 487 | , | TOPPAN PRINTING | JA 1142 |
| SUNCORP | AU 572 | V | toray industries | JA 605 |
| SUNING APPLIANCE | CN 897 | $\triangle$ | TORCHMARK | US 1242 |
| SUNTORY BEVERAGE \& FOOD | 993 | V | TOSHIBA | JA 817 |
| SUNTRUST BANKS | US 322 | - | тоSOH | JA 1655 |
| SUPERVALU | US 1733 | V | TOTAL | FR 26 |
| SURGUTNEFTEGAS | RU 305 | V | total system services | US 1956 |
| SURUGA BANK | JA 1529 | - | TOWNGAS | нк 945 |
| suzuken | JA 1584 | V | toyota boshoku | JA 1861 |
| SUZUKI MOTOR | JA 396 | $\triangle$ | TOYOTA INDUSTRIES | JA 442 |
| SVB FINANCIAL | US 1161 | $\triangle$ | TOYOTA MOTOR | JA 10 |
| SVENSKA HANDELSBANKEN | SW 383 | V | TOYOTA TSUSHO | JA 764 |
| SWATCH | SZ 917 | $\nabla$ | TP ICAP (DIVERSIFIED FIN) | UK 1913 |
| SWEDBANK | SW 376 | $V$ | TRACTOR SUPPLY | US 1401 |
| SWIRE PACIFIC | HK 552 | $\nabla$ | TRANSCANADA | CA 700 |
| SWISS LIFE | SZ 422 | $\triangle$ | transdigm | US 1531 |
| SWISS RE | Sz 130 | V | transneft | RU 658 |
| sWISSCOM | Sz 516 | V | transocean | sz 1290 |
| SYDNEY AIRPORT | AU 1650 | V | transurban | AU 1426 |
| SYMANTEC | US 857 | $\triangle$ | travelers | US 179 |
| SYNCHRONY FINANCIAL | US 267 | $\wedge$ | tsinghua tongfang | CN 1641 |
| SYNDICATE BANK | 1745 |  | TUl (BUSINESS SERVIICS) | GE 960 |
| SYNGENTA | SZ 489 | V | turkcell | TU 1744 |
| SYNNEX | US 1790 | $\triangle$ | TURKISH AIRLINES | TU 1511 |
| SYNNEX TECHNOLOGY INTL | TA 1986 | , | TWENTY-FIRST CENTURY FOX | US 192 |
| SYNOVUS FINANCIAL | US 1949 | $\triangle$ | TWO HARBORS INVESTMENT | US 1866 |
| SYSCO | US 424 | $\triangle$ | TYSONFOODS | US 351 |
| SYSMEX | JA 1659 | - | UBI BANCA | 1434 |
| TROWE PRICE | US 116 | $\nabla$ | UBS | sz 80 |
| T\&D (INSURANCE) | JA 544 | $\triangle$ | UC RUSAL | RU 961 |
| talheivo cement | JA 1536 | - | UCB | BE 1212 |
| talsel | JA 879 | $\triangle$ | UCO BANK | 1N 1849 |
| TAISHIN FINANCIAL |  | $V$ | UGI | US 1364 |
| TAIWAN BUSINESS BANK | TA 1749 | $\triangle$ | ULTA SALON COSMETICS \& FRAG | US 1358 |
| taiwan cooperative fin | TA 1252 | $\triangle$ | ULTRAPAR PARTIIIPACOES | BR 981 |
| taiwan mobile | TA 1527 | V | UMICORE | BE 1819 |
| TAIWAN SEMICONDUCTOR | TA 127 | $\triangle$ | Uniball-rodamco | FR 635 |
| TAKEDA PHARMACEUTICAL | JA 348 | $\triangle$ | UNICHARM | JA 1266 |
| talanx | GE 414 | $\checkmark$ | UNICREDIT | 1T 496 |
| TAQA (UTLITITES) | AE 1829 | $\nabla$ | UNILEVER | NE 103 |
| TARGA RESOURCES | US 1407 | $\triangle$ | UNION BANK OF INDIA | IN 1420 |
| TARGET | US 227 | $\checkmark$ | Union national bank | AE 1589 |
| TATA CONSULTANCY SERVICES | 376 | $\wedge$ | UNION PACIFIC | US 182 |
| TATA MOTORS | 290 | $v$ | UNIPER | GE 896 |
| TATA STEEL | IN 1076 | $\triangle$ | UNIPOL GRUPPO | 17 869 |
| tatneft | RU 673 | - | UN-PRESIDENT | TA 1036 |
| TAYLOR WIMPEY | UK 1408 | V | UNIQA | As 1543 |
| TCL (TECH HARDWARE) | CN 1104 | V | United alicraft | RU 1829 |
| TD AMERITRADE | US 836 | , | United continental | US 269 |
| td bank | CA 56 | $\wedge$ | UNITED OVERSEAS BANK | S1 332 |
| TDK (TECH HARDWARE) | JA 1036 | $\nabla$ | UNITED PARCEL SERVIIE | US 159 |
| TE CONNECTIVITY | SZ 502 | V | UNITED RENTALS | US 1183 |
| TECH DATA | US 1604 | $V$ | UNITED TECHNOLOGIES | US 87 |
| TECH MAHINDRA | IN 1998 | V | UNITED UTLLTIES | UK 1335 |
| TECHNIPFMC | UK 1914 | - | UNITEDHEALTH | US 36 |
| TECHTRONIC INDUSTRIES | HK 1676 | $\triangle$ | UNIVERSAL HEALTH | US 990 |
| teck resources | CA 753 | - | UNUM | US 568 |
| TELECOM ITALIA | 300 | $\wedge$ | UPM-KYMMENE | F1 762 |
| telefónica | SP 110 | , | URaLKALI | RU 1370 |
| TELEKOM INDONESIA | ID 653 | $\triangle$ | us bancorp | US 96 |
| telenor | No 715 | V | us foods | US 1571 |
| TELIASONERA | SW 702 | , | US STEEL | US 1941 |
| TELSTRA | AU 282 | V | vakifbank | TU 951 |
| TELUS | CA 643 | $V$ | VALE | BR 156 |
| TENAGA NASIONAL | MA 490 | - | VALEANT PHARMACEUTICALS | CA 1248 |
| tenaris | LU 1396 | V | VALEO | FR 634 |
| TENCENT | CN 148 | $\triangle$ | VALERO ENERGY | US 211 |
| tenet healthcare | US 1204 | $\triangle$ | VALSPAR | US 1979 |
| tenneco | US 1761 | - | VEDANTA RESOURCES | UK 1318 |
| TERNA | 172 | $\nabla$ | ventas | US 973 |
| TERNIUM | LU 1671 | $\bigcirc$ | VEOLAA ENVIRONNEMENT | FR 721 |
| terumo | JA 1559 | V | VEON | NE 802 |
| TESCO | UK 587 | $V$ | VErbund | AS 1942 |
| TESLA | US 933 | $\wedge$ | VEREIT | US 1929 |
| tesoro | US 694 | $\nabla$ | verisign | US 1811 |
| TEVA PHARMACEUTICAL TEXAS INSTRUMENTS | IS 485 US 387 |  | VERISK ANALYTICS VERIZON COMMUNCATIONS | US 1418 US 18 |

$\triangle$ UP
ASIAN COMPANIES ARE IN RED TYPE
market leadership in India. As per its filings with the Registrar of Companies, Mercedes-Benz's profits in India in 2014-15 stood at about $\$ 50$ million. In 2016, it consolidated its lead despite being badly hit by the ban on the sale of big diesel cars in the National Capital Region (NCR) as well as by demonetization; in the first quarter of 2017, it posted its highest-ever sales numbers, 3,650 units, with those of SUVs growing by $13 \%$. The perception that it is not a brand for younger people was changing as well-the average age of its customers dropped from 45 to 37. Globally, too, Mercedes-Benz regained its leadership in 2016 after over a decade of playing catch-up.

Mercedes-Benz's recovery in India began with the launch of the A-Class in 2013. The car, with its modern design, ran up 400 orders in just ten days. More launches followed, including in the SUV segment. In 2015, some 15 models debuted, followed by another 13 in 2016. This year has already witnessed three launches: the new E-Class with a long wheelbase, Night Editions in the A-Class and B-Class models, and the S-Class Connoisseur's Edition. "The new launches helped us cover all the white spots in our product range," says Folger, a 57 -year-old Mercedes-Benz lifer who headed the Malaysia business before coming to India. "Our new launches this year will be more or less the same as last year."

The product blitzkrieg has helped the company erase its "slow mover" image, while offering customers multiple options across seg-ments-be it a compact car, sedan or SUV, dream cars like Cabriolet or performance vehicles such as AMG.

Even as the company launched new models, it realized that the new class of customers it was wooing was different from its traditional buyers in many respects. For instance, entrepreneurs-in the startup space and elsewhere-and professionals who had tasted success early in their careers wanted to own a Mercedes-Benz but found them unaffordable. The company adopted a multipronged strategy to tackle that challenge.

First, it put to better use its manufacturing facility at Chakan, near Pune, with a capacity to assemble up to 20,000 cars, by assembling more vehicles in India. "Today we locally assemble nine models that account for $80 \%$ of our volumes," Folger says. The company also focused heavily on localization. For most of the nine models the local content is about $60 \%$. "These measures enabled us to reduce our prices by $20 \%$ to $30 \%$. This helped our volumes and improved our profitability," he says.

Today any model that sells over 500 units a year presents a business case for the company to assemble locally. This applies to top-end cars as well. India is the first and the only market outside Germany where a righthand-drive, long-wheelbase E-Class is assembled locally. The same is the true of the Mercedes-Maybach S500 and S600, priced at $\$ 260,000$ and $\$ 400,000$ respectively. "It is testimony to the fact that we can produce cars of the same quality as Germany with no discernible difference at all," Folger says. "Such is the quality of the people at our plant that when Mercedes-Benz started a plant in Brazil, workers from here were sent to train people there."

The company also adapted cars that came as CBUs (completely built-up units) for the Indian market in a bid to make them more affordable. For instance, AMGs were launched globally with 4-liter V8 engines, but the company felt they were too powerful for Indian conditions and cost too much. The company opted for a 3-liter, V6 engine,
which offered a relatively lower horsepower and torque but worked well for local conditions and came with a lower price tag.

The affordability factor was also tackled through some innovative financing products. Daimler Financial Services India (DFSI), the captive financing company, came in handy here. "The challenge before us was to make a Mercedes-Benz car more accessible to customers who wanted to own it but were unsure of servicing a large equated monthly installment," says Fred Wick, managing director and CEO of DFSI.

Launched in 2013, STAR Agility, a finance solution created by Mercedes-Benz India with Mercedes-Benz Financial, gave buyers the option of making a balloon payment at the end of the contract and either take ownership of the car or exchange it for a new model at the end of the contract period. STAR Agility reduced the equated monthly installment by $40 \%$, making the cars affordable for a wider pool of customers.
"Mercedes-Benz learned from its past mistakes and understood the need to make its products attractive and affordable to the new breed of customers. By doing so, it has come back strongly," says Amit Jain, a partner at BMR Associates. "It also built a strong management team to go deeper into the country." With 89 sales and service outlets across 41 cities, Mercedes-Benz has the densest network among all luxury-car players in the country and $35 \%$ more than its nearest competitor.
"Our 'go to customer' strategy, a qualitative network expansion, has been the key to our growth story. We have tried to unleash the potential not only in the key metros but also in emerging T2 and T3 markets," says Michael Jopp, vice president of sales and marketing at Mercedes-Benz India.

This widespread network was useful when the company rolled out its next biggest differentiator: My Mercedes-My Service. Until a few years ago, the total cost of ownership-a metric that looks at the cost a buyer incurs while using a car-was never a factor in the luxury-car space. But for the new crop of buyers who wanted to own a luxury car for the first time, a high maintenance cost-as well as service-was a big deterrent to buying a Mercedes. To address this issue, the company extended the warranty period to three
years (two years is the norm in the industry) for all cars.

It did not stop there. Mercedes began offering attractive service packages in various forms. Each car has 45 different packages that enable customers to choose a plan based on their usage pattern-three years or 30,000 km , three years or $60,000 \mathrm{~km}$ and even ten years or $200,000 \mathrm{~km}$. About $30 \%$ of all new car buyers have opted for the My MercedesMy Service scheme since it launched in July 2016. "My father always said you learn how to save money from rich people," Folger says.

Mercedes-Benz is back on a firm footing. It has attracted younger customers, and what pleases Folger even more is that many of the traditional customers who left the brand in 2009-10 are returning. "They tried out other brands and realized that the grass is not always greener on the other side," he says. If anything worries him today, it is the larger issue of growth in the Indian luxury-car market. For many years now, the volumes have remained almost flat. Between 2013 and 2016, the segment added just 4,000 units, and in 2016, growth declined by $5 \%$ to 34,176 units. The high duty structure seems to be an impeding factor. "The exorbitant duty structure makes luxury cars quite prohibitive in pricing in this market. Any reduction in excise duty would have grown the volume, and the fear of revenue loss would have been more than aptly balanced," Jopp says. Folger adds, "India is still a bit socialist in its thinking."

But that is changing from a customer's perspective. "Buying a luxury car is not a taboo any longer, and customers now perceive a luxury car as an extension of their lifestyle and also as an achievement," Jopp says. BMR's Jain agrees. "The Indian market is upping the ante. People want to own a luxury car." The numbers surely show the potential headroom for growth. In India, the share of luxury cars among total new cars registered, at $1.2 \%$, is among the lowest in the world. In Indonesia it is $2.5 \%$, Malaysia $5.4 \%$, China $8 \%$ and Germany $24 \%$. "I am confident the market will grow," says Folger. He adds that MercedesBenz has never been better prepared to take advantage of any sharp increase in demand for luxury cars in the country. (B)
Adapted from Forbes India, a licensee of Forbes Media.

GLOBAL 2000
VERTEX PHARMACEUTICALS US 1644 A VESTAS WIND SYSTEMS

## VIACOM

VICINITY CENTRES
VIENNA INSURANCE
VIETIN BANK
VIETNAM DAIRY PRODUCTS VIETNA
VINCI
VIPSHO

VIPSHOP
VIRGIN
VISA
VIVENDI
VIVENDI
VODAFONE
VODASTALPINE
VOESTALPINE
VoLks

## VONOVIA

VORNADO REALTY
VOYA FINANCIAL
VTB BAN
VULCAN MATERIALS
W\&W-WÜSTENROT
WALGREENS BOOTS ALLIANC WAL-MART STORES WALT DISNEY WANHUA CHEMICAL WANT WANT CHINA WÄRTSILÄ WASTE CONNECTIONS WASTE MANAGEMENT WATERS WEC ENERGY WEICHAI POWER WELLCARE HEALTH PLANS WELLS FARGO WELLTOWER WENDEL

## WESFARMERS

WEST JAPAN RAILWAY WESTAR ENERGY WESTERN DIGITAL WESTERN UNION WESTFIELD WESTLAKE CHEMICAL WESTPAC BANKING WESTPAC B WESTROCK
WEYERHAEUSER WEYERHAEUSER
WH (FOOD, DRINK \& TOBACCO) WH (FOOD, DRINK \& TOBACCO) HK WHEELOCK

## WHITBREAD

WHOLE FOODS MARKET
WILLIAMS
WILLIS TOWERS WATSON
WILMAR INTERNATIONAL WIPRO WISTRON WM MORRISON SUPERMARKE WOLSELEY WOLTERS KLUWER WOODSIDE PETROLEUM WOOLWORTHS WOORI BANK WORKDAY WORLD FUEL SERVICES WPG
WPP
WRP BERKLEY
WULIANGYE YIBI
WW GRAINGER
WYNDHAM WORLDWIDE
WYNN RESORTS X5 RETAIL XCEL ENERGY XEROX
XEROX
XIAMEN C\&D
XIAMEN INTL TRADE XIAMEN INTL TRADE
XIAMEN XIANGYU XIAMEN
XILINX
XILINX
XISHUI STRONG YEAR INNER
MONGOLIA
XL (INSURANCE)
XPO LOGISTICS
YAHOO!
YAMADA DENKI
YAMAGUCHI FINANCIAL
YAMAHA MOTOR YAMANASHI CHUO BANK Yamato
YANZHOU COAL MINING
YARA INTERNATIONAL YES BANK
YONGHUI SUPERSTORES YPF (OIL \& GAS)
YUANTA FINANCIAL YUM BRANDS YUM CHINA YUNNAN BAIYAO ZENITH BANK ZHEJIANG ZHENENG ELECTRIC POWER ZHONGSHENG ZHONGSHENG ZIMMER BIOMET ZIONS BANCORP ZIONS BANCORP
ZOETIS ZOETIS
ZURICH INSURANCE

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Singapore


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Director, National Economic Research Institute, Chairman China Reform Foundation, China


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Patrick Grove Group CEO, Catcha Group, Malaysia


Douglas Hsu
Chairman \& CEO,
Far Eastern Group, Taiwan


Jay Wintrob CEO, Oaktree Capital Management, USA


V Shankar CEO \& Partner, Gateway Partners, UAE

# Build the Wall! Por Favor. 

# Trump's incendiary tweets against Mexico are music to the ears of BlackRock's intrepid emerging-market portfolio manager Gerardo Rodriguez. 

## BY KENNETH RAPOZA

Among Mexicans, few get as much pleasure from President Trump's tough talk excoriating our southern neighbor as Gerardo Rodriguez, portfolio manager of BlackRock's Total Emerging Markets Fund.

Since January, Total has been seriously overweighting Mexican bonds, and the president's rhetoric and tweets about "bad hombres," building walls and dealing NAFTA a deathblow tend to send the peso falling. In January, during Trump's first days in office, the peso's exchange rate with the U.S. dollar peaked at nearly 22 , its weakest level in history.

For Rodriguez, that moment was somewhat like the S\&P 500 low in March 2009, after the financial crisis. Rodriguez knew it was a great time to buy Mexico, and he instructed BlackRock traders to pile into peso-denominated bonds when most investors were running for cover. At the time, Mexican government bonds were yielding 7.8\%, compared with $2.3 \%$ for ten-year U.S. Treasurys. This move, plus a big allocation to beaten-down Asian stocks like Samsung and Alibaba, has helped Total Emerging Markets achieve a $10.4 \%$ total return year to date and a $4.2 \%$ three-year average annual return, topping its category and earning it five stars among Morningstar-rated funds.
"All of our analysis was flashing red hot in favor of Mexico in January. Trump's aggressiveness didn't frighten us away. When there's a big move like that in Mexico, you go in," Rodriguez says from his office on Park Avenue in New York, a colorful sombrero hanging outside on the wall. Rodriguez just returned from 90 -degree weather in Mexico City, but New York on this day was an unseasonable 55.
"You have a window. It's now until the end of the year. After that, things will start to intensify, and you will need to reassess. There will be new themes because of [domestic] politics," Rodriguez says, adding that populism in Latin America, recently dormant, could be awakened given that ex-Mexico City governor An-
drés Manuel Lopez Obrador, a populist, is leading in the polls for next year's election.

According to Rodriguez, Mexico has been through far worse than Trump. "He's not really at the top of our minds. Security, corruption and the economy are far more important," he says in a strong Mexican accent.

Rodriguez begins to run down a list of things that make Mexico reliable for investors: chiefly, its proximity to the U.S., its welcoming stance on manufacturing and trade, and relatively conservative fiscal and monetary policies. The takeaway: Mexican politics are turbulent, but economic policy is not. In January, hundreds of Mexicans took to the streets to protest gasoline price hikes. He describes the scene of looted shops, busted windows and protesters calling for President Enrique Peña Nieto's resignation. Mexico's president is less popular than Trump, so the government can't avoid political stress. But it will seek to avoid financial stress, Rodriguez insists.

He ought to know. He has insider status when it comes to Mexico's finances. Born in Puebla, a state with a $64 \%$ poverty rate, Rodriguez, 44, is the son of a construction entrepreneur and attended Universidad de las Américas in Puebla, majoring in economics and playing shooting guard for the college's championship team, the Aztecas. Rodriguez went straight from there to an entrylevel position at Mexico's Ministry of Finance and then on to Stanford, earning a master's degree in engineering, economic systems and operations research.

After graduating in 1999, Rodriguez headed back to the finance ministry under presidents Vicente Fox and Felipe Calderón, ultimately rising to undersecretary of finance. During his 14-year tenure there, Rodriguez got to know the Mexican capital markets intimately, because he helped create them. From 2005 to 2011, as head of Mexico's public-debt management, he was the nation's yield-curve czar. He also created an online Treasury Direct platform similar to the one in the U.S. and launched
a National Infrastructure Fund.
"I was in the finance ministry during the Asian Tiger crisis, at a time when we were just getting over the Tequila Crisis ... and then, bam, it's 2008," Rodriguez recalls. The Tequila Crisis refers to Mexico's devaluation of its peso in December 1994, which sparked hyperinflation and capital flight. At the time, Mexico faced default on its dollar debts, and the IMF, with the help of the U.S. Treasury, spent $\$ 40$ billion bailing out the country.
"We became the poster child of the IMF", he says. "None of that compared to 2008." That's when the world began falling apart. In Mexico City, while Wall Street was imploding, Rodriguez and others in the finance ministry were looking at their balance sheets for ticking time bombs, "and we found nothing," he says. Until Rodriguez realized that Mexican corporations had gorged on dollar loans. Companies needed more pesos to pay dollar debts. It was the Great Recession with a painful reminder of the peso crisis.
"We spent $\$ 25$ billion in different forms to stabilize the situation, because we thought, No way is anyone going to fund us. It was intense," he says shaking his head, with a "never again" look on his face.

Thanks to Mexico's good record paying back its 1990s peso-crisis debts, it got thrown another IMF lifeline during the 2009 G20 meeting in
 London. "We got a $\$ 47$ billion credit
line. Until then, we thought we were entering another major financial crisis," he says. On the news, the peso rebounded from 15 to the dollar to about 13.

According to Rodriguez, the peso strengthens fast on good news. He predicts it will happen again.

In 2013, Rodriguez was recruited by BlackRock, barely a year after he spearheaded the hosting of the G20 Summit in Mexico City. During the meeting, Rodriguez led the effort to increase IMF funding by over $\$ 450$ billion. Despite his decision to move El Norte, Rodriguez continues to be named as a potential successor to Agustín Carstens, the current governor of Mexico's central bank.

In his new role managing BlackRock's \$370 million fund, Rodriguez has spread its investments around the globe, employing something of a contrarian value strategy. The fund currently has its largest exposure to equities in China and Taiwan and is overweight tech
and telecom stocks. From a currency standpoint, he is long the Brazilian real as well as the Thai baht and Turkish lira. For bonds, his top three holdings are Mexico, South Africa and Indonesia, all yielding around $7 \%$. Total is leveraged $140 \%$ on the fixed-income side to help limit volatility in equities. In 2016, the fund returned $13.2 \%$, beating the benchmarks and its category average of $8.47 \%$.

In December, Fitch downgraded Mexico's credit outlook from stable to negative amid an interest rate hike by its central bank. The peso has recently strengthened to 18.80 , and Rodriguez has lightened up his positions there.
"The big mystery for Mexico has been Trump, but soon local politics will take center stage," he says. "But there is a strong fundamental backdrop in the country." What if its populist frontrunner comes to power and the peso falls back to 22? Says Rodriguez, "Buy. Absolutely buy." (F)

# Little Rich Boss 

## 32-year-old Itthipat "Tob" Peeradechapan has reaped a bounty from selling flavored seaweed.

BY NAAZNEEN KARMALI

The Taokaenoi Land store at the popular Terminal 21 mall in central Bangkok is a favorite pit stop for Chinese tourists, who flock there to pick up Thailand's signature seaweed snack. Taokaenoi's waferthin sheets of crispy dried algae are available in an array of flavors from tom yum to wasabi. These are the East Asian equivalent of potato chips, providing a nutrient-rich fix for a salty snack craving.
"One-fifth of the world's population already eats seaweed. But that only means there's huge room to grow," says Itthipat "Tob" Peeradechapan, founder of Thai-exchange-listed Taokaenoi Food \& Marketing. The company dominates the domestic market for seaweed snacks with close to a two-thirds share. Its nearest competitor is Masita, made by beer baron Santi Bhirombhakdi's (No. 9) Singha, with a $19 \%$ market share.

Taokaenoi means "little boss" in Thai, a nod to 32 -year-old Tob, a college dropout and former vendor of roasted chestnuts, whose seaweed success has made him something of a youth icon. An early achiever, he shot into the limelight at age 26 when a movie was made about his life titled The Billionaire.

In dollar terms, Tob doesn't make the billionaire cut yet, but he's on his way.

Taokaenoi's surging sales-up more than a third in 2016 to $\$ 136$ million-lifted its shares, securing Tob's debut on the list at No. 44 with $\$ 610$ million.

The stock has jumped fivefold since the company's 2015 IPO, a gain that was "beyond our expectations," acknowledges Kongkiat Opaswongkarn, chief executive of Asia Plus Securities, the lead investment bank for the public issue. He attributes the rise partly to investors' growing appetite for the food and beverage sector.

Analysts say the post-IPO buzz around Taokaenoi was also sparked by rising sales in China, the company's biggest overseas market, which contributes more than a third to revenues. "The IPO price hadn't fully factored in the China play," says Nantika Wiangphoem, an analyst at Bangkok securities firm DBS Vickers, who tracks the company.

At his company's Bangkok headquarters, Tob, wearing a solid black T-shirt, the color preferred by his icon Steve Jobs, admits to eyeing an even bigger play: to make Taokaenoi a global brand. "The next stop has to be the U.S., as that's the world's biggest snacking market," he says. In the American market, as in China, Taokaenoi will have to fight it out with earlier Korean and Japanese arrivals.

Unfazed, Tob is in the throes of doubling Taokaenoi's annual production


capacity to 12,000 tons. He's used half the $\$ 42$ million IPO proceeds to build a new factory that will produce exclusively for export. It is located in an industrial park 47 miles north of Bangkok, close to the historic city of Ayutthya, the former capital of the Kingdom of Siam. Adjacent to Taokaenoi's 7-acre complex, is, ironically, a PepsiCo plant producing Lay's potato chips.

Traditional labor-intensive production, whereby seaweed is manually fried (or roasted) in woks, has been replaced here with automation, using imported Korean and Japanese machines and some equipment that was developed in-house. Chief operations officer Boonchai Kowpanich, who oversees the newly opened unit, says it needs a third of the 3,000 who are employed at the old factory.

Uraiwan Tantisuwannakul, an analyst with CIMB Securities (Thailand), points out that the eight-year tax break that the new unit enjoys, combined with productivity gains and cost savings, should make Taokaenoi more competitive. But, she adds, the company remains vulnerable to price increases of its main raw material. And seaweed isn't available locally.

Taokaenoi depends on imports from South Korea, but Tob insists that it secures "competitive rates." The capacity expansion and export push are crucial, he says, for achieving his target of doubling revenue by 2024. "We have to be big or we cannot survive."

Tob imbibed such survival lessons at an early age. The youngest of three children, he saw his father's construction business collapse in the wake of the 1997 Asian financial crisis with the bank threatening to take possession of their home. A videogame fanatic, he dabbled in selling such fare while at school, netting $\$ 10,000$. In his freshman year of college, he dropped out to start "a real business" to help with the family's financial woes.

A visit to a food fair sparked the idea of selling roasted chestnuts. He used $\$ 7,200$ from his savings to buy equip-
ment and set up a stall at a food court in a mall. But sales were slow, and he contemplated shutting shop and going to work at the McDonald's opposite his stall. Just then he got a timely break with supermarket chain Tesco Lotus. Sales took off from the get-go. "My kiosk was close to the cash counter," he says. "It was all about location, location, location."

He called his fledgling venture Taokaenoi because "my father used to tease me by calling me Little Boss." Soon he had expanded to 30 locations with

> Tob latched on to seaweed when a girlfriend brought him a packet of the traditional variety. "It was love at first bite!" he says.

monthly sales of $\$ 87,000$ and 50 staffers. "That wasn't bad for a 19-year-old," he says, smiling. But he kept close tabs, visiting every spot at least once a week.

A change in management at Tesco Lotus ended his dream run. The chain wanted him to shift to the parking lot since the smoke from the oven was affecting some customers and turning ceilings black. His offer to retrofit was turned down. Sales plummeted, forcing him to look for other avenues.

Tob latched on to seaweed when a girlfriend brought him a packet of the traditional variety from her university store. "It was love at first bite!" he says. He sensed an opportunity as seaweed snacks were already popular with the younger crowd but were not being made in Thailand in a big way.

He sought know-how from experts at Kasetsart University, which is known for agricultural sciences, and enlisted his mother's help in creating flavors. "Our original salty and spicy flavors are based
on her recipes," he says. Raising \$200,000 by selling some of his chestnut stalls, he set up a factory to make crispy seaweed in 2006.

Wirode Tangwutthikaiwit, founder of PAG Design, the firm that designed Taokaenoi's logo of a young boy in traditional Chinese attire, recalls being amazed by the teenage Tob. "He was only 19 but had a clear vision for what he was out to do."

Taokaenoi's launch at a 7-Eleven store sputtered when the packs were placed on lower shelves, hence out of sight. After Tob persuaded the store manager to move them close to the cashier, sales jumped. In 2008, when Taokaenoi's sales touched $\$ 30$ million, his confidence got a boost and he mulled taking Taokaenoi public: "I knew then that I would succeed."

But success spawned competition by the likes of Masita and a raft of smaller copycats. He faced a setback in 2011 when flooding in Thailand devastated Taokaenoi's factory. Working overtime, he restored production in three months, though the plan for an IPO had to be postponed. "In the foods business if you don't have your product on the shelves, consumers will try another brand," he explains.

What if seaweed snacks become passé with consumers? Tob admits that he frets about the possibility but is following Warren Buffett's advice to stay focused. Taokaenoi's range now includes corn snacks (Tob Corn) and Seagle seaweed chips made of seaweed powder and a flour mix. Tob has splashed $\$ 2$ million on Taokaenoi's latest marketing campaign, which revolves around the popular South Korean boy band Got7.

In recent months, Tob has divested $10 \%$ of his holdings to institutional investors, partly to diversify his personal portfolio. Having tasted success, he is keen to back startups and what he calls the "next generation" of entrepreneurs: "Though I am 32, in terms of experience I feel closer to 50." (F

## Thailand's 50 Richest

BY NAAZNEEN KARMALI

# Rising Against the Odds 

## The nation's wealthiest record handsome gains in a downcast year.

Thailand's economy expanded $3.3 \%$ in the first quarter of 2017, its highest rate in four years, largely on the back of improved farm production, increased consumer spending and a recovery in exports. The uptick spells good news for a nation under authoritarian rule that is observing a yearlong period of mourning for much revered King Bhumibol Adulyadej, at his death the worlds longest-reigning monarch, who ruled over seven decades.

Despite the subdued sentiment, Thailand's 50 richest are raking it in. They are worth $\$ 123.5$ billion, up $16 \%$ since 2016, outperforming the stock market's $12 \%$ rise in the past 12 months. More than twothirds of the country's 50 richest added to their wealth, with the top 5 notching up the biggest dollar gains.

The Chearavanont brothers of the Charoen Pokphand Group added \$3 billion to retain their No. 1 spot with a fortune of $\$ 21.5$ billion. Liquor tycoon Charoen Sirivadhanabhakdi, who remains at No. 2, was in the news for his plan to build a $\$ 3.5$ billion township in central Bangkok, the city's biggest development to date, overseen by his younger son, Panote, age 39 (see "Charoen Earth," p. 66).

The Red Bull clan, headed by Chalerm Yoovidhya, is the second-biggest gainer in


Panote Sirivadhanabhakdi oversees the $\$ 3.5$ billion One Bangkok project.
dollars, up $\$ 2.8$ billion since 2016. Though Red Bull sales are flat, the sector is sizzling and public competitors trade at higher multiples than a year ago. (Chalerm's son, Vorayuth, has subtracted himself in a criminal matter; see "Fugitive Heir", p. 69)

Three are new this year: Itthipat Peeradechapan, founder of seaweed snack maker Taokaenoi Food \& Marketing, who at 32 is the youngest on the list (see "Little Rich Boss," p. 58); poultry prince Winai Teawsomboonkij, who founded his Thaifoods Group in 1987 with a farm of 20,000 chickens; and Nutchamai Thanombooncharoen, another energy-drink maker and one of only half a dozen women (see p. 68).

The biggest drop in net worth was suffered by Prasert Prasarttong-Osoth, whose wealth shrank by $\$ 600$ million as shares of his hospital chain, Bangkok Dusit Medical Services, and airline, Bangkok Airways, both took a hit on falling profits.

Notable drop-offs include siblings Nijaporn Charanachitta and Premchai Karnasuta, whose flagship, Italian-Thai Development, saw its shares fall $35 \%$ in the past year as the government delayed infrastructure spending.

Net worths were based on stock prices and exchange rates from May 18.

- Reporting by Ron Gluckman, Sean Kilachand, Suzanne Nam, Phisanu Phromchanya and Anuradha Raghunathan



## PETCH OSATHANUGRAH: WAITING FOR A BOOST

The much anticipated IPO of Thailand's oldest consumer product company, 125-year-old Osotspa, maker of the popular M-150 energy drink, is expected to be one of the largest on $\sum^{\infty}$ the Thai stock exchange. Originally planned for 2016, the offering was put on hold due to a weak market and tighter listing rules but is expected this year. The delay allows the
Osathanugrah family (No. 24) to decide which of nearly 50
companies, besides the drinks business, to include. Meantime, Osotspa's exotic CEO Petch, who shares close to two-thirds of the company with younger brother Ratch and cousin Niti, is preparing to break ground on his contemporary art museum, Sansab. A collector for three decades, he recently "bought my first Picasso!" The museum, says Petch, who also runs the family-founded Bangkok University, will be a gift to Thailand.

THE LIST

1
CHEARAVANONT BROTHERS
\$21.5 BILLION CHAROEN POKPHAND GROUP

2 CHAROEN
SIRIVADHANABHAKDI
\$15.4 BILLION A
THAI BEVERAGE AGE: 73
3

CHIRATHIVAT FAMILY
\$15.3 BILLION A
CENTRAL GROUP

## 4

CHALERM YOOVIDHYA
\$12.5 BILLION A
RED BULL AGE: 66

## 5

VICHAI
SRIVADDHANAPRABHA
\$4.7 BILLION A
KING POWER AGE: 59

## KRIT RATANARAK

$\$ 3.9$ BILLION
BANGKOK BROADCASTING \& TV
AGE: 71 7
VANICH CHAIYAWAN
$\$ 3.8$ BILLION
THAI LIFE AGE: 85
8
PRASERT
PRASARTTONG-OSOTH
\$2.6 BILLION
BANGKOK DUSIT MEDICAL SERVICES AGE: 84

SANTI BHIROMBHAKDI
\$2.3 BILLION
BOON RAWD BREWERY AGE: 70
10
ALOKE LOHIA
\$1.75 BILLION A
INDORAMA VENTURES AGE: 58

## 11

THAKSIN SHINAWATRA
\$1.7 BILLION
SC ASSET AGE: 67

## SUPALUCK UMPUJH

\$1.65 BILLION A
THE MALL GROUP AGE: 62
-UUP MORE THAN 10\% VDOWN MORE THAN 10\%
*NEW TO LIST URETURNEE

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## Thailand's 50 Richest



## VICHAI SRIVADDHANAPRABHA: SHOP AND FLY

Thailand's tourism boom drew a record 32.6 million visitors in 2016, more than a fourth of them mainland Chinese. Thanks to their spending, sales at Vichai's King Power duty-free stores were up $20 \%$ to $\$ 2.4$ billion last year, adding $\$ 1.45$ billion to his wealth and earning him a spot in the top five for the first time. But this growth faces speed bumps: The military junta has started cracking
down on cut-price group tours from China and is set to end King Power's airport monopoly in 2020. To expand beyond duty-free, Vichai picked up a $21 \%$ stake in Thai Air Asia for $\$ 225$ million in the past year. The football fan, who transformed Leicester City into a Premiere League champ, reportedly agreed to buy Belgian second-tier football team OH Leuven for an undisclosed sum.


## CHUCHAT \& DAONAPA PETAUMPAI: MONEY ON WHEELS

With one million customers and 2,000 branches, Muangthai Leasing, the country's biggest provider of loans against motorcycles, is thriving. Its loan portfolio grew by more than $80 \%$ to $\$ 695$ million in 2016 . Shares surged $60 \%$ since last year, propelling the combined wealth of the founders past the $\$ 1$ billion mark for the first time. The husband-and-wife team, who gave up bank jobs to start Muangthai in 1992, appear at No. 19 with $\$ 1.4$ billion. Chuchat, an avid wine collector with 2,000 bottles in his private cellar, says they are aiming for $50 \%$ growth this year with 600 additional branches.


## SUPHACHAI

## CHEARAVANONT:

## SONS ALSO RISE

Agribusiness conglomerate Charoen
Pokphand Group, controlled by Thailand's richest clan, announced a long-expected succession in its top ranks in January. After 48 years as chairman and CEO, Dhanin Chearavanont crowned his oldest son, Soopakij, 53, and the youngest, Suphachai, 50 , as CP's chairman and CEO respectively. An alum of New York University, Soopakij has worked in key group companies. Suphachai, an undergrad from Boston University, started out at retailing arm Siam Makro and went on to head True, CP's telecom business, in which the group has invested billions, though it has struggled to make it profitable. Suphachai recently announced "CP 4.0," a plan to transform the group with digital technology, among much else. "I see myself as both a professional and an entrepreneur," he says. The patriarch, 77, is now designated senior chairman, though it is believed he continues to call the shots.

THE LIST

13
PRAYUDH MAHAGITSIRI
$\$ 1.62$ BILLION
QUALITY COFFEE PRODUCTS AGE: 71
14
RIT THIRAKOMEN
$\$ 1.6$ BILLION
MK RESTAURANT GROUP AGE: 65
15
WILLIAM HEINECKE
$\$ 1.55$ BILLION
MINOR INTERNATIONAL AGE: 68
16
WICHAI THONGTANG
\$1.5 BILLION
BANGKOK DUSIT MEDICAL SVCS
AGE: 70

## 17

CHATRI SOPHONPANICH
$\$ 1.47$ BILLION
BANGKOK BANK AGE: 83
18
KEEREE KANJANAPAS $\$ 1.43$ BILLION
BTS GROUP HOLDINGS AGE: 67
19
CHUCHAT \& DAONAPA PETAUMPAI
\$1.4 BILLION
MUANGTHAI LEASING AGE: 63, 63
20
THONGMA VIJITPONGPUN
$\$ 1.39$ BILLION
PRUKSA REAL ESTATE AGE: 59
21
SOMPHOTE AHUNAI
\$1.37 BILLION A
ENERGY ABSOLUTE AGE: 49
22
ISARA VONGKUSOLKIT
$\$ 1.36$ BILLION A
MITR PHOL SUGAR AGE: 68
23
HARALD LINK
\$1.2 BILLION
B. GRIMM GROUP AGE: 62

24
OSATHANUGRAH FAMILY \$1.12 BILLION $\boldsymbol{A}$ OSOTSPA

## 25

ANANT ASAVABHOKHIN
\$1.11 BILLION A
LAND \& HOUSES AGE: 66

AUP MORE THAN $10 \%$ VDOWN MORE THAN $10 \%$
$\star$ NEW TO LIST URETURNEE

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## Thailand's 50 Richest

# Charoen Earth 

## BY RON GLUCKMAN

Nobody knew what to expect when Thailand's richest tycoon, Charoen Sirivadhanabhakdi, outbid other suitors to snatch beverage-and-property giant Fraser \& Neave of Singapore for $\$ 11.2$ billion in 2013. Now comes news of the first offspring of the Frasers property unit: One Bangkok, a $\$ 3.5$ billion development in the heart of Bangkok's central business district. The project, touted as the largest investment on a single site in the city, is being developed with Charoen's privately held TCC Assets (Thailand), through which he controls vast land parcels in Thailand, including this one.

Spread over 41 acres, it will be a mix of office towers, hotels, residences and retail. Reports say it will include a 90 -story skyscraper. "This is all on a scale unlike anything we've seen before," notes Simon Landy, executive chairman of property consultancy Colliers International Thailand.

Panote Sirivadhanabhakdi, 39, Charoen's youngest child, is overseeing One Bangkok. While his older brother, Thapana, works on the liquor, food and beverage side as president and chief executive of flagship Thai Beverage, Panote, group CEO of listed property arm Frasers Centrepoint in Singapore, is in charge of the family's international property interests.

The site, along Rama IV and Wireless roads, snug against Lumpini Park and close to the embassy district, has long been among the most desired for development. Owned by the Crown Property Bureau, it housed the popular Suan Lum Night Bazaar until 2007, when vendors were evicted. TCC and listed Univentures, which Charoen also controls, won the bid to develop it in 2014 for an undisclosed price.

Originally granted a 30 -year lease, TCC won a rare 30 -year extension, which Panote insists is critical to the project's viability. He dismisses worries of a property glut, saying it will be done in stages and completion won't be until 2025. In the process, the project should also boost values for a bevy of other properties that Charoen owns or leases in the area (see photo), making the tycoon, says one banker, "the Regent of Rama IV."


## THE LIST



## 26

PHORNTHEP PHORNPRAPHA
$\$ 1.1$ BILLION A
SIAM MOTORS AGE: 68

## 27

BANTHOON LAMSAM
\$1.05 BILLION
KASIKORN BANK AGE: 64

PETE BODHARAMIK
\$1 BILLION A JASMINE INTERNATIONAL AGE: 44

29
PRANEETSILPA
VACHARAPHOL
\$950 MILLION
THAI RATH AGE: 85
30
VICHAI MALEENONT
\$890 MILLION
BEC WORLD AGE: 97

## 31

CHATCHAI KAEWBOOTTA
$\$ 870$ MILLION A
SRISAWAD POWER 1979 AGE: 65
32
SATHIEN SETTHASIT
$\$ 830$ MILLION A
CARABAO GROUP AGE: 63

## 33

SURANG PREMPREE
\$820 MILLION A
BBTV AGE: 74
34
PAWAT VITOORAPAKORN $\$ 790$ MILLION
EASTERN POLYMER GROUP AGE: 65
35
WINAI TEAWSOMBOONKIJ
\$750 MILLION *
THAIFOODS GROUP AGE: 5
36
WITOON SURIYAWANAKUL
$\$ 745$ MILLION
SIAM GLOBAL HOUSE AGE: 59

## 37

NISHITA SHAH FEDERBUSH
$\$ 730$ MILLION
PRECIOUS SHIPPING AGE: 37

## Thailand's 50 Richest



## NUTCHAMAI THANOMBOONCHAROEN: MS. FIZZ

In a year when the energy-drinks market in Thailand declined 3\%, SET-listed Carabao Group, maker of Carabao Dang, Thailand's second-most-popular energy drink, recorded double-digit growth in volume. The company's shares surged $55 \%$ in the past 12 months, propelling its cofounder and managing director onto the list for the first time. With a $26 \%$ stake she debuts at No. 46 with a $\$ 590$ million fortune, joining her business partner Sathien Sethasit, who entered the ranks in 2015. She branched out from her family's financial-services business to team up with Sathien for a property venture before setting up Tawandang German Brewery, a microbrewery and restaurant, in 1999. Two years later, they partnered with popular folk singer Aed Carabao for a foray into energy drinks.

## ANANT ASAVABHOKHIN: TEMPLE TANGLE

The property baron is in the spotlight over his alleged role in a financial scandal linked to the Dhammakaya Temple, north of Bangkok. Anant was reportedly summoned for questioning by the Department of Special Investigation over supposedly dodgy land deals he entered into with the former chairman of a credit union, who is serving a prison term for embezzlement of funds. The jailed chairman is alleged to have sold land at a fraction of the market price to Anant, who in turn sold it at a huge profit and donated the bulk of the proceeds to the Buddhist temple. Anant, who didn't respond to requests for a comment, reportedly said that he was perplexed by the summons. Nonetheless, he resigned from the chairmanship of four of his companies: Land \& Houses, Quality Houses, LH Bank and Home Product Center. It was speculated that the Bank of Thailand may have forced his hand.


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## VORAYUTH YOOVIDHYA

## Fugitive Heir

Early one September morning in 2012, a speeding black Ferrari ran over and killed a motorcycle policeman in central Bangkok and fled the scene. While the cops were quick to identify the alleged culprit by following a trail of brake fluid to his home, nearly five years on-un-believably-he has yet to be brought to book.

The driver was allegedly Vorayuth Yoovidhya, whose late grandfather Chaleo Yoovidhya cofounded the global energy-drink maker Red Bull. The family, led by Vorayuth's father, Chalerm, is Thailand's fourth richest, with a $\$ 12.5$ billion fortune. Ignoring multiple police and court summonses, Vorayuth, whose nickname is Boss, is on the lam at an unknown overseas location.

The high-profile case, which has incited public anger over the blatant impunity enjoyed by the rich, returned to the headlines recently as some of the charges Vorayuth could face-for speeding and reckless driving causing property damage-lapsed owing to the statute of limitations, though he still faces charges of reckless driving causing death and failing to help the victim. Last month, days before he was to appear in court, Vorayuth reportedly flew to Singapore, from where he fled.

His disappearance prompted prosecutors to take urgent actions. A warrant for the scion's arrest was finally issued and his passport revoked by the Foreign Ministry. The government said it was seeking Interpol's help for Vorayuth's extradition. Despite these moves, the general perception is that the law will never catch up with the fugitive heir.

Indeed, in the aftermath of the accident, Vorayuth didn't seem racked with remorse. He continued to live the high life and, as reported by


Living the high life in glamorous locales.
AP, posted photos on social media from glamorous foreign locales as he hit the ski slopes and racing tracks, among much else. (The family did not respond to a request for comment.)

A recent editorial in the Bangkok Post, titled "Raging Red Bull Runs Rings Round Lame Ducks," slammed the foot-dragging by the police and prosecutors. Niti Pawakapan, a professor of sociology and anthropology at Chulalongkorn University, doubts Vorayuth will suffer any consequences.

The case has drawn attention to another lister: deposed prime minister Thaksin Shinawatra, who faces corruption charges and has been living in self-imposed exile in Dubai for a decade. Thaksin, who has denied wrongdoing, appears at No. 11 with $\$ 1.7$ billion. -N.K.


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FORBES KOREA JUne
Chung Mong-Won is chairman of Halla Group. The auto-parts-maker-cum-conglomerate was founded by his father (who split off from his brother's Hyundai). While restoring Halla's fortunes, Chung also has built up Korean ice hockey. His team will compete in next year's Winter Olympics at Pyeongchang. (forbeskorea.com)


## FORBES INDONESIA JUNE

Government veteran Agus Rahardjo, 61, has energized friend and foe of the Corruption Eradication Commission (KPK). At its helm since December, he's pursuing kickbacks in the rollout of a national ID card after earlier targeting the ex-CEO of state airline Garuda Indonesia. "There will be turmoil," he says. (forbesindonesia.com)

FORBES INDIA MAY 12
Under new CEO Kalyan Krishnamurthy, an alum of eBay and the Tiger Global fund, Flipkart is restoring its market capitalization after a difficult 2016 as it consolidates India's ecommerce market for continued battle with Amazon. (forbesindia.com)


## FORBES ASIA

AMERICA'S RICHEST SELF-MADE WOMEN



Former news anchor Jamie Kern Lima began testing makeup a decade ago to help cover her red, blotchy skin. That experimentation led to the creation of IT Cosmetics, which L'Oréal snapped up in 2016 for $\$ 1.2$ billion. Now she's plotting to turn IT into the largest beauty brand in the world.

## BY CHLOE SORVINO

Fifty women start lining up outside an Ulta Beauty store in northern New Jersey at 7:30 a.m. on a winter Saturday, here for a twohour workshop in makeup application taught by employees of IT Cosmetics. An hour and a half later, IT Cosmetics' founder, 39-year-old Jamie Kern Lima, arrives. She's wearing a bright-pink dress and pumps, and her light-brown hair is pulled back in a low ponytail, accentuating her flawless complexion. She points to her right cheek and then wipes off her makeup to reveal red blotches that "feel like sandpaper." She pauses, then applies color-correcting cream across her face. In seconds, the spots are undetectable. "For so long, we would never see real," she says. At the end of the class, the participants-including a lupus patient whose brows and eyelashes have fallen out, an emergen-
cy-room nurse and a construction work-er-line up to meet her and rave about her products.

Kern Lima, who has a skin condition called rosacea, which causes redness, has put this show on since 2010. That's when she began peddling her corrective prod-ucts-hybrids of skin care and makeuplive on the QVC home shopping channel. Since then, Kern Lima has appeared on TV hundreds of times, and IT Cosmetics, which stands for Innovative Technology, has been mentioned in 8.4 million YouTube videos. On Facebook, the brand is shared or commented on an average of 3,600 times a day, according to analytics firm ListenFirst Media. "When women find something that works, they tell somebody. That's really how we grew," Kern Lima says.
instance, received numerous offers and was sold for 6.6 times its previous 12 months revenue of $\$ 182$ million. In all, 62 private beauty companies were acquired in 2016, $38 \%$ more than the previous year, according to the analytics firm CB Insights. Estée Lauder paid approximately $\$ 1.45$ billion for Too Faced, an irreverent cosmetics brand known for edgy products like Better Than Sex mascara, and roughly \$200 million for Becca Cosmetics, known for its shimmering bronzers, both in 2016. L'Oréal bought Toni Ko's NYX Cosmetics for $\$ 500$ million two years earlier.
"The organic growth is just not there for the established brands," says Hana BenShabat, a partner at the global consultancy A.T. Kearney and the lead author of the report "Shop or Drop: The Inevitable Path for Growth in Beauty," which studied 214 beauty transactions over six years. Beauty conglomerates, she has said, "cannot afford to be inactive in the acquisition game if they want to succeed."

Small companies can easily create new products by working with make-

She calls her loyal customers "IT Girls." But it's Kern Lima who has become the it girl of the $\$ 445$ billion beauty industry. Her popularity has helped make IT Cosmetics one of the hottest beauty brands in the country. So hot that the world's biggest beauty company, L'Oréal, paid $\$ 1.2$ billion in cash for it in August 2016, the French conglomerate's biggest acquisition in eight years. Kern Lima, the majority owner, pocketed an estimated $\$ 410$ million after taxes. She is staying on to run IT, making her the first female CEO of any of L'Oréal's brands ( 34 in the U.S. alone) in its 108-year history.

The $\$ 28$ billion global giant was drawn to IT (estimated 2016 sales of $\$ 300$ million) by its charismatic founder and its popular products, but the deal illustrates a larger trend. Right now, the beauty industry is growing at a tepid 3\% a year. That has driven big players like L'Oréal, Coty and Estée Lauder into bidding wars for the fastest-growing, most fashionable brands, pushing them to pay high multiples. IT, for
up labs, but expanding overseas, with the differing regulations and the need to find local distributors, is nearly impossible. "There are a large number of brands that have to survive in a very competitive environment. The market is not growing fast enough-that's made M\&A almost inevitable," Ben-Shabat explains.

According to A.T. Kearney's concept of "Merger End Game," based on the analysis of hundreds of mergers, an industry typically approaches a merger tipping point when the top three companies have a combined market share of $45 \%$ or more, making increased M\&A activity likely. The beauty and personal care industry arrived there by the end of last year, explaining the current wave. The beer and telecom sectors similarly went through a period of consolidation about a decade ago.

L'Oréal has high hopes for IT Cosmetics, planning to build it into the most popular makeup brand on the planet. For now, it ranks 35th in the world, according to Euromonitor, well below L'Oréal's top brands:

Maybelline (No. 1; 2016 sales of $\$ 4.9$ billion), L'Oréal Paris (No. 2; \$3.2 billion) and Lancôme (No. 5; \$1.6 billion).

Kern Lima is a big part of its gamble. "I'm still driven at this moment the way I was even before the L'Oréal acquisition," she says. "I'm just scratching the surface of what I have to give and what I have to do."

THE BEAUTY INDUSTRY has long been a beacon for female entrepreneurs. In the 1940s, Queens-born Estée Lauder was selling pots of cream in beauty parlors around New York City. Her heirs are worth \$18 billion. In 1995, Bobbi Brown, a makeup artist turned entrepreneur, sold her company for about $\$ 70$ million, roughly $\$ 115$ million today. There are now at least 40 prominent beauty businesses founded by women. In part, that's because the barriers are quite low, says Kern Lima. "I feel like what I've done, any woman can do."

The makeup mogul began honing her drive at an early age. Given up at birth and adopted as a newborn, she grew up in Seattle and at 15 started doing odd jobs such as bagging groceries and coaching gymnastics. The first in her family to go to college, she worked as a waitress at Denny's to pay her way through Washington State. She graduated as valedictorian.

In 1999, she won a competition to appear on a Baywatch episode and was crowned Miss Washington USA, which led to a stint on the first season of the reality show Big Brother. She changed gears and headed to Columbia University in 2002 to earn an M.B.A. Kern Lima met her husband, Paulo, in statistics class and began writing for the student newspaper. After graduation, she took a job back in Washington at a TV station for $\$ 23,000$ a year and quickly moved to a Fox affiliate in Portland, Oregon.

Having to start work at midnight most days was stressful, and her hereditary rosacea flared up. (The disease, which affects at least 16 million Americans, typically begins after age 30.) Foundation made her condition look worse. Fed up, she started thinking about new formulations and technologies to help people with flawed, sensitive skin. In Paulo's native Brazil, the couple met with family friends who were plastic surgeons. They set up an advisory
board that included plastic surgeons and dermatologists. The newlyweds wrote the business plan on a flight to South Africa for their 2007 honeymoon.

Kern Lima left the TV station in 2008, and the couple began bootstrapping in their Los Angeles living room. "If you want something, you figure out how to make it happen," she recalls from her glassy office in Jersey City, which looks across the Hudson River at Manhattan. Putting her reporting skills to use, she cold-called beauty companies to find manufacturers. An actress who lived in their spare bedroom rent-free spent 20 hours a week putting products in boxes and getting them ready to ship. A graphic designer from her former news station worked with her remotely on packaging.

IT's first products were contouring kits that included concealers, highlighting creams and bronzers. QVC told her it wasn't interested. Just a few months later, shopping channel HSN agreed to feature her dark-circle concealer, which uses a proprietary "3D Skin Flex" technology to allow the foundation to move with facial expressions without creasing.

With ample on-air experience, Kern Lima thought pitching her wares on TV would be fun. But the products didn't sell, and she wasn't asked back at the end of her contract. Shopping Channel Canada did see her segment, though, and gave her another chance a year later.

All the while, she was hounding QVC, nearly four times the size of HSN in 2010, to give her another shot at the American market. Allen Burke had been building QVC Beauty since 1997, when the channel started featuring high-end brands like Bobbi Brown and Clinique. After saying no several times, he gave her a chance in the fall of 2010. "Did she go call me after every Canada visit and tell me how she did? Yes," Burke says, who retired in late 2011 and was hired by IT as a paid consultant in January 2012. To prepare, Kern Lima watched her competitors' past segments and started figuring out how to connect better with her customers. She wiped the concealer off her cheek (yes, she used under-eye concealer on her face) on TV for the first time. She also hired a 66-yearold woman to appear with her. The prod-

ucts sold out in ten minutes.
QVC brought her back another four times before the end of 2010, and sales topped an estimated $\$ 1$ million. "It took us a while to say, 'Let's give this a shot,' but it was an instant success from the beginning," Burke says. In 2011, Kern Lima and her husband, who is co-CEO and largely handles the operations and finances, moved to Bayonne, New Jersey, from California to be within driving distance of the network's studios in eastern Pennsylvania.

Investors began calling. "You're so tempted, especially if you were a poor entrepreneur like I was," Kern Lima recalls. "You're just hoping for someone to help you grow your infrastructure beyond what you can do yourself." But she hesitated and did due diligence, ringing up every entrepreneur and CEO who had previously worked with the suitors.

She focused on a couple: TSG Consumer Partners, a $\$ 5$ billion private equity firm best known for investments in Plan-
et Fitness and Glacéau Vitaminwater, and Guthy-Renker, the direct-marketing powerhouse that built Proactiv into a billiondollar acne-treatment brand. Both said no. She waited. "You have to hold your gut and your own belief on a pedestal," Kern Lima says. "All the ones that had said no finally said yes."

It wasn't until 2012, after Ulta Beauty signed a deal to sell the brand, that TSG invested an undisclosed sum. A year later, Guthy-Renker followed suit; it got an estimated $20 \%$ stake in return for the right to package and market discounted kits to be sold on infomercials. Guthy-Renker has spent about $\$ 50$ million a year buying infomercial spots, according to cofounder Greg Renker.

In 2013, IT Cosmetics rolled out what became its top seller, CC Cream, which
would be decades longer if we did it internally" (though she did bring IT to Australia in 2014).

After meeting Carol Hamilton, the head of L'Oréal's Luxe Division, at an industry conference in 2013, Kern Lima followed up with a handwritten thank-you note, which is currently on display in Hamilton's office. Hamilton visited IT later that year and walked out the door thinking it was the most powerful brand she'd seen in a long time. "I realized the connection that Jamie had with women was authentic," Hamilton recalls. "She absolutely has a fierce desire to make every woman realize her best self. A lot of women might say that, but her commitment was what made me really convinced that her brand was going to continue to be on fire."

While both parties were smitten, there
eted approximately $\$ 150$ million.
Under the L'Oréal umbrella, IT Cosmetics will continue to ramp up in Southeast Asia, a rapidly expanding region for the industry and home to four of the top five fastest-growing markets for beauty in the world, according to Euromonitor: Myanmar (No. 1), Laos (No. 2), Sri Lanka (No. 4) and Cambodia (No. 5).

IT is already positioned to do well there. The company says that its products that help cut down on sweat and shrink pores, like the Bye Bye Pores finishing powder, have become bestsellers in Southeast Asia since hitting shelves in August. With L'Oréal's support, the company will also be developing more products specifically suited for the humid weather and tailored to the region's women.

In addition to international expansion,

| Makeup | NYX Cosmetics | Glamglow | IT Cosmetics |  | Too Faced | Becca Cosmetics |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Mergers | Bold colors, drugstore prices | Facial masks and skin care | Problem-solving makeup |  | Millennial fave for lipstick, eye colors | Highlighters and bronzers |
| cosmetic conglomerates are snapping up smaller brands | ACQUIRED BY L’Oréal \$500 MILLION 2014 | acquired by Estée Lauder EST. $\mathbf{\$ 1 0 0}$ MILLION 2015 | ACQUIRED BY L’Oréal \$1.2 BILLION 2016 |  | ACQUIRED By Estée Lauder $\$ 1.45$ BILLION 2016 | acquired by Estée Lauder EST. $\mathbf{\$ 2 0 0}$ MILLION 2016 |
| Here are some of the biggest recent deals. | NYY Simgerie |  |  |  |  |  |

took four years and more than 200 attempts to perfect. By 2014, sales hit an estimated $\$ 117$ million. Another top seller took even longer: Superhero Mascara, which lifts even the shortest lashes by catching hairs through a proprietary elas-tic-stretch technology and has antiaging ingredients in the tint. Launched in February 2016, it took three years and 275 tries to formulate.

## INTERESTED IN RE-CREATING that

 success outside the U.S., Kern Lima began thinking about a buyer early on: "We could [go internationally] on our own for sureit would just be so much slower. Every entrepreneur learns at some point that you don't know what you don't know. From a capacity and infrastructure situation, itwere several false starts. After talks fell apart one time, Hamilton called Kern Lima to give her the bad news and told her not to give up. Kern Lima's response: "I am certain someday we're going to be part of the L'Oréal family."

Kern Lima considered taking the company public and also went ahead with plans to expand into Southeast Asia, the industry's fastest-growing region. One week before that launch, the sale to L'Oréal finally went through. TSG founder and CEO Chuck Esserman recalls Kern Lima telling him IT would be the best investment he ever made. "Every entrepreneur tells me that. In Jamie's case, she did it," says Esserman. Forbes estimates his firm made 25 times its money on the sale, while Guthy-Renker pock-
there will likely be stand-alone stores and more products, such as its first face wash, called Confidence in a Cleanser.

Days after the sale, Kern Lima and Hamilton got on a plane for Singapore, followed by Thailand and Malaysia. Hamilton admits she was anxious to see how IT, whose acquisition she'd championed, would translate in Asia. She got quick relief inside Singapore's biggest mall, where women who had just met Kern Lima were suddenly crying. Back at L'Oréal's headquarters, Hamilton smiles, promising the deal was well worth it: "She allows herself to be vulnerable in front of women. She knows how to tap into that and make us believe in ourselves. Confidence is not something that is defined by national boundaries." F

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## FORBES LIFE $\triangle$ luxury lineage

# The Corvette at 65 

## BY MICHAEL SOLOMON

LIKE A LOT OF sexagenerians, the Chevrolet Corvette still looks youthful for one reason-it's had a lot of work done. Introduced by General Motors in 1953, the Corvette (named for a small, fast warship) was the first American sports car, and while its initial performance didn't live up to that of its European competitors, the Corvette eventually became one of the great muscle cars of all time. In April, Chevrolet debuted a 65th-anniversary edition, the Corvette Carbon 65-meaning retirement is not in its future.
 convertible, which came with a 150-hp straight-six engine. It was available only in white with a red interior, and it had just two luxurious options: a heater and an AM radio.


## 2018: Carbon Fiber 65

For its 65th birthday, Chevrolet introduced the Carbon Fiber 65 in Grand Sport 3LT and Z06 3LZ models in April. But good luck getting one: Chevy will produce only 650 of each for all markets, with a price starting at $\$ 81,490$ for the Grand Sport and $\$ 99,490$ for the Z06. And say goodbye to the C 7 next year-the eighth-generation Corvette is coming.

1963: C2
Ten years after the Corvette's debut, Chevrolet rolled out a smaller, sleeker cousin, the Sting Ray. The second-generation Corvette, the C2, had a more powerful engine ( 250 hp ) and a controversial split rear window, which lasted only a year but is prized by collectors today. The Sting Ray, which had a list price of $\$ 4,252$ for the coupe (roughly $\$ 34,000$ in today's dollars), was a smash-Corvette sales increased from a record 14,531 in 1962 to 21,513 the following year.

## 2013: C7

The Stingray returned after an absence of 38 years, featuring a carbon-fiber hood and aluminum panels to keep the body light. Selling for a list price of $\$ 51,995$, the Corvette continued to get more muscular, with a 455-hp engine.


## THOUGHTS ON

## Pioneers

"I don't repeat myself well. I want and need that stimulus of walking forward from one
"WE PUSH ASIDE BRANCHES OR CUT THEM BACK, WE TRAMP DOWN NETTLES AND LONG GRASSES, FORD RIVERS AND STREAMS, THROUGH THE INNER AND OUTER LANDSCAPES."
-LUCY H. PEARCE
new world to another."

"IF YOU WANT SOMETHING NEW, YOU HAVE TO STOP DOING SOMETHING OLD."
-PETER DRUCKER

## "Pioneers may be

 picturesque figures, but they are often rather lonely ones."-NANCY ASTOR

"THE ADVENTURES MAY BE MAD, BUT THE ADVENTURER MUST BE SANE."

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[^0]:    ASIAN COMPANIES ARE IN RED TYPE.

