ECONOMY GETS BOOSTER SHOTS

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Forbes INDIA

KKR INDIA'S DICE WITH DEBT

THE B2B GROCERY STARTUP SCRUM

WHY ONLINE RESKILLING IS WHITE-HOT

Manu Kumar Jain, VP, Xiaomi, and MD, Xiaomi India

MISSION POSSIBLE

How, after becoming India's No 1 smartphone company, **Xiaomi** has morphed into a consumer electronics and durables colossus

BUILDING A LOCAL TEAM HELPED US SUCCEED: XIAOMI FOUNDER LEI JUN

SMARTPHONES TO LOOK OUT FOR THIS FESTIVE SEASON

Network 18 www.forbesindia.com

ISSN 2278-0440

Welcome to the
INDIA Forbes
Tablet Edition

Ask Mi Anything

Gree Electric Appliances is a Zhuhai-headquartered air-conditioning corporation that also makes water heaters, smartphones, home appliances and refrigerators, among other household appliances. *Global Times*, a tabloid that looks at global issues from the Chinese government's perspective, recently in a feature on Gree CEO Dong Mingzhu, referred to a bet she had with Xiaomi founder Lei Jun back in 2013.

Dong, whose company swears by the slogan 'Made in China, Loved by the World', wagered that she would pay Lei 1 billion yuan ($14 million) if Xiaomi's annual revenues surpassed Gree's in five years. Dong won: In latest annual reports, Gree had revenues of a little over 198 billion yuan, and Xiaomi of 174.9 billion yuan (roughly $25.5 billion).

However, in August, Dong reportedly said she wouldn't take the money from Lei, and that the bet was an argument between two different business ideas. Gree took shape in the early '90s, when the internet hadn't yet sunk into consumer consciousness. Lei founded Xiaomi in the post-iPhone age, in 2010, and soon earned the moniker of China's Steve Jobs.

Till a year ago, ahead of Xiaomi's much-touted IPO, analysts indeed talked about the Chinese smartphone maker in the same breath as Apple. But the public issue was a much toned-down affair—Xiaomi raised some $4.7 billion at a valuation of $54 billion, a far cry from Apple's current $1 trillion market cap.

What augurs well for Xiaomi's future earnings, though, is that it's No 1 in the world's two biggest mobile phone markets, China and India. In India, it has been on a tear, selling over 100 million smartphones in the past five years. This compares well with Apple selling 146 million iPhones *worldwide* between 2007 and 2011.

The next leg of the journey, as Rajiv Singh captures in this fortnight's cover story, is an evolution into a full-fledged internet company with smart hardware connected by an Internet of Things platform. Singh spoke to India head Manu Jain as well as founder Lei, who said Xiaomi has invested in over 200 startups and "could be the largest hardware incubator in the world".

In 2018, Xiaomi's international revenue stood at almost $10 billion, or 40 percent of the total. India contributed a third of that, at $3.24 billion, a mind-boggling growth of 175 percent over a year ago. And, now, with Xiaomi stretching the Mi brand to sell everything from luggage and audio products to smart TVs and air-purifiers, new growth avenues have opened up. The mainstay, though, will remain smartphones, where Jain is conscious that yesterday's disruptor can easily face the same fate in a hyper-competitive market. In many ways, Xiaomi is taking a path similar to Gree's, which has air-conditioning as its core, around which it has built related categories.

Smartphones isn't the only sector with cut-throat competition in India. This fortnight we shine a light on two other tech-enabled businesses witnessing such rivalry. Sayan Chakraborty delves into the B2B grocery startup space where a handful of well-funded ventures are slugging it out to supply to neighbourhood stores, which dominate India's retail landscape.

And Kunal Talgeri lays out the plans of some of India's seasoned entrepreneurs to build viable internet business models in the white-hot area of reskilling. In today's fast-changing environment, adding value to what you know and have learnt—or creating a business around it—isn't a bad idea at all.

STORIES TO LOOK OUT FOR

▲ Thriving in competition: (From left) Manu Jain, India head of Xiaomi, the No 1 smartphone brand in India; the founders of Jumbotail, which has gained a foothold in the country's B2B retailing sector

Brian Carvalho
Editor, *Forbes India*
brian.carvalho@nw18.com

Best,

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ON THE COVER

Forbes INDIA

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ISSUE 21

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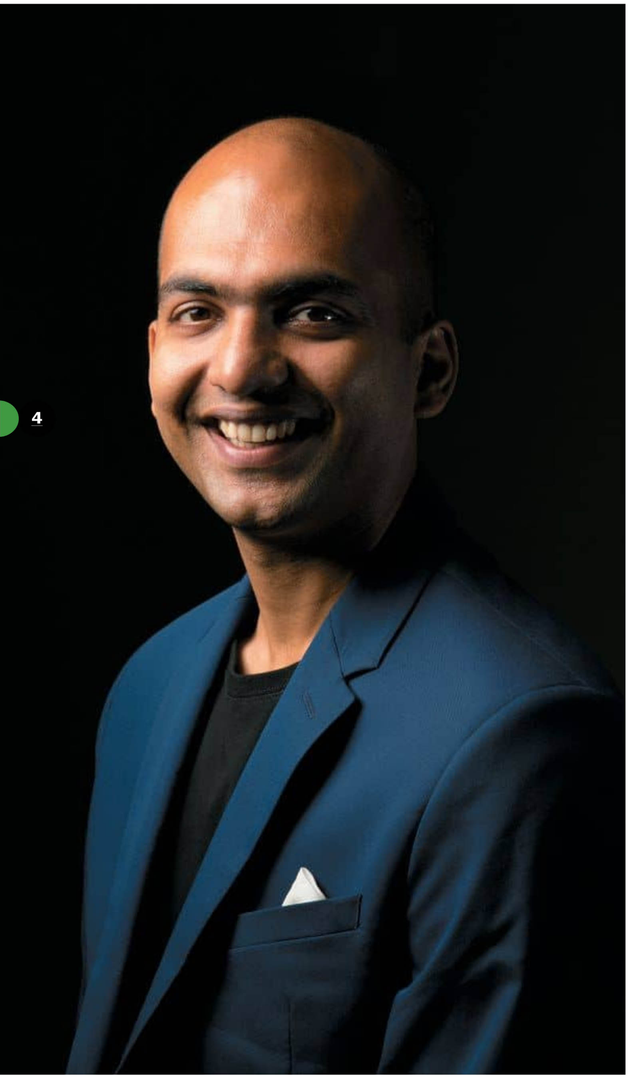
MISSION POSSIBLE

In five years, Xiaomi India has become India's No 1 smartphone company and morphed into a 'smart' electronics consumer durable maker

SELVAPRAKASH LAKSHMANAN FOR FORBES INDIA



Manu Jain, MD, Xiaomi India: "This is just the beginning of a brand new chapter. We will bring in more categories and products."

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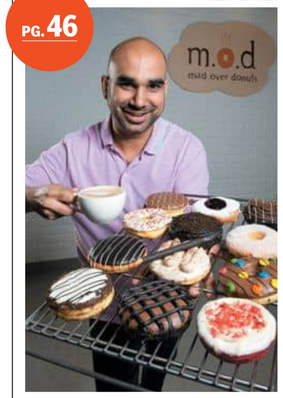

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Editor: Brian Carvalho

Network 18

TO OUR READERS

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Challenges faced in the Consumer Packaged Goods Industry require a specific Planning & Scheduling tool

The CPG Industry faces a set of unique demands that, when combined together, result in an environment that is particularly challenging for planning and scheduling.

Manufacturing stays on schedule

- **Variation in raw materials and demand** Seasonality and reliance on crop yields mean that the quantity and quality of raw materials and demand can fluctuate.
- **Increasing Variants** and consequently the decrease in volume per variant is a key trend in the Indian market. This makes **planning and scheduling** very complex.
- **Short shelf life** Perishable materials and produce mean that it is essential to optimize the timing of production to avoid wastage.
- **Strong price pressure from customers** In order to remain profitable, it is necessary to ensure that the production process is running as efficiently as possible.
- **Complex quality and packaging requirements** The need to comply to stringent quality standards for Product and Packaging is critical.

The Siemens Opcenter Planning and Scheduling is a collection of software offerings that enable constrained and unconstrained planning and scheduling. For companies who are in a volatile, make to stock environment and require a more dependable method to plan capacity and stock, **Opcenter Planning** offers a planning tool that has the convenience of spreadsheets but with interactive graphs to give the user full control over the results.

Opcenter Scheduling allows you to gain greater visibility and control of your manufacturing processes, allowing better machine utilization and on-time delivery.

They are also a very useful tool to evaluate alternative scenarios and this delivers true cost reductions and efficiencies. Through easy integration with ERP and **Manufacturing Execution Systems**, Opcenter Planning and Scheduling links seamlessly with the Business and Automation Systems of an enterprise.

Focus on a leader in chocolates

Challenges	▪ Capture shop floor data in real time ▪ Improve transparency and communication among Departments ▪ Make decisions in a more flexible, accurate and efficient way ▪ Improve visibility across the whole supply chain ▪ Optimize manufacturing processes
Results	▪ Faster sequencing of production orders ▪ More accurate production planning ▪ Enhanced communications amongst departments ▪ Increase contribution to service level from 97.8 to 98.5 percent

Siemens Manufacturing Operations Management (MOM) software offers a holistic solution that enables you to implement your strategy for the complete digitalization of manufacturing operations.

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- Manufacturing Execution
- Quality Management
- Manufacturing Intelligence
- Formulated Product Design

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Discounts To Beat Slowdown
Ecommerce companies plan to offer lucrative deals this festive season to boost sales P/10

Ambulance In The Sky
Zipline to provide on-demand medical assistance in India with its drone delivery services P/12

Content Competition
Will Zomato's move to get into online content work in its favour or against it? P/14-15

TAXES

Economy Gets Booster Shots

In boosting growth, the government has chosen to focus on reviving investments through lower corporate taxes

PUSH INDIA TO THE WALL AND IT will reform. After a series of incremental announcements that did little to lift sentiment, came the big bang—a reduction in corporate tax rates and withdrawal of increased surcharges on income from equity investments. Both moves pushed the markets up—with the Sensex and Nifty gaining over 5 percent—its highest aggregate gain ever as investors priced in increased corporate earnings.

In reviving growth, the government's bet is that the lower taxes would spur investments and create jobs that would then revive consumer demand. This is in contrast to the excise tax cut done in 2009 that resulted in a pick-up in demand but was also accompanied by high inflation. New manufacturing companies taxed at 17 percent will now pay the same rate as their counterparts in China. In June, Indonesia had announced a road map to take corporate taxes down to 20 percent. In 2018, the US lowered corporate taxes to 21 percent from 35 percent. "Rationalisation of corporate tax to induce more investments by corporates is vital to turn around the economy," says Niranjan Hiranandani, co-founder and managing director of the Hiranandani Group.

AMIT VERMA

In the immediate aftermath, the markets reacted to the increased earnings companies are on track to post on account of lower taxes. Prime beneficiaries are expected to be banks and auto companies as they usually pay full taxes without exemptions. For instance, HDFC Bank paid 34.6 percent of income in tax. Maruti Suzuki paid 27.9 percent. Expect lower tax rates to add to their bottomline. At the time of going to press, brokerages were still calculating revised earnings estimates. Initial estimates suggest that Nifty earning per share could move up by 10-13 percent.

For now it remains to be seen whether the increased earnings result in higher investments. "Surplus funds available for companies will be invested in capex and talent," says Ajay Piramal, chairman of Piramal Enterprises, who believes that other corporates would invest, resulting in more jobs and higher demand from consumers.

One possible drawback is a possible end to rate cuts. Lower corporate taxes would result in a ₹145,000-crore hit to the exchequer and it's anybody's guess whether the increase in economic activity would be enough to compensate for the loss of revenue in the current financial year, resulting in increased borrowing by the government. Immediately after the announcement, bond yields rose by 3.2 percent with the 10-year bond trading at 6.8 percent, signalling a possible end to the Reserve Bank of India's rate cut cycle.

• SAMAR SRIVASTAVA

Tax Bazooka

- Corporate tax rate cut to 22 percent (25.17 percent after surcharges and cess). No exemptions allowed
- New manufacturing companies to pay 15 percent corporate tax (17.01 percent after surcharges and cess)
- Enhanced surcharge announced in Budget 2019 will not apply on gains arising from sale of any security, including derivatives by Foreign Portfolio Investors
- Buyback tax on companies that announced buybacks before Budget 2019 will not apply
- Total revenue forgone: ₹1.45 lakh crore

BANKING

Mess At Yes

Altico Capital's default could put more pressure on Yes Bank's balance sheet and lead to greater scrutiny

BAD NEWS SURROUNDING YES Bank doesn't seem to stop. In September, the default of unlisted NBFC Altico Capital for ₹19.97 crore of interest income on an external commercial borrowing of ₹340 crore from UAE-based Mashreq Bank led to a ratings downgrade by various agencies. According to an India Ratings note, Yes Bank has a ₹450 crore exposure to Altico. In an unrelated development, Yes Bank founder Rana Kapoor is considering selling stakes of his family-owned stakes in Yes Bank to Paytm, in a bid to repay dues.

Yes Bank's stock has fallen by 80 percent to ₹54.15 on the BSE, from a high of ₹280 in April. Concerns over corporate governance and exposure to the commercial real estate which continues to slow down and impact in asset quality are hurting the bank.

Altico's chairperson Naina Lal Kidwai, who had 14 committee and board meetings over the past 60 days, has quit from her post, citing "the burden impossible to keep up".

"It is apparent that either Altico's strategy of concentrated lending to high-risk real estate developers had the board's full support or they were ignorant of it," says Hemindra Hazari, an independent banking analyst who publishes his writings on Singapore-based research platform Smartkarma.

Hazari says the lesson from Altico's default is loud and clear: Companies' financial accounts and the senior management commentary maybe misleading and excessively optimistic.

This could put more pressure on Yes Bank's balance sheet. It also indicates the incompetence of credit ratings agencies.

• SALIL PANCHAL

FRANCIS MASCARENHAS / REUTERS

ALTICO FINANCIALS

	2015	2016	2017	2018	2019
Profit (₹ cr)	62	145	271	264	147
ROE (%)	8.3	9.1	12.6	14.4	5.5
GNPA	0	0	0	0	1.8
NIM (%)	15.9	19.3	13.8	9.3	9.1

SOURCE Altico, Hemindra Hazari and credit rating agencies

FINANCE

The Cashless Revolution

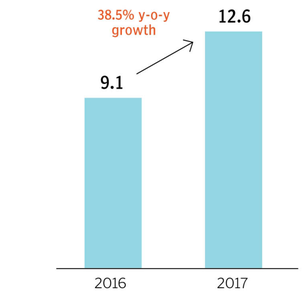
India, in particular, is seeing a digital payments boom

INDIA SAW A 38.5 PERCENT JUMP in non-cash transaction volumes between 2016 and 2017, second only to Russia (39.5 percent). The adoption of digital wallets, the success of ecommerce platforms and innovation in mobile payments have driven this growth, notes consultancy Capgemini it its World Payments Report 2019. India, in particular, is seeing a digital payments boom. The National Payment Council of India's efforts in promoting instant payments and open APIs is also key.

Cards were the most dominant form of payment globally in 2017, says the report. Debit card transaction volumes grew by 17 percent, most noticeably in emerging markets. Emerging Asia, which includes India, recorded 34 percent growth, Latin America 14 percent and the Middle East and Africa region 23 percent. Credit card volumes grew only by 11 percent globally. "More and more millennials appear to be avoiding credit, while the current levels of interest rates and capital adequacy ratios are challenging the industry," say the authors of the report.

• VARSHA MEGHANI

Cashless Transactions (bln)



SOURCE RBI

$69.02

The level that Brent Crude Futures touched after the attack on Aramco's facilities

SHUTTERSTOCK

ECOMMERCE

Discounts to Beat Slowdown

Ecommerce companies will offer lucrative deals this festive season

THIS FESTIVE SEASON, ecommerce companies could increase discounts and offer attractive payment options like no-cost EMIs or rebates on debit and credit cards across a larger selection of merchandise to beat the slowdown in spending. Festive sales are a crucial part of any ecommerce company's calendar and account for at least 20 to 25 percent of their annual gross sales.

Flipkart recently said it has increased the reach of its flexible payment schemes such as Pay Later and Cardless Credit by three times as against last year's festive sales. Pay Later allows consumers to shop through the month up to a certain limit and pay a consolidated bill. Cardless Credit has a limit of up to ₹1 lakh, payable in instalments.

Similarly, Amazon India's festive sale has a tag line, "Now budget won't hold back India's celebration". The company will also offer a wide range of financing options and cash back offers. "If the sales have to grow proportionately this festive season, the middle India participation becomes crucial. For that to happen, financial engineering is required. Etailers want to seed the idea that you may not have significant money to spend, but we will work around the finances so that you can afford the product," says Anil Kumar, chief executive at Redseer Consulting.

SHUTTERSTOCK

EXPERTS EXPECT ETAILERS TO SPEND MORE ON DISCOUNTS TO DRIVE SALES IN THE NEXT COUPLE OF MONTHS

He expects online sales to touch $32 billion in 2019 from $24 billion a year ago.

Satish Meena, senior forecast analyst at Forrester Research, expects festive sales this year to grow by 20 percent to about $3.5 billion. Etailers had posted about 50 percent growth in festive sales in 2018, over 2017, he estimates. "Etailers want to nudge the customers to purchase online, and not offline. They are targeting household upgrades like TVs, refrigerators, and washing machines."

Meena also expects etailers to spend more on discounts to drive sales in the next couple of months, especially after the first half of the year remained slow. "There has been a general slowdown in spending and consumers are postponing purchases. Impulse purchase isn't happening as much either."

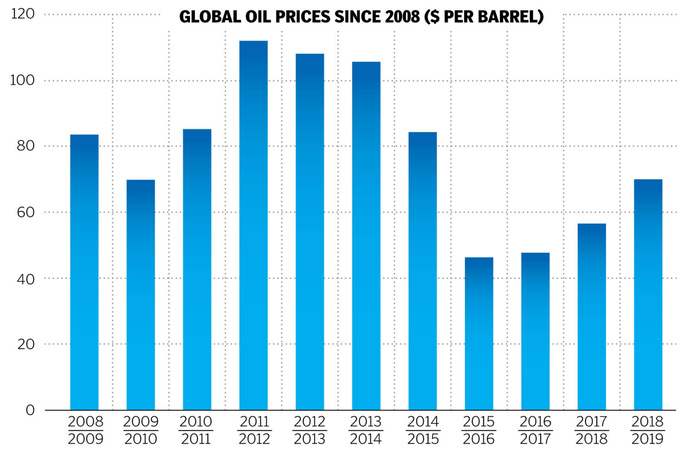
• SAYAN CHAKRABORTY

DRONE ATTACK EFFECT

Oil Prices

THE SEPTEMBER 14 DRONE attack on Saudi Aramco's oil processing facilities in Abqaiq and Khurais in Saudi Arabia invoked a knee jerk reaction. Oil prices rose over 20 percent, the highest since Iraq's 1991 invasion of Kuwait. They've since cooled off to about $65 a barrel as Saudi Arabia indicated supply disruption would be limited to a month. India' crude oil cost is expected to remain at last year's average of $69.88 a barrel.

• SAMAR SRIVASTAVA



SOURCE Petroleum Planning and Analysis Cell

56%

Share of market occupied by feature phones in India in 2018

SHUTTERSTOCK

REAL ESTATE

'Sometimes, Recession is Good'

John Forrester of Cushman & Wakefield is bullish on India

Q Betting Big on India

The underlying fundamentals are positive in terms of urbanisation, population growth and employment. But there is some negativity around the ability to get things done. That, however, seems to be rare.

Q On the real estate market

Real estate goes through ups and downs. And India is no different. You can find reasons to be a bit cynical and negative. But compared to other markets, India offers a healthy yield for a global buyer. We see opportunity in whatever circumstances we're in. Sometimes recession is good to reset the market. And other times, it's not.

Q On why commercial realty market is growing

When you talk about real estate in India, people think in terms of residential. And that's fair because 90 percent is that. But if you leave that out, there are some green shoots in the affordable and mid-income category. The commercial market is doing well because the services economy and the global outsourcing in artificial intelligence and cloud data security are working well.

• RAJIV SINGH

NEW LAUNCHES

Lights, Camera, Smartphones

Top players to offer phones with attractive features this festive season

UNFAZED BY THE SOFTENING OF the global premium smartphone market, which dipped 6 percent year-on-year in the second quarter this year—making it the second consecutive quarter of shrinking volumes—handset makers in India are putting up a brave front. They have announced a battery of launches across the mid-and-premium segments to light up the festive season.

Leading the pack is old warhorse Samsung, which is finally launching its much-touted foldable smartphone. The rest—all Chinese rivals—too have ensured that they load their handsets with attractive features to lure buyers. With the Chinese and American markets showing signs of a slowdown, India offers hope to the embattled global smartphone makers. Here's a peep into what one might expect this festive season.

• RAJIV SINGH

VIVO

V17PRO AND U10 IN SEPTEMBER

V17 Pro sports dual 32 MP + 8 MP pop-up front cameras, along with front moonlight glow flash; boasts of 48 MP AI quad rear camera setup with 13 MP 2x optical zoom, 8 MP super wide-angle and super macro (2.5 cm) and 2 MP Bokeh lens; has two variants with 8 GB RAM + 128 GB ROM.

U10 is powered by 5,000 mAh battery, and Qualcomm Snapdragon 665AIE; base model comes with 3 GB RAM and 32 GB internal storage, and the top-end model comes with 4 GB RAM and 64 GB.

ONEPLUS

7T IN SEPTEMBER

7T will come with a circular camera setup, and a waterdrop notch display; might be powered by Qualcomm Snapdragon 855 Plus processor.

SAMSUNG

GALAXY FOLD IN SEPTEMBER

Fold is priced at $1,980 in the US, which translates to ₹1.4 lakh in India; it sports a 7.3-inch Dynamic AMOLED Infinity Flex display, which can fold up like a book.

OPPO

RENO2 F IN NOVEMBER

Smartphone comes with 6.53'' AMOLED screen, 2,340x1,080 resolution, 16 MP rising front camera and a screen-to-body ratio of 91.1 percent, made from 5th Generation Corning Gorilla glass.

REALME

XT IN SEPTEMBER

It's a 64 MP quad camera phone powered by Qualcomm Snapdragon 712; sports a super AMOLED Dewdrop full screen and an in-display fingerprint technology; variants start from ₹15,999 and go up to ₹18,999

APPLE

IPHONE 11, 11 PRO AND 11 PRO MAX IN SEPTEMBER

iPhone 11 has a dual camera setup at the back, smart HDR and image processing algorithms, night mode and 6.1-inch liquid retina display. Updated specs also include new Apple A13 bionic chip, faster Face ID, longer battery life, support for faster LTE; entry price is likely to be ₹64,900 for 64 GB option; 256 GB comes for ₹79,900.

40 mln

Number of jobs the Indian health care sector is likely to generate in 2020

SHUTTERSTOCK

GARMENTS

Kashmir Imbroglio Hits Ludhiana Industry

Hosiery manufacturers stare at losses as there are no orders

DANISH SIDDIQUI / REUTERS

THE COMMUNICATION clampdown in Kashmir since the abrogation of Article 370 on August 5 has had an adverse impact on Ludhiana's hosiery sector. There are nearly 12,000 hosiery units, including unregistered factories, that manufacture sweaters, pullovers, jackets, shawls and blankets. These are procured by Kashmiri traders for local retail markets. Ludhiana's hosiery industry generates revenues of ₹13,000 crore per year.

"This season has been washed away," says Vinod Thapar, president of the Knitwear and Textile Club, Ludhiana. "While there is no hope of orders from Kashmir, some pending payments of last year from Kashmiri traders are also stuck."

Sudershan Jain, owner of Ludhiana-based garment brand Oner, says a substantial number of wholesalers from Jammu also procure goods for markets in Kashmir. "There are many Kashmiri traders who prefer to purchase goods from Jammu due to its proximity to the Valley. However, the hosiery industry in Ludhiana has ceased to receive bulk orders even from Jammu wholesalers, because the markets in Kashmir are closed," says Jain, who is also president of the Knitwear and Apparel Manufacturers Association.

Hosiery products worth ₹500 crore are procured from Ludhiana by Jammu & Kashmir of which those worth ₹150 crore are used in Jammu's market. "There is little hope even from Jammu this year," says Jain.

Gaurav Deep, 33, a garment dealer from Domana in Jammu, claims ₹50,000 worth of woollens that he procured are stuck in his godown. "Usually, Kashmiri traders visit my shop from August to September, but no one has turned up so far," he says.

Small hosiery owner Sahil Verma, 42, based out of Daresi, ships woollens worth ₹8 lakh to Kashmir every year. "Kashmiris would take goods on credit and pay a few months later... but I have not received a single order this year," he says.

Charanjeev Singh, secretary of the Knitwear Club, Ludhiana, says manufacturers are hopeful of orders from other parts of the country.

• ARJUN SHARMA

HEALTH CARE

Ambulance in the Sky

From 2020, Zipline to provide on-demand medical assistance in India with its drone delivery service

ACCESS TO THE RIGHT medication at an appropriate time has been a struggle in remote locations. But now there's hope. After successfully providing on-demand medical assistance in Rwanda and Ghana through the world's first and only national-scale drone delivery service technology, California-based automated logistics company Zipline is now setting up operations in India.

The service—in partnership with the Maharashtra government—is likely to start next year. "Millions die each year because they can't get the medicine they need when they want it," says Keller Rinaudo, CEO, Zipline. "Instant drone delivery can help solve that problem. We hope to ensure that millions have on-demand, instant access to blood, vaccines and critical medicines that they need."

ZIPLINE

Justin Hamilton, head of global communications & public affairs at Zipline, says: "If a mother in childbirth begins to haemorrhage and needs blood, doctors can WhatsApp Zipline. The closest distribution centre will load it into a box with a parachute on a drone. The package is likely to reach in 30 minutes instead of 4-6 hours."

The first two distribution centres will be set up in Pune and Nandurbar. The launch will be supported by a grant from the Serum Institute of India, the world's largest vaccine manufacturer. "Our partnership with Serum is much broader. We are working with them to expand this technology to all of India. As we expand, we will also serve private health facilities," says Hamilton.

• NAINI THAKER

18.6 mln

Number of people who watched the 2019 IPL final on Hotstar

SHUTTERSTOCK

SPORT

IPL Brand Value Soars To ₹47K cr

Mumbai Indians registers highest valuation of ₹809 crore, according to Duff & Phelps report

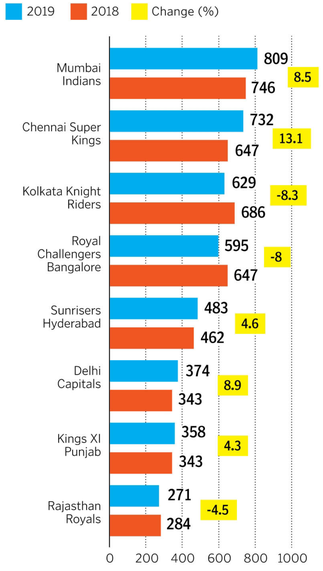
THE INDIAN PREMIER LEAGUE'S (IPL) brand value has increased by 13.5 percent to ₹47,000 crore ($6.8 billion), up from ₹41,800 crore ($6.3 billion) last season, according to the 2019 IPL Brand Valuation report by Duff & Phelps, a corporate finance advisory firm. While this is lower than the 19 percent growth in 2018, ad spends have increased by 20 percent despite the 2019 ICC World Cup.

Mumbai Indians, which won its fourth title this year (most for any team), has registered the highest valuation of ₹809 crore. This is followed by Chennai Super Kings at ₹732 crore, with the MS Dhoni-led team recovering from the brand value erosion caused by its two-year ban. Santosh N, managing partner, D and P India Advisory Services LLP, a member of the Duff & Phelps network, says factors like team performance, presence of star players, marketing, celebrity influence and social media engagement affect valuation. This explains the 8.3 percent fall in the valuation of the Kolkata Knight Riders (₹629 crore), and the 8 percent decline for Royal Challengers Bangalore or RCB (₹595 crore) since last year, given its sub-par performance on field. "If not for the personal brand equity of RCB captain Virat Kohli, the team's brand value would have suffered further," he says. "On the other hand, a team like Sunrisers Hyderabad, which has performed consistently, has still not been able to reach the Top 4 because it lacks marquee players."

"At least three to four teams have become profitable, while the losses made by the rest are almost immaterial because they are close to break-even," explains Santosh, who says the firm does not have access to the financials of each team. "But our understanding is that the share of the central pool of revenues between teams has been decent because of the 2017 [media rights] renewals that happened at a huge premium. This has resulted in most losses getting covered."

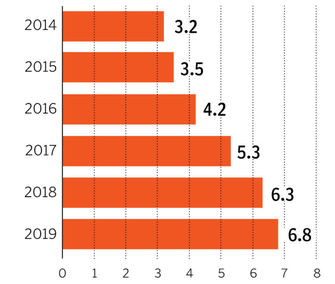
ROBERT CIANFLONE / GETTY IMAGES

Mixed Fortunes (₹ cr)



SOURCE IPL Brand Valuation report by Duff & Phelps

Burgeoning Brand ($ bln)



SOURCE IPL Brand Valuation report

• DIVYA SHEKHAR

$155 mln
Zomato's delivery revenue for FY19, compared to $38 million in FY18

SHUTTERSTOCK

VIDEONOMICS

Is Zomato Biting Off More Than It Can Chew?

The app is now streaming episodes of food-related content, but can the twain meet? Here are two perspectives

'Won't Clash With Netflix'

By DURGA RAGHUNATH

OUR DECISION TO LAUNCH Zomato Originals is determined by user behaviour. For certain categories like food and travel, users do a lot of research, reading and watching before and after their transactions. They're inherently well-suited to content. That was Fact No 1 for us. Fact No 2 is the amount of time people engage in watching videos about food is extraordinary. For both Facebook and YouTube, they're the second and third most-watched categories.

The link between users making decision on the Zomato app about their meals and them consuming content around food is something we feel strongly about. It's logical and organic. There are many reasons to come to the Zomato app; some are loyalty driven and some engagement driven. We thought food content would be a great way to experiment how we can push those boundaries. When you come for delivery, can you also think about health and food, about dining out, about sustainability? Content has traditionally made people think about verticals in a broader sense. Given the amount of time users spend on the app, it's a great way to get them to think about many other aspects of food.

When I started thinking about formats, I was clear we needed to do what is native to our user experience, which is ad-driven, involves vertical scrolling, and a session time that is not driven by watching long pieces of content like Netflix and Amazon Prime. So, our shows are between 3 minutes and 11 minutes. We're experimenting with the vertical format, key to the app experience, and have met with a lot of excitement from directors.

We're not competing with Amazon Prime or Netflix; it's very much about food for us. I do hope that at some point, people come to us to watch content, but it's hard to even think of the two in the same line at this point. I don't think Zomato Originals is anyone's competitor. There are learnings from players like YouTube, where we know that recipes work, that users employ playlists, and so on. But brands nowadays can no longer do with a single narrative, because users engage with them in different and discreet ways.

You'll see videos related to travel, the history of food, explainers etc. We're also looking for ways to engage our restaurant and user communities. We do not have ads for the videos currently, but we do have sneak peeks and other restaurant-centric content, syndicated and licenced.

You will always see our shows being made keeping our economics in mind, which are not similar to OTT economics. We are closely watching user feedback and trying to find thwe right formats for us. You'll see these pillars develop over the next three to six months, and we're confident that users will enjoy the experience.

SENIOR VICE PRESIDENT–GROWTH AT ZOMATO, COMMISSIONS ZOMATO ORIGINALS

AS TOLD TO PANKTI MEHTA KADAKIA

COURTESY: ZOMATO

'Half-Cooked Intentions'

By ABHIK CHOUDHURY

EARLIER THIS YEAR, HSBC valued Zomato at $3.6 billion. And recently its founder Deepinder Goyal quoted a whopping ₹200 crore-plus monthly revenue for its delivery partners. As Zomato enters the content industry, it should know that category is like the G7 of the internet right now... and with due respect, it is New Zealand at best. Here are four reasons why it will hurt the company's IPO plans:

MAKING CONTENT IS EXPENSIVE, MARKETING IT IN A WORLD OF YOUTUBE A NIGHTMARE

1. THE BLACK HOLE OF INVESTMENT

Making content is expensive and marketing it in a world of limitless free YouTube content gives even triple digit billion-dollar companies nightmares. The production budget of just the final season of *Games of Thrones* was $100 million, while Zomato's annual revenue was around $200 million (with $300 million worth of losses). Apple has committed a staggering $6 billion to its original video content budget (almost double of Zomato's valuation). And with Uber Eats and Swiggy keeping Zomato on its toes with bleeding discounts, it's difficult to understand from where the new investment for this added arm will come. And if it does, how long will it last?

2. THE PARADOX OF PAID SUBSCRIPTION

To sustain any original content game, a planned revenue model should be in place. Brand collaborations can pay for the first few months, but the promise of sustainability comes only through a subscription model. It's a jungle out there. While Netflix India starts at ₹499 per month, Apple TV comes for a meagre ₹99 per month. Zomato can only hard-sell subscription so much. This is a tricky terrain to survive.

SHUTTERSTOCK

3. THE CONTENT CLASS

The crux of Zomato's released listing is a mix of chef Sanjeev Kapoor and a few famous YouTubers. Netflix already has Emmy award-winning food series, including *Anthony Bourdain: Parts Unknown*, *Chef's Table* and the MasterChef series. Netflix specials such as *Midnight Diner: Tokyo Stories* around a special Japanese cuisine are breathtaking. So, as the first investor often asks, what are you bringing to the table? Please don't say vertical format videos. Instagram launched them last year.

4. CLARITY OF PURPOSE

Amazon Prime Video and Amazon ecommerce are individual entities marketed together. There is sense in that. Now imagine another scenario: If Amazon thinks that when a customer comes looking for denims, it should show a standup comedy special around menswear, sponsored by Levi's... will it work? No.

Zomato's 70 million monthly active users open the app to order food or unlock a Zomato Gold deal inside a restaurant. For original content, they would rather binge-watch *Hell's Kitchen* on Hotstar on their smart TVs, while eating the burger that has been delivered to them. Zomato needs clarity.

Even its competitor Uber markets Uber Eats and its cab services separately. The Venn diagram intersects, but doesn't eclipse.

Zomato has jumped too late in a category with what seems like half-cooked intentions. Zomato Originals, as part of its social media content plan, would have worked effortlessly, but marketing it as a standalone app feature where brands pay for eyeballs is far-fetched. It will inflate the distance between cost and revenue even further, hurting Zomato's stock prices, if and when it launches its IPO.

THE WRITER IS CHIEF STRATEGIST AND FOUNDER, SALT AND PAPER CONSULTING

400
Number of fintech companies in India, according to a 2018 Nasscom report

SHUTTERSTOCK

FINTECH

Hunting For Pals

US-headquartered PayPal is banking on technological innovations and the growing popularity of digital payments to increase market share in India

DAN SCHULMAN BELIEVES THAT the digital payments space will see more changes in the next five years, compared to the past three decades put together. The president and CEO of PayPal is addressing a gathering of media professionals from across Asia and Europe at the company's sprawling headquarters in San Jose, California, in mid-September.

Dressed in a black T-shirt, jeans and flip-flops, and seated next to Franz Paasche, PayPal's head of corporate affairs, Schulman speaks about a variety of things, ranging from how his mother drove him to a Martin Luther King Jr rally in a baby carriage during his early childhood to the need to lend working capital to small businesses.

He also refers to how Krav Maga, the Israeli martial arts form that he practices, has taught him more than just sporting skills. "The best way to win a fight is to not get into a fight. This is what we think about in business too; finding collaborations and de-escalating tensions," he says.

Schulman has put this learning into practice too, having moved into strategic partnerships with Visa, MasterCard and banks such as JP Morgan and Citi. This has not only benefited PayPal customers by giving them more seamless payment experiences and incentives that they want, but has also ensured that the company does not spend time slugging it out with rivals.

SHARING THE SPOILS

PayPal's strategy of forging partnerships has been more apparent of late, with at least 40 in recent years. "Competition is like gravity. The huge untapped opportunity ensures that everyone can get a share of the pie. While the barriers to entry are low, the barriers to scale still remain high. Partnerships are at the core of our strategy," Schulman tells *Forbes India* in an email response after the interaction.

As with other digital payment firms, PayPal in India has been wooing customers with cashbacks and discounts. In May 2019, it launched the 'OneTouch' feature using Google Smart Lock in India, which helps users register their device with PayPal and stay securely logged into the platform for all subsequent PayPal purchases on that device. OneTouch has been the company's most rapidly adopted product globally with over 123 million consumer accounts and more than 11 million merchant accounts as of Q4 2018.

PayPal has over 286 million customers and 23 million merchants across 200 markets. The company does not disclose country-specific numbers, but currently commands a small market share in India. Data from the ministry of corporate affairs and data intelligence firm Veratech indicate that it reported revenues of ₹258 crore from its Indian payments arm in 2018, a 12x jump over ₹21 crore in calendar year 2017. The firm, which is in "investment mode", reported a loss of ₹2.28 crore in FY18.

PayPal's Progress

	Q2FY19	Q2FY18
Net new active accounts*	9	7.7
Payment transaction per active account	39	35.7
Total payment volume	$172	$139
Total payment transactions*	3	2.3
Total revenues (bln)	$4.31	$3.86

SOURCE Company

* Figures in mln

EVOLVING MARKET

PayPal in India is in a crowded space, where rival Paytm—backed by SoftBank and Alibaba—is a market leader with its mobile wallet being part of the payments bank. Other competitors in the digital payments space include Walmart-backed ecommerce and digital wallet PhonePe, Amazon Pay and Google Pay, apart from a range of fintech firms and payment banks.

Anupam Pahuja, managing director of PayPal India, says companies in the digital payments space have just covered the "first hundred metres of the marathon". He explains that in the Indian market, where close to 90 percent payments are still made with cash, one must have a long-term view of offering a seamless and secure payment experience to "win the market".

Digital payments per capita in India stands at 22.4 as of March 2019, which is far behind countries like China and Brazil, where it is 96.7 and 148.5 respectively. That said, the number of digital payments per capita has increased tenfold in India, up from 2.4 in March 2014, according to Nandan Nilekani, who headed a high-level committee constituted by the Reserve Bank of India on deepening digital payments in India.

PayPal CEO Dan Schulman says the best way to win a fight is to not get into a fight

Given the growth opportunity, PayPal—which launched its peer-to-peer payments solutions in India in August 2016—is investing in manpower and technology at its innovation laboratories in Chennai and Bengaluru, which are the largest in the world after its San Jose headquarters.

"We are trying to explore other levels of authentication which can guarantee frictionless checkout of transactions. We are also looking at improving tokenisation," says PayPal's general manager (technology) Guru Bhat, who oversees the technology centre operations.

FUTURE INNOVATIONS

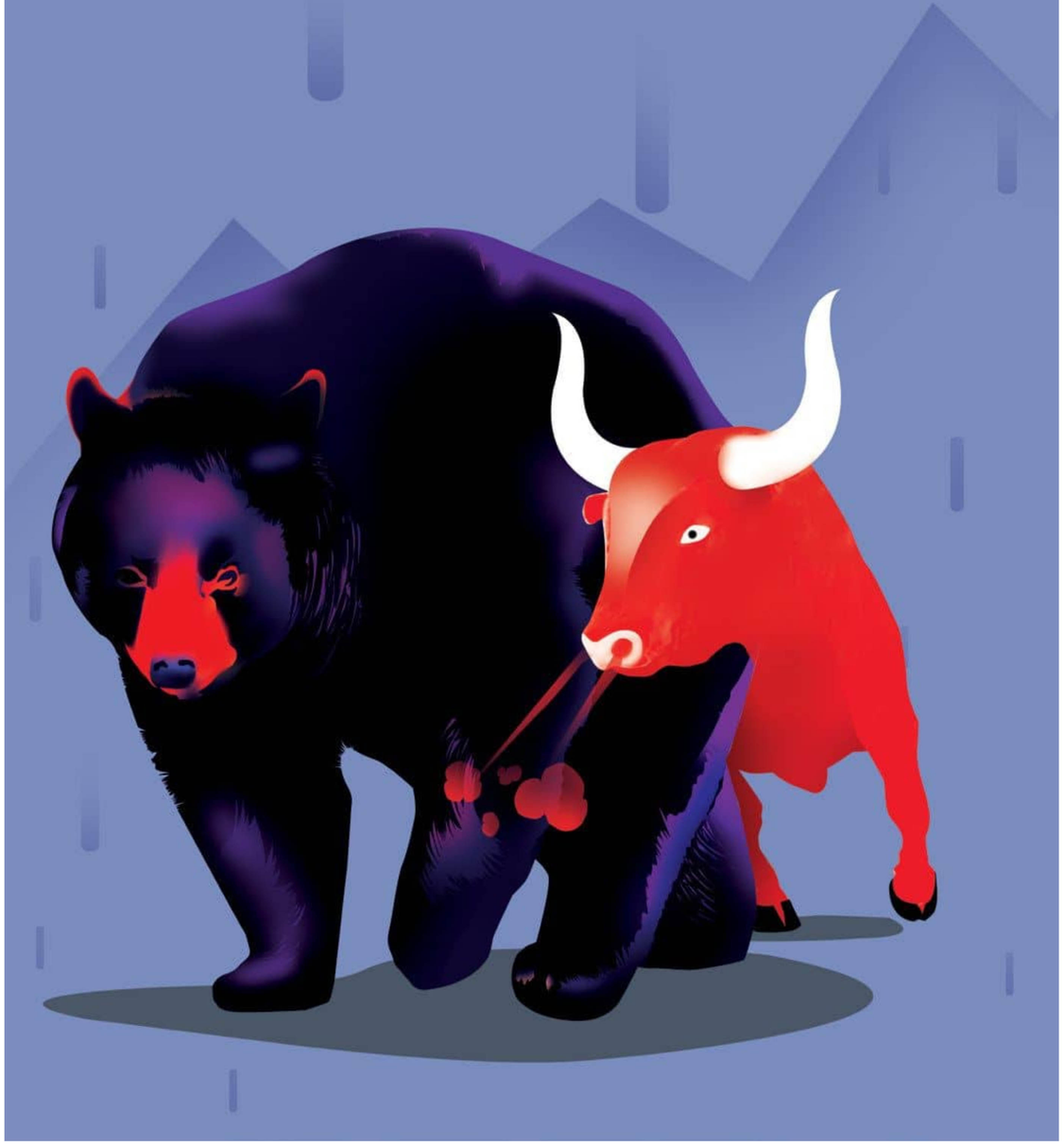
At a time when Prime Minister Narendra Modi has been marketing the launch of the domestic card payment scheme RuPay in the UAE, PayPal plans to push for digital payments focussed toward the Indian diaspora internationally. It cannot ignore Unified Payments Interface (UPI), the real-time payment system developed by the National Payments Corporation of India (NPCI), which registered a transaction volume of 918 million as of August 2019, and has about 141 active banks.

"We plan to take UPI—and RuPay—worldwide. Customers of PayPal will be able to transact through NPCI using these products, in the form of international transactions in overseas markets," says a person with knowledge of the matter, on condition of anonymity.

Another new innovation will be a frictionless transaction for Google-backed Dunzo through the PayPal system, which will be launched in Q4FY20. Using its strength in cross-border transactions and payments for freelancers, the company will continue to specialise and aim to monetise operations.

The next big move from PayPal will be if it decides to take its rapidly growing money transfer app Venmo beyond the United States. That may appear far-stretched as of now, but who knows.

• SALIL PANCHAL
• THE WRITER TRAVELLED TO PAYPAL'S HEADQUARTERS IN SAN JOSE AT THE INVITATION OF THE COMPANY



SAMEER PAWAR

In Focus

Bottom-Fishing, Anybody?

After a steep fall, a number of indicators points to why this is a good time to start buying smaller company stocks

By SAMAR SRIVASTAVA

Good news and good prices rarely come together.

The last time mid and small caps were this cheap was in mid-2013. Then the Indian economy seemed to be coming apart for a number of reasons. With the US Federal Reserve withdrawing its Quantitative Easing programme, the threat of an increase in the cost of capital had pushed up interest rates and had resulted in foreign investors dumping Indian equities. India's crude oil basket stood at $108 a barrel.

Unsurprisingly, the rupee tumbled 13 percent to 68 and the markets sold off—the Sensex fell 8 percent to 18,816. As investors rushed for the exits, smaller companies took it on the chin with some quality franchises losing as much as half their value in August 2013 alone. Stocks quoting at an eight percent dividend yield had no takers. No matter how attractive the valuations were, few were willing to put their money to work in these businesses.

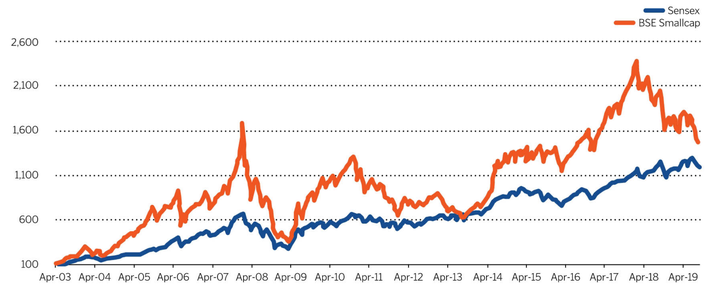
Six years on, it's clear that that was a great buying opportunity. That September, Narendra Modi's announcement as the prime ministerial candidate started a rally that saw the Nifty Midcap 100 Index compounding at 22.9 percent a year till August 2018. There were several instances of individual stocks rising 10-fold in that period. Sure, there were other aiding factors that couldn't have been foreseen then—the collapse in oil prices and food inflation and subsequent lowering of interest rates. But those brave enough to buy smaller companies then have had a profitable ride.

While there is always a chance of prices falling in the near term, those investing now with a three-year time horizon have a good chance of making money, says Andrade

The present year-long market sell-off starting mid-2018 has prompted investors to question whether this could be the right time to enter smaller companies again. While the Midcap Index is down 31.6 percent, there are many instances of companies losing anywhere between 50 and 70 percent of their valuation. Data from Equirus Securities, an investment bank, shows that the BSE Small Cap Index has been declining for the last 84 weeks. It also points to the divergence between the large cap and midcap indices. At over 20 percent, these divergences are the highest they have been this decade.

Kenneth Andrade, chief investment officer, Old Bridge Capital Management, believes that valuations are attractive with several businesses quoting below their replacement values. While there is always a chance of prices falling in the near term, those investing now with a three-year time horizon have a good chance of making money, he says, while cautioning that these stocks can be extremely volatile. The first two weeks of September have seen buying interest returning to mid and small caps with stocks rallying sharply.

Long term performance of BSE Smallcaps vs Sensex: Higher volatility



SOURCE Equirus Securities

THE FALL

The spectacular outperformance of mid and small cap stocks was on account of the valuation gap that had built up. At the start of the market rally in September 2013, the Nifty quoted at an earnings multiple of 17 times while the Nifty Midcap 50 quoted at 12 times. With the valuation differential ignored since 2011, it was time for midcaps to close the gap, and how. By January 2018, while the Nifty had moved to 27 times earnings, the Nifty Midcap 50 was trading at 85 times with a large part of the gains coming in December 2017 and January 2018. It was the melt-up moment for the Indian markers.

This valuation boom soon exposed many shortcomings of the rally. First was the lack of liquidity in midcap stocks. Trades of a few thousand shares were enough to have them locked on upper circuits (20 percent or 10 percent depending on the stock) as investors bought into future growth projections. (The same story repeated on the way down as well.) As the cost of capital for smaller companies fell, their balance sheets began to look a lot leaner, which resulted in a valuation rerating.

Second, the lack of earnings growth caught up with valuations. In hindsight, the rerating of the Midcap 50 Index from 12 times to 85 times shows that valuations rose seven times faster than earnings—a classic hope rally. Exceptions where

The BSE Smallcap index is at its cheapest in five years. While its dividend yield is close to 2015 levels, its PE ratio is 36 percent cheaper. Midcaps, though expensive, are in the buy zone too

the increased valuations have held have been few and far between. For instance, Relaxo Footwear rerated from about six times earnings before the start of the 2013 rally to 60 times as it delivered a steady earnings growth of 21 percent a year.

Third, an October 2017 circular issued by market regulator SEBI laid down how mid and small caps are classified. Any company between the 100th and 250th market cap is now a midcap, and any company after the 250th market cap mark is a small cap.

In the absence of a strict classification earlier there were instances of fund managers buying mid and small caps in schemes not meant for them in order to boost returns. According to research from Emkay Securities, between January and June 2018, this resulted in the Nifty Midcap 100 falling 14 percent and the Nifty Smallcap 100 falling 21 percent only due to an outflow of funds from these schemes.

Last was the excessive leverage that promoters of midcap companies took. As share prices rose, share pledges increased. Money raised against those pledges was used to fund newer businesses often outside the listed company. So in many cases, while the balance sheet of the listed company whose shares were pledged improved, the promoter was heavily leveraged.

In the case of Eveready, India's largest manufacturer of dry-cell batteries, an increase in the company's valuation from ₹210 crore in August 2013 to ₹3,230 crore in January 2018 saw the number of pledged shares rise from 10.15 percent to 88.51 percent. As markets came off and the company defaulted on its loan covenants, the lenders had no option but to sell pledged shares in the market. From the peak, the company has lost 87 percent of its market value.

CHEAP VALUATIONS

Fast forward to September 2019. The valuations on the mid and small cap indices have reverted to the mean, making it a good time to enter. "The markets have baked in too much pessimism," says Sunil Damania, chief investment officer at MarketsMojo, explaining that midcaps always do better once the market turns. A number of factors point to why this is the case.

A leading technical indicator is the advance decline ratio, which, for a universe of about 3,000 companies, has turned positive in September. From 0.8 stocks advancing to every stock declining in July 2019, the ratio moved up to 0.98 in August and turned positive to 1.46 in the first two weeks of September. As a result, shares of small companies with reasonable earnings growth have moved up between 10 and 20 percent.

Case in point: Huhtamaki PPL that makes packaging material for consumer goods companies is up 11.8 percent in September, but still down 37 percent from its January 2018 peak. The company has negligible borrowings.

The BSE Smallcap index is at its cheapest at any point in the last five years *(see chart)*. At 1.01, its dividend yield is close to 2015 levels but the price earnings ratio is 36 percent cheaper. Midcaps, though more expensive, are also in the buy zone.

At these valuations, companies have baked in low earnings growth and any outperformance can result in a quick rerating on the upside. Indo Count Industries, a home textile company which made a profit of ₹34 crore in the first quarter of 2019-20 as compared to a profit of ₹59.8 crore in the year 2018-19, saw its stock rise 62 percent in the last month.

From the second quarter of this year, as the base effect kicks in, several numbers—auto sales, consumer goods sales and mining—will start to look better from a year-on-year perspective and companies can get back to growth albeit from a lower base. Still, Damania cautions that investors wading into midcaps must not look to made quick money.

"Look for growth prospects, no promoter pledging, and a low or zero debt to equity ratio. These are the companies that will rerate first when the cycle turns," he says before reiterating that the cycle always turns. F

Advance Decline

MONTH	ADVANCES	DECLINES	ADVANCES/ DECLINES RATIO
Sep-19	1,701	1,167	1.46
Aug-19	1,406	1,439	0.98
Jul-19	1,264	1,584	0.8

BSE Midcap Index

YEAR	PE RATIOS	PB RATIOS	DIVIDEND YIELD (%)
2019-2020	30.77	2.43	1.03
2018-2019	32.87	2.65	0.95
2017-2018	37.22	2.79	1.02
2016-2017	28.36	2.42	1.23
2015-2016	24.54	2.42	1.41

BSE Smallcap Index

YEAR	PE RATIOS	PB RATIOS	DIVIDEND YIELD (%)
2019-2020	29.1	1.99	1.01
2018-2019	21.54	2.28	0.81
2017-2018	86.19	2.51	0.67
2016-2017	62.58	2.01	0.88
2015-2016	46.73	1.91	1.05

SOURCE MarketsMojo

KKR's Dice With Debt

Lessons for the global private equity giant from lending transactions that have gone sour in an era when governance levels have hit new lows. Two key takeaways: The need for more due diligence and a proactive, eagle eye on the debt portfolio

By POOJA SARKAR

The turmoil in the Indian non-banking finance companies (NBFCs) isn't sparing the lending books of private equity (PE) funds either. Global PE giant KKR, which lends in India through its two credit arms—KKR India Financial Services Pvt Ltd, the wholesale lending arm, and KKR India Asset Finance Pvt Ltd, to real estate firms—has witnessed some of its investments in its corporate lending book turn sour. The pain is largely being felt at KKR India Financial Services (KKRIFS), the NBFC.

Over the last year, KKRIFS's debt investments in companies like Kwality Dairy, CG Power and Industrial Solutions, and Coffee Day Enterprises Ltd have floundered. According to *Forbes India* estimates, the collective exposure to two credit investments—CG Power and CCD—stands at nearly ₹475 crore of KKRIFS asset book of ₹6,200 crore as of March 2019. It has completely written off its exposure in Kwality Dairy last year. The total number of loans and bonds on the books of KKR India Financial Services was under 50, with reported net non-performing assets at under 2 percent.

Last October, KKRIFS India took Kwality Dairy to the National Company Law Tribunal (NCLT), and has already written off the investment from its book. According to Kwality's last publicly available annual report, for FY18, it owed ₹195 crore to KKR India. In July 2016, the company had publicly announced that it managed to raise ₹520 crore from KKR India in a structured finance transaction for its consumer facing business. The debt-ridden company, which has eroded 98 percent of investor wealth in the past two years, is in NCLT awaiting its resolution.

The Gautam Thapar-promoted CG Power and Industrial Solutions has also come under the scanner, with KKR India finally acquiring just under 10 percent in the company in mid-September by invoking its pledges.

Trouble Spots...

INVESTEE COMPANY	DEAL SIZE (₹ cr)
Café Coffee Day, CG Power	475
Kwality Dairy	195.3*

... And Under Close Watch

INVESTEE COMPANY	DEAL SIZE (₹ cr)
Flexituff	100
Sintex BAPL Ltd	1,250

*KKR has written off the amount

SOURCE Annual reports and publicly available resources

On September 17, the Securities and Exchange Board of India (Sebi) issued an order restraining Thapar from accessing the securities market.

The order further said that it requires BSE Ltd to appoint an auditing firm to conduct a detailed forensic audit of the books of the accounts of the company from 2015-16 till date. CG Power in its notice to shareholders on August 19 had stated that the total liabilities of the company and the Avantha Group may have been potentially understated by approximately ₹1,053.54 crore and ₹1,608.17 crore respectively, as on March 31, 2018; and by ₹601.83 crore and ₹401.83 crore, respectively, as on April 1, 2017. Moreover, advances to related and unrelated parties of the company and the Group may have been potentially understated by ₹1,990.36 crore and ₹2,806.63 crore respectively, as on March 31, 2018; and by ₹1,479.34 crore and ₹1,331.47 crore, respectively, as on April 1, 2017.

Café Coffee Day, for its part, restated its debt in mid-August at ₹4,970 crore. It is in the process of selling non-core assets to reduce its debt obligations.

Other accounts on which KKR is keeping a proactive watch include Flexituff, Resonance Eduventures and Sintex BAPL Ltd. According to Flexituff's 2018-19 annual report, it defaulted on ₹9 crore during the January-March period and has an outstanding loan of ₹100 crore, which is now payable till May 2021. The KKR NBFC had also invested ₹1,250 crore in Sintex BAPL, a subsidiary of the Ahmedabad-based textiles and plastics maker Sintex Group. Recently, the group defaulted on non-convertible debentures worth ₹112 crore to six undisclosed investors. The Sintex Group had earlier in June defaulted on an amount of ₹86 crore.

As the Indian economy struggles, the wholesale lending ecosystem has been facing a liquidity squeeze. With lending coming to a near standstill, companies are finding it difficult to refinance their loans. And with sales slowing down, their ability to pay off debt from operations is stretched.

VIKAS KHOT

For the past six months, KKR India CEO Sanjay Nayar has been setting aside time to keep an eagle eye on the NBFC's credit book. This is in addition to his main responsibility of private equity. Clearly, there is a problem, but Nayar doesn't think it's time to ring the alarm bells.

"We are leveraged 1:1/1:1.2. We don't borrow short-term money and that's why we breathe easy. Our corporate & RE books each are approximately ₹5,000 crore in size and each has equity of about ₹2,500 crore to ₹2,700 crore," says Nayar.

In early January, Care Ratings rated KKR India Financial Services' commercial paper worth ₹300 crore as A1 plus. The lending firm is a wholly-owned subsidiary of KKR Capital Markets India Pvt Ltd. In FY18, the parent infused equity capital of ₹640 crore, which resulted in a sharp increase in its capital adequacy ratio.

According to the ratings note, gross gearing levels as on March 31, 2018, stood at 1.25 times compared to 2.08 times as on March 31, 2017. Over the years, there has been regular infusion of equity capital to support business growth.

As the loan book grows, the provision and writeoffs also increased in FY18 to ₹22 crore from ₹9 crore in FY17 on account of additional provision of ₹17 crore on standard assets. The company reported profit after tax (PAT) of ₹196 crore during FY18 as against PAT of ₹213 crore during FY17, a drop of 8 percent.

In end-March, Crisil Ratings rated KKR India Financial Services' bank loan facility of ₹3,400 crore as AA plus stable. According to Crisil, during FY19, there were three accounts that had turned delinquent. KKR India Financial managed to recover from one account and wrote off another during April to December 2018. Consequently, the gross non-performing asset (GNPA) metric stood at 2.4 percent (net NPA 1.33 percent) as on December 31, 2018. The company managed to recover from the third account in January post which, as on date, the GNPA ratio is nil.

KKR was the first global private equity fund to launch its credit book in India back in 2009, building an asset class which lent to promoters, and then moved on to lending to small and medium enterprises. Most global private equity funds followed in the footsteps of KKR in India to launch their credit books.

Few of these PE giants would have foreseen what was to come. In recent times, related party transactions have become one of the perilous ways of siphoning capital from a company; this has caught investors off-guard and investors are now looking for ways to safeguard their interests. These incidences have also made global investors wary on the kind of due diligence investors needed before

KKR is looking to change the way it does debt transactions in India. It now wants to be a significant lender in a firm and more hands-on like a pure play private equity investor

[redacted]

deploying capital in a company, especially debt, where they are a smaller participant in the entire pool of debt (vis-a-vis banks).

Nayar is now busy rebooting KKR'S corporate debt story that's been a victim of fraudulent promoters and poor governance. But the turnaround isn't going to happen in a hurry, and he needs to do more due diligence, and be more proactive with the portfolio.

To begin with, KKR is looking to change the way it does debt transactions in India. It now wants to be a significant lender in a firm. It wants to be more hands-on like a pure play private equity investor, far more involved and engaged including guiding the firms in capital expenditure assessments, alternate ways to raise capital, and monetisation of assets, among other areas.

As Nayar puts it, "We will move towards controlling debt stacks over time. And I think the banks will come along with us to sign up for inter-creditor agreements so that we are all in this together. I think we will do fewer deals but larger ones and control the debt stack."

One of the reasons to become a senior creditor in the pool stems from the fact that if a company is headed to the NCLT, under the Indian bankruptcy laws it will have a say in the resolution process; most funds are not in such a position, especially special-situation and PE funds.

Then, there is the issue of governance, or the lack of it. "Governance is a key area and, in this credit climate, we anticipate spending greater time looking at the governance aspects of a deal," Nayar says.

The firm is now looking at implementing similar measures for its debt investments that it usually practices for its equity transactions. Apart from heightening its due diligence processes, it is also looking to hire outside resources in terms of auditing, including forensic auditing and consulting, before offering large cheques in terms of debt.

Another strategy the firm is adopting for its existing deals includes recapitalising some of its existing portfolio companies with better terms in terms of both return ratios and increase in collateral and governance.

Nayar says that in credit businesses, market and business cycles are the norm, "as we have seen globally where we have $70 billion of credit asset under management. We consistently leverage our global expertise in order to structure credit investments in India through cycles. That gives us meaningful history and track record to shape our new investments."

Nayar points out that KKR's overall leverage levels have consistently been below 2x. "In terms of track-record, the firms has had stress in its portfolio in <10 percent of its executions life-to-date, by number and value." The worry though is that, if the economic slowdown persists, the stress could well build up.

Four Strategies To Counter Loans Going Bad

1. To work with existing portfolio companies and increasing exposure with better terms
2. To become the majority debt holder in its investee firms
3. Increase governance measures in investee companies
4. Hire external resources to help with portfolio companies

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Forbes INDIA

The Renaissance Bet

Online courses from India are providing domestic and global learners with the knowledge and skills to upgrade themselves, while building high-margin businesses

By KUNAL TALGERI

In 2015, American investor Lee Fixel was in Bengaluru to meet Krishna Kumar, founder and CEO of SimpliLearn. Fixel, a partner at private equity (PE) fund Tiger Global, had built a reputation for identifying high-volume businesses in India that were ripe to go online.

Under Fixel, Tiger Global had capitalised Flipkart, Ola and Freshworks at early stages, before any other fund was willing to write big-ticket cheques for internet companies from India. Kumar had started SimpliLearn as a blog in 2010 for working professionals in the IT sector. It sold certification programmes online, which were designed with companies like IBM to train people in emerging areas like cloud computing and project management.

Neither Fixel nor Kumar talked money as it wasn't a meeting to close a deal. The former was on the lookout for a high-volume opportunity in education technology that was focussed on the Indian market. (Earlier this year, Tiger Global closed a deal with Vedantu, a learning platform for students who want to crack board and competitive exams like IIT-JEE.) But when Fixel met Kumar, the latter wanted to take SimpliLearn global, and not restrict it to India.

The two did not meet again. (Fixel quit Tiger Global this May.) From the start, Kumar wanted SimpliLearn to be in a growing segment of customers with an increasing wallet-share for learning technology. The re-skilling video platform claims to have between 50,000 and 70,000 learners participating in live online sessions at any time of the day. It has 2,000 instructors who teach working professionals in India, the US and the UK, Australia and Singapore. Kumar's decision has since had three positive fallouts.

MEXY XAVIER

(From left): Chaitanya Kalipatnapu and Ashwin Damera, Eruditus Learning Solutions: Going international by collaborating with foreign universities

"Repeats and referrals are essential for a profitable business. We don't spend anything on acquiring half our students in India."

KRISHNA KUMAR,
FOUNDER AND CEO, SIMPLILEARN

One, with India's economy slowing down—GDP growth was 5 percent this June—it is a good time for professionals to start new ventures or learn new skills that can help further their careers. Two, the highly capitalised startup ecosystem is hiring technology talent in large numbers, making knowledge and certification of new-age technologies a must for IT professionals. And three, other seasoned entrepreneurs—with a strong bias towards high-gross margins—have followed in the steps of SimpliLearn; they, too, have taken renaissance bets.

FOUNDERS' QUOTIENT

Ronnie Screwvala co-founded Upgrad in 2016 with Mayank Kumar, managing director. Focussed on the domestic market, it has around 3.65 lakh learners registered on its platform, almost 15,000 of whom pay for re-skilling courses.

"This is my a) first, b) proper, and c) only internet business," says Screwvala, who founded UTV in 1990, charting a long path into television and film production, before selling the company to Disney in 2012. Mayank Kumar says re-skilling is in its third stage of evolution. In the first phase, until 2011, content providers made education-content (predominantly text) accessible online. In the second phase, education content began to be available online in video, though bandwidth was an issue. "We are in the third wave, where online content delivery is seamless. But it is bringing with it the need for a lot of human touch or offline hand-holding," he explains.

Then, there is Ashwin Damera's Eruditus Learning Solutions, co-founded with Chaitanya Kalipatnapu, in 2011. Damera was co-founder of Travelguru in India, a hotel-aggregator website in 2005, long before the likes of Oyo entered the directory of internet ventures. He has now built a global business from India. Eruditus has 30,500 paid learners across India, the US, Latin America and Europe. It has raised $50 million in three rounds of funding, most notably from Sequoia in January.

There is also Mohan Lakhamraju, who co-founded Great Learning in 2013 with Hari Krishnan Nair and Arjun Nair. As vice chairman and CEO of Great Lakes Institute of Management in Chennai, Lakhamraju began Great Learning to provide blended learning (online-plus-classroom training) . In the past three years, he says, it has evolved into a platform with 1 million registered users, of which around 14,000 pay for the courses.

The focus on working professionals has never been more pronounced in the internet industry. And Kumar of SimpliLearn is happy. "All of them are doing well. They are investing money, which is building this market to serve working professionals. Our message is the same: Take charge of your career," he says.

By going global, SimpliLearn and Eruditus have expanded their ability to monetise and get more customers.

THE INDIA WAY

Screwvala isn't one to let context escape opportunity. Less than a week after food-ordering app Zomato let go of 540 employees in September, he addressed them on LinkedIn. "We can help you prepare for your next job. Companies have to take some hard calls, especially in an era where technology is disrupting manual intervention and helping organisations scale effectively," he

Hari Krishnan Nair (left) and Mohan Lakhamraju of Great Learning: Focussing on the careers of learners

HEMANT MISHRA FOR FORBES INDIA

wrote, before pointing to an Upgrad course for customer support teams.

Pedigreed companies like NIIT focussed on skills training as far back as the 1990s. That model comprised the franchising of classrooms with personal computers to reach graduates around India. The opportunity was in monetising fresh graduates, who sought to grow their certifications before they entered the jobs market. The technology sector was nascent.

In contrast, the training business can now harness a large part of the technology workforce. What's also different is the paying capacity of working professionals, as IT and business processing management in India has become a $181 billion industry, according to Nasscom. Last year, more than 6 lakh professionals became digitally skilled, it adds. This could be on account of IT employers undertaking the expense, or professionals paying for continued learning.

The battery of re-skilling platforms is growing its presence in both business-to-business as well as business-to-consumer opportunities. And improved online connectivity and advanced devices have made it possible for internet companies to harness video content for learning programmes.

For an entrepreneur from the television era, the internet appealed to Screwvala as a "two-way" medium to deliver education.

"It is an interactive medium. And there is the prospect of creating a learning experience, so that users don't miss going to a university. The ability of people to post questions and get answers right there from peers, study groups or faculty and mentors is high," he explains.

The delivery model from India is different compared to the US, where massive open online courses (MOOCs) captured the public imagination in 2011. Companies like Coursera, Udacity and EdX promoted the idea of self-learning platforms that host well-produced videos for professionals and students. In India, the role of the instructor is vital for learners, says Kumar of SimpliLearn. The human interface is vital in four areas: Designing the course material, advisory services to learners before they select a course, student support, and career placement.

Online Reskilling in India

93 mln	37.7%
Size of market for reskilling and online certifications in 2016	Share of reskilling and online certification courses in the online education market in 2016. It is the largest portion of the ed-tech market

463 mln — Expected market-size for reskilling and online certifications in 2021

SOURCE KPMG India-Google study, 2016

Continued Learning Worldwide

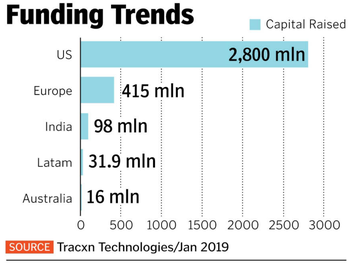
No of companies	4,050
Top companies	Udacity, Pluralsight, Coursera
IPOs	M2i Formation (France), Sept 2017 Pluralsight (US), May 2018

Small Private Online Courses in India

Ventures	Eruditus	Great Learning	Upgrad
Founded	2011	2013	2016
Active user base*	30,500	14,000	10,000
No of employees	550	550	450
Academic partnerships	10	< 5	9

SOURCE Companies *in FY2019

Funding Trends



SOURCE Tracxn Technologies/Jan 2019

HUMAN FACTOR

"Unlike a MOOC, we are not telling universities to just put their content on our platform and monetise it. We work with their faculty and recreate the course from scratch. This is a six-month cycle," says Damera. Eruditus works with 12 universities, including Harvard Business School, Berkeley, Massachusetts Institute of Technology (MIT) and Wharton, to develop the course material. It is able to charge a premium because of these partnerships.

"MIT has spent 150 years perfecting how to do research and teach. It has an annual budget of $2.5 billion. We can't match that. Why would I want to be an academic institution that tries and creates resources if I can partner with them?" says Damera.

Eruditus has managed to repurpose its brand-led course content in Spanish, and build a customer base in Ecuador, Mexico and Guatemala. India forms less than 20 percent of its customer base. Damera has been able to go global because of university partnerships and build a venture from India with a $145-million revenue run rate.

While Upgrad is more focussed on the local market, it has built nine partnerships with universities and institutes, including Mica in Ahmedabad, IIIT (International Institute of Information Technology) in Bengaluru, and Bits Pilani. "There is a lot of hand-holding and human touch necessary in India. It isn't just about online content," says Kumar of Upgrad, referring to 150 graders on their platform across India, 150 industry experts, 60 teaching associates, and 40 faculty members. This has led to nearly 8 lakh counselling sessions for learners during and after the courses.

Great Learning has evolved in the same direction, building on partnerships with 220 companies. "We have put a significant emphasis on career track," says Lakhamraju, adding that they have worked on helping learners get mentorship from relevant experts. "That way, these companies have access to the talent we train. And the talent gets to understand the needs of new jobs in companies."

Lakhamraju declines to share details of Great Learning's headcount, but its employee base has touched 500. It has the Flipped Classroom model, whereby learners study individually on the platform during the week. Then, they have a live interactive session in a small group with the instructor over the weekend. Similarly, an online mentor-learning facility brings personalisation as a learner can have the same mentor. "In some sense, the mentor takes ownership for your learning. That personalisation ensures high-quality learning outcomes in an online setting," says Lakhamraju.

Damera says these local needs are peculiar to SPOCs (small private online courses) from India. It's why Eruditus has a tele-sales team of 200 programme advisors, another 100 employees for 24x7 student support, and 70 in marketing. That's more than two-thirds of its 550-people global headcount. Upgrad's headcount has touched 450.

None of the players has figured out the perfect method of delivery yet—the ratio of content, technology and offline hand-holding. "We still need to get that critical mass to a level where we feel we are getting results," says Screwvala. "Right now, we need to solve the problem of building credibility and getting people online, convincing them that this medium is as good as going to a university. With re-skilling platforms, they are not losing a year, or the opportunity cost [of a salary]."

The gross margins can range between 30 percent and 40 percent, according to estimates. But the process of keeping the learner engaged until a course concludes, and growing the number of customers, erodes the profitability of what is not a commoditised business.

Says Kumar of SimpliLearn: "The one thing essential to build a profitable business is: Repeat and referral. This is traditionally a referrals business. So, we don't spend any marketing dollars on half the students SimpliLearn acquires in India."

MEXY XAVIER

Ronnie Screwvala (left) and Mayank Kumar of Upgrad: Counselling the online learner is vital

THE PLATFORMS ARE LEARNING

For now, the platforms of Indian service providers are getting more intelligent because of the range and growing volume of learners they are attracting. Analytics help understand learning habits, and make the platform more responsive with features to suit these habits.

At Eruditus, the Learning Analytics team in Mumbai does R&D activities on learning habits of its users, based on working professionals' behaviour in each of its geographies. "They have a lot of time-commitments apart from learning. Against that tide, our course-completion rates have to be high," says Damera.

Universities traditionally release new modules on Mondays. But Eruditus Learning Analytics team found two kinds of behaviour. 'Set 1' comprised learners who spent 30 to 60 minutes twice or thrice a weekday to study. 'Set 2' learners start on Saturday and Sunday, and put in four hours at a stretch. They go to office on a Monday morning, and submit the assignments from there.

"So, if we start a weekly module on Tuesday or Wednesday, it is optimal for both sets," says Damera. How important is that? "Earlier, nearly 30 percent of our students would seek extensions for their assignments. That number fell to 12 percent," he adds. Analytics is also helping personalise features.

That's why if the slowdown has come as a rude shock for working professionals, now is a good time to find the skill they want to build. The choices are aplenty on the information highway. F

Ashish Jhina (left), chief operating officer, Jumbotail, and Karthik Venkateswaran, chief executive officer, at the company's Bengaluru warehouse

SELVAPRAKASH LAKSHMANAN FOR FORBES INDIA

The Shop for Shopkeepers

By using technology, Jumbotail is gaining a foothold in the mammoth market of neighbourhood grocery stores

By SAYAN CHAKRABORTY

Karthik Venkateswaran has done his time in the trenches, literally, crouched behind sand bags, waiting for hell to break loose.

"Hum taabhi phi boriyo ke peeche baithte the, hum aaj bhi boriyo ke peeche baithte hai [we sat behind gunny bags then, and we sit behind gunny bags even now]," grins Venkateswaran, who retired from the Army about a decade ago. He looks at Ashish Jhina, who nods in agreement. Jhina, on his part, had shed his pinstripes and spent months crisscrossing the bumpy terrains of India's hinterlands in trucks ferrying gunny bags stuffed with grains, while working on projects on the public distribution system for his former employer, Boston Consulting Group (BCG).

What Venkateswaran and Jhina are alluding to are the sacks of staples moved every day at their maiden venture, Jumbotail, a startup that lets neighbourhood retailers buy staples and fast moving consumer goods (FMCG) online.

Jumbotail wasn't a business conceived out of whack, over a drink or two. It was, in fact, an idea that Venkateswaran and Jhina had been nurturing long before their paths crossed at Stanford University in 2009, and took years to crystallise. During his stints in Manipur, Siachen and Uri among others, Venkateswaran had seen from close quarters how far local farmers were from the sunshine and rainbows. Similarly, Jhina, who hails from a family of apple farmers in Himachal Pradesh, had experienced their travails first-hand. Both had inferred that they should begin with aggregating farmers and giving them direct access to the market by cutting out intermediaries.

Only to be proven wrong.

On intermittent breaks from duty, while working with farmers in his hometown Madurai, Venkateswaran realised his approach was flawed. "The supply side wasn't the right starting point, though a lot of people were working on aggregating famers. Because, once you have aggregated supply, you are desperate to sell it. The Indian demand is so fragmented that more than 90 percent of the demand flows through approximately 10 million neighbourhood stores," says the chief executive officer of Jumbotail.

At his apple orchards in Himachal Pradesh in 2014, a similar realisation was dawning upon Jhina, who had quit BCG by then. "I thought of trying out all the things that people say might work to improve farmer livelihoods and try them out quickly. We figured that getting farmers together, selling directly to consumers or large chains, etc, won't work," says Jhina, the chief operating officer. "The realisation was that we will have a finished product at hand, but who do you sell to?"

So, when Venkateswaran and Jhina chanced upon each other at a common friend's wedding in Delhi, in 2014, they agreed that a business worth its salt should look at aggregating demand. It wasn't until another year that Jumbotail was launched in its current form, after they burnt their fingers chasing hotels, restaurants and cafes—tough nuts reluctant to try new products.

"Our motivation was to aggregate demand quickly. There is no

difference between say 2,000 hotels and 2,000 neighbourhood stores buying one bag of rice every day. With stores, we have aggregated the same amount of demand with far less friction," says Venkateswaran.

Avers Jhina, "Our initial idea was to do business-to-business [B2B], and food and grocery as a category was certain. We didn't focus on neighbourhood stores because there was a blind spot. We were under the impression that there is a good distribution network for such stores, so what would they need? Also, the neighbourhood stores weren't technologically equipped."

In 2015, when Jumbotail was still an idea, getting stores to embrace online purchases was a tall order. Data wasn't cheap. Smartphones weren't ubiquitous. According to Statista, in 2015, India was home to 199 million smartphone users and about 260 million internet users. By all means, neighbourhood store owners, with average monthly sales of about ₹5 lakh, weren't exactly at the helm of the smartphone and internet revolution. Besides, they had been doing business with wholesalers and distributors for years, with minor hiccups but nothing serious enough to sever ties.

"On the grocery side, building revenue based on a sub-5 percent margin structure is a hard task. There is a lot more variability in business-to-consumer [B2C] pricing that customers can live with, but, in B2B the shopkeepers will try to get the lowest price and they will want credit. Also, it is hard to break relationships, as the distributors have been working with them for many years," says Rahul Chowdhri, investor at Stellaris Venture Partners.

Also, Venkateswaran and Jhina wanted to build the business the "right way". For instance, they could have cut themselves some slack and deployed executives to take orders from the stores, at least until buying online became a habit.

B2B Startups Focussed on Grocery

NAME	FUNDS RAISED ($ MLN)	INVESTORS
Udaan (horizontal marketplace that sells grocery)	680	Lightspeed (India and US units), DST Global, Altimeter
Ninjacart (deals in fresh produce such as fruits and vegetables; sells to supermarkets as well)	150	Accel Partners, Tiger Global Management, Qualcomm Ventures
Jumbotail	23	Nexus Venture Partners, Kalaari Capital, Heron Rock, Capria Fund, BNK Ventures
ShopKirana	12	Infoedge, Incubate Fund, Better Capital
Peel-Works	7-10	Equanimity Ventures, HDFC Bank, Unilever Ventures, Inventus Capital India, Chiratae Ventures
GramFactory	1	Beenext
ShopX	50-60	Nandan Nilekani, Fund Strategic Holdings

But they insisted on taking orders only on the app. Luring retailers with hefty discounts wasn't an option either. They would instead make money from commissions from sellers and logistics, and working capital loans to buyers, apart from running promotions and loyalty schemes for brands.

In return, retailers buying on Jumbotail would have the luxury of ordering inventory without having to visit the wholesalers and haggle, or wait for their sales executives' periodic visits. Jumbotail would deliver in 24 to 48 hours. Also, they got to access a vast collection without having to deal with multiple vendors of different products. Most importantly, they got all of what they ordered at one go. Jumbotail claims an order fulfilment rate of about 95 percent against an industry average of 60 to 70 percent.

"Early on, we used to get calls to place orders. But we declined to accept those. Shopkeepers often said they had exhausted their phone's data packs. We would recharge their phones and add the cost to the final bill to get them into a habit of ordering on the app," recalls Jhina. "We never wanted to build a business based on a sales force running around. Our hypothesis was, we will take less business if we have to, but we will take it in the right way."

Cut to 2019, and one thing is certain: Neighbourhood grocery stores that once looked vulnerable to the onslaught of modern retail and ecommerce are here to stay. A 2019 report by the Indian Brand Equity Foundation estimates that the Indian retail market will grow from $672 billion in 2017 to $1,200 billion in 2021. And while modern trade (supermarkets and hypermarkets) almost doubled to $26.67 billion between 2016 and 2019, it is still a small fraction of the overall pie.

"People have accepted that in India, it isn't going to be only department stores but a combination of them and the mom-and-pop stores. Across grocery and FMCG, it is almost a $600 billion opportunity. Such a large market cannot have a winner-takes-it-all," says Rutvik Doshi, managing director at Inventus Capital India.

Besides, the market has changed. The number of internet and smartphone users in India are north of 500 million. People are now more comfortable with online transactions than ever before. "Importantly, this behaviour [buying online] is transitioning to business people also, because neighbourhood shop owners are themselves buying on ecommerce marketplaces [Amazon, Flipkart, Snapdeal, Shopclues]," says Sameer Brij Verma, managing director at Nexus Venture Partners.

Avers Sachin Chhabra, founder of Peel-Works, which started in 2010 as a software-as-service business focussed on consumer packaged goods companies, before launching a B2B marketplace called Taikee in 2017, "We always had the plan to start B2B retail. But the best time to be in this business is now."

Four autumns since its launch, Jumbotail has approximately 21,000 retailers—20,000 of them in Bengaluru and the rest in Hyderabad—buying on their app. The company, armed with its own fulfilment centres and supply-chain network, gets at least 80 percent of its revenue from sticky customers. These are shopkeepers who get anywhere between 9 and 30 deliveries a month. For such stores, says Jhina, Jumbotail, which is on track to end 2019 with $100 million in sales run rate, account for 20 to 30 percent of their procurement. About 15 percent of the firm's sales comes from its private brand in staples, Jumbo Farms. Overall, Jumbotail sells about 3,500 items.

But, Jumbotail isn't the only startup to have spotted a goldmine in neighbourhood grocery stores. Vying for the same pie are the likes of Peel-Works, Shopkirana, Gram Factory and Udaan, a unicorn with a valuation of $2.3 billion that has got about $680 million in funding. Also in the fray are heavyweights such Reliance Industries, Metro AG, Walmart and Amazon, among others.

Metro Cash and Carry, for instance, has launched an app that allows retailers to purchase online, keep a tab on inventory, and facilitate digital payment. The Indian unit of the German-headquartered Metro AG, which operates 27 stores across the country, clocked about ₹6,100 crore in sales in FY18. Similarly, Walmart India, which clocked sales of about ₹3,600 crore in the same period, is expected to significantly ramp up its presence in India. Then comes, Reliance Industries' highly anticipated "new commerce", which, according to its chairman Mukesh Ambani, will be a "user-friendly digital platform designed for inventory management, customer relationship management, financial services and other services".

"For a POS to succeed, a retailer has to do everything on the POS, not just the sales part."

SUMIT GHORAWAT,
CO-FOUNDER, SHOPKIRANA

While large conglomerates are likely to push for adoption of point-of-sales (POS) systems, Sumit Ghorawat, co-founder of ShopKirana, says digitising neighbourhood stores with POS is no cakewalk, irrespective of the size of the facilitator.

"For a POS to succeed, a retailer has to do everything on the POS, not just the sales part. They have to make an entry [in the system] while receiving inventory, as well for the actual inventory to show up on the system. From a technology standpoint, this is a lot to ask of a retailer," says Ghorawat. "The entire store will be digitised in the future, but it will happen one step at a time. Putting a POS is easy, but ensuring diligent usage is very difficult."

Harminder Sahni, founder and managing director at Wazir Advisors, a retail consultancy firm, says it is imperative for a retailer to source from a single supplier for POS to live up to its full potential. Large corporates could look at moulding themselves into that one large, overarching supplier. But, that's a tough task. "Every neighbourhood store is an individual business. If every store in a neighbourhood keeps the same supply at the same price by procuring from the same vendor, it will look as if they are looking for an employment with the vendor, but that is not case.

For one vendor to become everything—from the supplier to the keeper of data—is a challenge as every retailer will look for options," he says.

All said, there is no denying that large conglomerates will look to sweep the market. Venkateswaran and Jhina are the kinds who would rather build a bulwark early than wait for the storm to hit them. Consequently, Jumbotail is also toying with ideas that will let them strengthen its hold over mom-and-pop stores and upgrade them to modern convenience stores, fully powered by Jumbotail.

The company has launched a retail operating system called Goldeneye, which allows integration with third-party POS, and comes with a procurement portal that is fully integrated with the Jumbotail marketplace. With this, store owners can not only see their inventory levels, but also live prices, margins, offers and alternatives or substitutes to products that are unavailable on the Jumbotail marketplace. In addition, Goldeneye allows store owners to track incoming deliveries, payments, and credit balances.

Jumbotail will also tap retail chains with 5-15 stores. Procuring from Jumbotail will allow them to run the storefronts without bothering about warehousing and supply chain. Also, Jumbotail will help its network of stores to list on online platforms such as Swiggy or Dunzo, which translates into additional business.

In fact, at Jumbotail, they will do anything to live up to their tagline, "*Jai jawaan, jai kisaan, jai dukaan* [hail the soldiers, hail the farmers, hail the shops]". F

MISSION POSSIBLE

IN FIVE YEARS, XIAOMI HAS BECOME INDIA’S NO 1 SMARTPHONE COMPANY AND MORPHED INTO A ‘SMART’ CONSUMER ELECTRONICS AND DURABLES MAKER

By RAJIV SINGH

It’s The Frabjous Day, the day when Alice is slated to slay Jabberwock, a fictional creature in Lewis Carroll’s 1871 classic *Through the Looking-Glass, and What Alice Found There*, the sequel to Alice’s *Adventures in Wonderland*. Alice, though, gets nervous when she realises how enormously intimidating Jabberwock is. “This is impossible,” she mutters. Mad Hatter, who is standing next to Alice, tries to boost her confidence: “Only if you believe it is.”

Egged on by Mad Hatter, Alice recalls six impossible things that she used to believe could be done before breakfast. “Six impossible things. Count them, Alice,” Mad Hatter implores. Alice starts saying them aloud. One, there’s a potion that can make one shrink. Two, a cake that can make one grow. Three, animals can talk. Cats can disappear. There’s a place called Wonderland. And six, I can slay Jabberwock. Alice eventually ends up killing the creature.

In Bengaluru in July 2014, in a cramped one-room office that barely had space for a few chairs, a jittery Manu Jain was counting his list of ‘six impossible things’. The first, and most urgent, was a fervent wish that at least 10,000 people would go online to buy a Xiaomi smartphone on Flipkart. Second, India offered hope, and space, for yet another smartphone brand. Third, on online-only player can succeed among offline competitors. Fourth, Xiaomi can one day become the biggest brand. Fifth, Xiaomi can morph into a brand that is much more than a smartphone. And six, Wonderland does exist.

Five years down the line, the global vice president of Xiaomi, and managing director of Xiaomi India, is living his wildest dream. Xiaomi has sold over 100 million smartphones in India since it its debut in July 2014. Jain pinches himself on his wrist. “It’s almost like Alice in Wonderland,” he grins. When Alice started her journey, he lets on, she didn’t know how Wonderland would be. “We too didn’t know what was in store for us.”

In five years, Xiaomi has not only become the biggest smartphone brand in India, ahead of South Korean tech giant Samsung, but it has also taken pole position in three more product categories that it almost single-handedly created: Smart TVs, smart wearables and power banks.

In revenues too, it has leapfrogged. While it closed FY17 at ₹8,380 crore, the numbers for the next fiscal jumped to ₹23,060 crore, with a profit of ₹293 crore. Xiaomi India declined to share the financial details.

From selling smartphones to having a sizeable presence in over 12 segments as diverse as routers, smart air purifiers, shoes, lifestyle products like backpacks, luggage, T-shirts, audio products and trimmers, Xiaomi has morphed into a ‘smart’ electronics consumer durable maker. The promise is of much more. “This is just the beginning of a brand new chapter. We will continue to bring in more categories and products,” contends Jain, who has now entered into water purifiers as well (see interview).

FRABJOUS DAY

July 22, 2014. Xiaomi had flagged off its maiden flash sale on Flipkart. Jain was hoping against hope. A brand few would have heard of in India, a company that didn’t spend a marketing dollar in announcing its debut, and a smartphone brand that was going against the grain by selling only online was doing something unthinkable: Putting 10,000 units of

SELVAPRAKASH LAKSHMANAN FOR FORBES INDIA

Mi3 on sale. "We thought that people who followed us on Facebook would come and buy the phone," recalls Jain, who had a torrid time before the sale, as sceptics voiced their doubts about the online-only gambit.

Within seconds of the flash sale going live, Flipkart crashed. Over half a million people went online to buy Xiaomi handsets. Mi, which stands for 'Mobile Internet' but also means 'Mission Impossible', started its India innings with a bang. Jain had slayed his 'Jabberwock'. Mission Possible had begun.

In the third quarter (July-September) of the same year, Xiaomi sold over a lakh smartphones. By the end of the year, it had launched power banks and emerged as the fifth largest smartphone maker in India. In the same quarter the following year, Xiaomi sold 1 million handsets. A year later, the number doubled to 2 million. And by 2017's last quarter, the Chinese upstart had dethroned Samsung to become top dog. It's held on to that position ever since.

> **"XIAOMI YEARNS TO BE THE AMAZON OF TECHNOLOGY. EVERY SIX MONTHS IT LAUNCHES A NEW PRODUCT CONNECTED TO THE INTERNET."**
>
> **ABHIK CHOUDHURY,** FOUNDER, SALT AND PAPER

The Xiaomi juggernaut is in no mood to pause, what with the enormous headroom to expand in India. "We are greedy for growth, not profit," says Jain, underlining the fundamental business philosophy of the world's fourth biggest smartphone maker which it incorporated in its initial public offering (IPO) prospectus last June. The overall hardware net profit margin, the draft prospectus noted, will never exceed 5 percent.

In an open letter, along with the IPO documents, Lei Jun, chairman and founder, pointed out the positioning of the company. Xiaomi, he underscored, is an internet company with smartphones and smart hardware connected by an IoT (internet of things) platform at its core. In January 2019, in his annual conference speech, Jun unveiled the dual engine strategy of Xiaomi: Mobile +AIoT. "This is the core strategy of Xiaomi in the next five years," he said (see interview).

Back in India, Jain decodes the game plan of the smartphone maker. "We always wanted to become a full IoT player, and not just a smartphone company." The smartphone, he explains, is just one of the key milestones in the IoT journey. It's the centre of the universe for all the other IoT devices, he points out.

THREE BUCKETS THEORY

The seed for entering into multiple categories in India was sown in the first quarter of 2017. The topic came up for discussion in a meeting with Jun and board members. With Xiaomi looking sorted on the smartphone front, the question was: What next? From the brainstorming session emerged the contours of three big categories that Xiaomi could look into.

The first bucket is big in market opportunity: Consumer electronics and durables, including televisions (TVs), fridges, washing machines, air conditioners (ACs), water purifiers and laptops. "All these are big revenue generators," says Jain. "But there is also a lot of competition. So we have to do something disruptive," he says, adding that the war can't be won in each category unless the company does something distinctive. It did that by launching smart TVs last February.

Within a quarter (April-June), Xiaomi became the biggest smart TV brand in India. In fact, it ended up selling a staggering 2 million units in just 14 months since the launch. While older players like Samsung, LG and Sony were focusing on traditional TVs and priced their high-end TVs prohibitively, Xiaomi loaded its TV and sold at half the price.

The idea of launching TVs, ahead of, say fridges or ACs, was logical: TVs mirrored smartphones. "Like a TV, a phone is a medium to watch and consume content," explains Jain. TVs, most importantly, also fitted slightly better in Xiaomi's IoT scheme of things. "You can do a lot of smart things on TV that you can't with ACs and other durables."

The second bucket that Xiaomi identified was small in business terms but growing rapidly. This included fitness bands, robot vacuum cleaners and air purifiers. The idea was simple: To own the category and develop it. "Today we own the wearable space in India with more than 40 percent market share," beams Jain. The category, he points out, has grown almost 20 times in the last two years.

The third bucket has less to do with business and is more for the community of users built around the Mi brand—to keep them engaged and connected. "These are cool projects that we keep doing from time to time," says Jain, referring to shoes, luggage and T-shirts.

SMART BY SMARTEST

Xiaomi, reckon handset experts, was smart enough to realise that smartphones alone can't keep it at the No 1 position. "The smartphone has become a fickle play. It has been commoditised," avers Navkendar Singh, research director (Devices and Ecosystem), at IDC India & South Asia. Xiaomi's transition to a smarter lifestyle brand is based on the understanding that it has to reach out to its users and stay connected with them through different products. Smartphones, Singh reckons, are the easiest way to enter into the minds of the consumers.

Branding experts applaud the marketing strategy deployed by the handset maker. It offered high quality

TEAM PLAYERS

ANUJ SHARMA: Chief marketing officer, Xiaomi India
- Joined in September 2018
- Had stints in Wipro, Lenovo Smartphones and Motorola

MURALIKRISHNAN B: Chief operating officer, Xiaomi India
- Joined in July 2018
- Responsible for driving major strategic growth across supply chain, logistics, quality, IT, after sales and customer support
- Had stints with Myntra, Jabong and eBay

"The secret sauce for Xiaomi's success in India has three ingredients: Products with best specs, highest quality and honest pricing; distribution strategy and manufacturing in India."

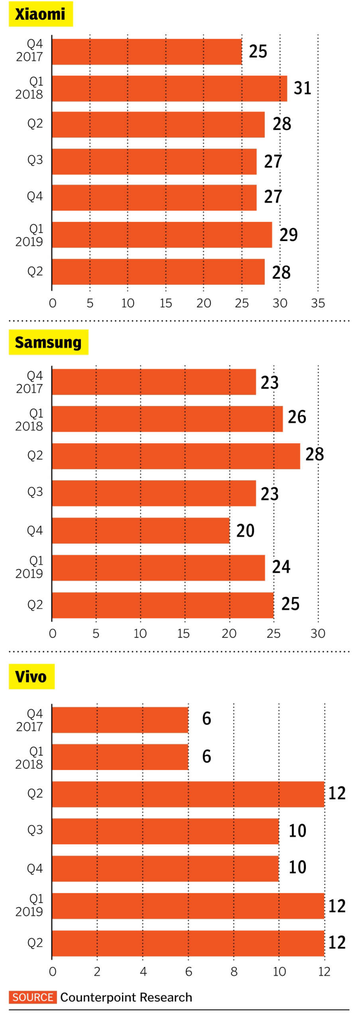
RAGHU REDDY: Head of category and online sales, Xiaomi India
- Joined in July 2016
- Since last January, is responsible for business growth across three key categories of smartphones, smart TVs and ecosystem categories
- Had stints with Snapdeal, Wipro and EY

"You can't come to a country like India where 90-95 percent of the phones are sold offline, and decide to go online. We went against the grain."

PHOTOGRAPHS: SELVAPRAKASH LAKSHMANAN FOR FORBES INDIA

SMARTPHONE SWEEPSTAKES

Market share (%) of the top three players



SOURCE Counterpoint Research

MAKING MI IN INDIA

- Has seven smartphone manufacturing plants in the country
- Five units are in partnership with Foxconn; one each with Flex and Hipad
- Four are in Andhra Pradesh, two in Tamil Nadu and one in Uttar Pradesh
- Ninety-nine percent of smartphones sold are made in India
- Xiaomi can make up to three smartphones per second during operating hours
- It also locally assembles PCBA, smartphone chargers, USB cables and batteries
- Nearly 65 percent of the value of each Xiaomi smartphone is locally sourced
- Has partnered with Navitasys India to manufacture Mi Power banks locally
- Has one smart TV plant with Dixon Technologies in Tirupati, Andhra Pradesh

HIGH FIVE

July 2014

Enters India
First flash sale on July 22; Mi 3 sells 10,000 units; Flipkart crashes as over half a million people go online to buy the handset

July-Sept 2015

Xiaomi sells more than 100,000 smartphones in Q3 2014, as per IDC. Launches power bank; ends the year as fifth largest smartphone maker

July-Sept 2015

Sells 6 million units of Mi Band, making it No 1 in India; corners a 25 percent share of all wearables sold in Q1 2015

July-Sept 2015

Sells over 1 million handsets in Q3, its best performance since debut; Redmi 2 Prime becomes best-seller

July-Sept 2016

Sells over 2 million smartphones. Around 400,000 wearables sold in India; Xiaomi's Mi Band tops the charts with 27.1 percent market share, according to IDC. Launches Mi air purifier in September

2017

- Becomes India's biggest smartphone brand in November
- Ships 9.2 million smartphones in July-September, bags 23.5 percent market share
- Introduces first smart router in India
- Sells 5 million units of Redmi Note 4 in six months
- Goes offline, launches first Mi Home in Bengaluru
- Grabs nearly 50 percent market share in online smartphones
- Becomes leading smartphone brand across top 50 cities
- Announces second manufacturing unit in partnership with Foxconn
- Opens up 500 service centres across 350 cities
- Sells 1 million units of Redmi 4 in 30 days
- Ends the year with market share of 26.8 percent for Q4

2018

- Launches smart TV in February
- Becomes biggest smart TV brand in India in second quarter (April-June); sells over 2 million units in just 14 months since launch
- Becomes leading brand in wearables, with 45.8 percent market share; shipments cross 1 million mark in Q2
- Sells 1 million units of Mi Band 3 in 2018
- Mi.com becomes the third largest ecommerce platform for smartphones after Flipkart and Amazon
- Opens over 500 Mi stores and 1,000 service centres
- Sells over 8.5 million devices during festive season in 30 days
- Sells 4.11 crore handsets in 2018; retains top smartphone billing in all four quarters
- Ends year with market share of 28.9 percent

2019

- Ships over 100 million smartphones in India in five years
- Maintains No 1 position in Smart TVs with 32 percent market share in Q2 2019, as per IDC, for five consecutive quarters
- Keeps pole position in wearables; Canalys Wearable Band Analysis in August gives it 39 percent market share
- Mi.com grabs 11 percent market share in online smartphone space
- Opens 2,000 Mi stores in India and introduces Mi Studios
- Becomes fastest growing brand in offline smartphone sales
- Redmi Note 7 series sells over 5 million units in just five months since launch
- Becomes biggest power bank brand

SOURCE IDC; Xiaomi; Counterpoint Research

SELVAPRAKASH LAKSHMANAN FOR FORBES INDIA

After making an online-only debut in 2014, Xiaomi now has experience stores in India

products at lower rates, was the first to own a trend across categories, exhibited flexibility with distribution and supply, and always delivered more bang for the buck irrespective of the audience they engaged with, contends Abhik Choudhury, founder of Salt and Paper, a brand consultancy firm.

Xiaomi, he points out, yearns to be the Amazon of technology. Every six months it launches a new product connected to the internet. "It wants to be a leader in any category that can be accessed wirelessly," he says. The opportunity to grow, he adds, is massive. As are potential challenges.

The biggest challenge is staying focussed. Though Xiaomi is no longer a one-man show—it has put together a professional team in two years—the big task is: Can it devote the same energy and focus to each category? Another challenge is the resurgence of Samsung and aggression of new players like Realme. In the second quarter this year, Realme became the second-largest player in the online segment with a 17 percent market share (it was just 4 percent in Q2 last year), according to Counterpoint Research. Xiaomi's share during the corresponding period came down to 46 percent from 55 percent.

Smartphones, reckon analysts, have to be Xiaomi's mainstay. "Apple is Apple because of iPhones. The rest comes because of it, not apart from it," says Ashita Aggarwal, marketing professor at SP Jain Institute of Management and Research.

Jain is aware of the threat. He knows the disruptor can get disrupted. "I think the biggest threat for us is more internal," he concedes. The feeling of having arrived is the one that has the potential to do the most damage. "That's the moment when probably we'll start seeing a decline," he says, recalling how the brand was billed 'mad' when it made its online-only debut.

Meanwhile, back in Alice's Wonderland, Mad Hatter throws a question to Alice.

"Have I gone mad?"

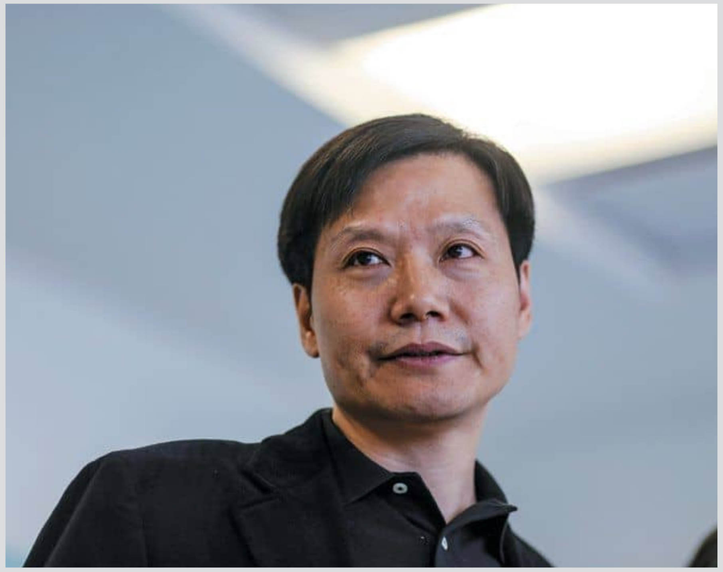
Alice answers in the affirmative, but ends the conversation with: "All the best people are." F

"COMPETITION HAS INCREASED IN TERMS OF NEW PLAYERS LIKE REALME, AND OLD ONES LIKE SAMSUNG ARE FIGHTING BACK."

FAISAL KAWOOSA,
FOUNDER AND CHIEF ANALYST AT TECHARC

'BUILDING A LOCAL TEAM HELPED US SUCCEED'

Lei Jun, Xiaomi chairman and founder, is dubbed as China's Steve Jobs. Inspired by the late Apple co-founder at an early age, Jun intended to follow in Jobs' footsteps. "I was greatly influenced by that (*Fire in the Valley*) book, and I wanted to establish a company that was first class," Jun told *The New York Times* in 2013. Six years down the line, he has created a company that is ahead of iPhone (manufactured by Apple) in China and India. "Currently, Xiaomi products are present in more than 80 countries and regions around the world and have a leading foothold in many of them," the entrepreneur tells *Forbes India*. Impressed by the performance of his company in India, Jun reckons that a big part of the success of Xiaomi has to do with the local culture that the company swears by. Xiaomi, he lets on, operates like a local brand, with a local team, across whichever region it works. "Building a local team has helped Xiaomi India in a lot of ways to succeed and under Manu's [Xiaomi India MD Manu Jain] able guidance, the brand has thrived even more," he says. Edited excerpts from a phone and email interview:



GETTY IMAGES

ON Xiaomi's five-year report card

Xiaomi India has outdone our expectations. When we entered India in 2014, we were hoping to make a mark in the first five years. In fact, when I came to India in early 2017, based on the real situation, we aimed higher to become the biggest smartphone brand over the next three to five years. The same year in the third quarter, we achieved this goal, becoming the No 1 smartphone brand. And this record has lasted till now. We have maintained it for eight consecutive quarters.

Indian Mi fans and users have been acceptable of us and given us a lot of love and support. We hope to keep providing them with the best specs, highest quality (products) and making all innovative technologies accessible at honest pricing points.

Thanks to all the love from Mi fans, we have been able to add many more categories and have already become a leading brand in several ecosystem categories like smart TV, smart wearables, lifestyle products and home security.

ON having a local leadership team

Currently, Xiaomi products are present in more than 80 countries and regions around the world and have a leading foothold in many of them. I believe one of the strongest reasons for this is that Xiaomi operates like a local brand, with a local team, in whichever region we work in. We imbibe local leadership, build a local team and customise our products for local needs such as adapting voltage fluctuation for adapters, PatchWall for smart TV, and P2i for India.

I strongly believe building a local team has helped Xiaomi India in a lot of ways to succeed and under Manu's able guidance, the brand has thrived even more.

ON apprehensions when Xiaomi entered India

When we entered India, there were over 300 smartphone brands in the country. A lot of people told us that we would not succeed since we were an online-only brand that wasn't willing to spend millions on traditional marketing. However, India is one of the fastest growing smartphone markets in the world and each year it continues to grow.

In 2018, India accounted for 140 million units, and one of the largest markets in the world witnessing positive growth is a big stimulant. Back in 2014, India was not a mature market, and there was a big gap for consumers who wanted high specs without paying a fortune.

ON the transformation of Xiaomi beyond smartphones

First and foremost, Xiaomi is an internet company, with smartphones and IoT-connected smart hardware at its core. Xiaomi has a dual core strategy of 'Smartphone + AIoT (artificial intelligence + IoT)' in the next five years with RMB 10 billion investment in AIoT. In addition to 'AI + IoT', AIoT also stands for 'All in IoT' for Xiaomi, creating a true ecosystem that weaves in all hardware. Our journey started with MIUI in 2010, our own operating system which you can find on all Xiaomi smartphones except our Android One offering. We have a unique 'triathlon' business model consisting hardware, internet services and new retail.

We believe the internet brings efficiency to and connects all platforms, and our hardware as well as retail is built with internet at the core. Xiaomi has invested in over 200 startups and could be the largest hardware incubator in the world. We have built the largest consumer IoT platform with more than 171 million connected devices, excluding smartphones and laptops. F

SELVAPRAKASH LAKSHMANAN FOR FORBES INDIA

'WE ARE GREEDY FOR GROWTH, NOT PROFIT'

It's common to spot Manu Jain sporting an Mi band on his wrist, but rare to see the global vice president of Xiaomi, and managing director of Xiaomi India, wear his heart on his sleeve. "It's not been an easy journey," he confesses. From being ridiculed for trying to do something 'eccentric' when Xiaomi made its India debut as an online-only smartphone brand in 2014, to being billed as 'mad' for nursing ambitions to become the biggest in India, to selling 100 million smartphones in five years, Jain has made Xiaomi not only the biggest smartphone brand in India but also helped it take pole positions in three more categories: Smart TVs, wearables and power banks. "It has been a roller-coaster and there have been days filled with dread and excitement," he says. Excerpts from an exclusive interview:

ON taking on South Korean and Japanese brands

I have huge respect for these guys. I grew up on many of these brands. But what they are doing is that they want to sell hardware... their job gets over once they sell the hardware. Our job, in contrast, starts after we sell the hardware. Take, for instance, TV where we have over 7 lakh hours of content. This is something no other brand has ever done. Our aim is not to make money by selling a TV. We actually sell TVs almost at cost, and keep a tidy margin. The aim is to make money from content.

ON his relationship with Lei Jun

Lei Jun and I have an understanding that we will meet at least once in a quarter. So every quarter either he flies to India or I go to China. Typically, at the beginning of the year, we discuss the yearly plans. As long as we adhere to the plans, India has full freedom to do what it wants to do. Lei Jun is pleasantly surprised (by India's progress). But he always believed that this is achievable. In fact he believes that we still haven't fully achieved what we can in India, or wherever we are.

ON customising TVs for India

We had to redevelop the TV end-to-end both from the hardware and software perspective. One of the biggest differences between China and India in TV viewing is that in China most of the people watch TV at night. In India, people not only watch TV at night but a significant amount of viewing also happens during the day by homemakers. And hence the brightness requirement in China is different from India. So we had to customise the brightness level for our TVs in India. The second change was done in sound. Most viewers will never go to the maximum sound but for some reason they want a loud sound. So we had to amplify the sound of our TVs for India. which is different from our sound in China. The third customisation was in the number of USB ports, which is much higher in India. People here are still using dish TV, cable TV, USB pin, firestick and many other things. So the number of connections that people want in India is higher. Now all of these may look like simple things. But it's almost like redesigning the entire TV.

ON getting into trimmers and personal care products

Though it (trimmers) is an established category and has players like Philips, it's not big in terms of volume. Imagine, within a day of launching it on Mi.com and Amazon, we became the largest selling trimmer on Amazon by a huge margin. We were four to five times the second biggest brand. And we just had one model, as compared to multiple ones by other brands.

ON the dynamics of the smartphone segment

On an average, phones take 9-10 months to hit the market. We have already started with our planning for Diwali next year. In industries such as automobiles, once you capture 30 percent, 40 percent or 50 percent market share, you can be assured about the next few quarters. You will continue to have a good market. But in phones, because the degree of innovation is so high, one can never assume that just because you're No 1 today you will be No 1 tomorrow. Things can drastically change every quarter.

ON why profits aren't a priority

We are not greedy for profit. We are greedy for growth. If you look at many of the great companies in the world, they have a long-term perspective on how to make money. But they've never been greedy. Take, for instance, companies such as Walmart and Amazon. People trust them because they know they will get the best product at the best price. This trust is important. So you can sell a product and make huge profit, and this can work out if you have a distinctive product. But in today's world, if you want to be sustainable and want people to continue buying your products, trust is a lot more important.

> "FIVE YEARS DOWN THE LINE, I HOPE WE'RE KNOWN AS AN AI PLUS IOT BRAND, RATHER THAN JUST A SMARTPHONE BRAND."

ON new opportunities

Our biggest opportunity is offline. In spite of not being present in thousands of cities, we have managed to capture 30 percent market share. We haven't even touched so many cities, so many villages, like lakhs and lakhs of them. So one of the biggest opportunities for us is offline growth, especially in Tier III, IV, V and VI. The second biggest opportunity is all the new categories that we will launch over the next four to five years.

ON potential threats

A big threat would be competition. I wouldn't want to call out any specific names, but I know for a fact that what we have done to other brands—we innovated at a fast pace—can be done to us. So, let's not be stupid to assume that others cannot succeed or are not smart enough. It's foolish to assume that we will always be the smartest.

I think the biggest threat for us is internal. If we start feeling that we have achieved and arrived in life, that's when we start taking things lightly. That's the moment when probably we'll start seeing a decline, because this is one industry which requires you to always think ahead of competition.

ON chances of the disruptor getting disrupted

Of course, yes. It's 100 percent true. This is because I have never seen any other industry that is evolving as fast as smartphones in terms of innovations. Three-four years ago, we launched Redmi Note 4G, which was the first 4G phone in the country. It was a 5.5-inch phone. People said you've gone crazy. It turned out to be a great hit. Today, when we launch a 5.5-inch phone, people say 'it's too small'.

ON handling pressure

My mother taught me when I was in school that a person should be satisfied enough to be happy, but dissatisfied enough to progress. And the beauty of life is, if you're on either of the extremes, it's not a balanced life. If you're always happy and you're not satisfied, it means you're not striving hard to go to the next level. And if you're always unhappy and grumpy about what you have, you may keep achieving more but you will never be happy. So, yes, some sort of pressure is required so that you can continue to achieve better. And what we can do as leaders is ensure that you're not passing on that pressure to team members.

ON the toughest part of the job

The toughest part is that it is a lonely job. So even if you have pressure and things are going wrong, I can't go to the team and say, 'Oh, things have gone wrong and now everything is doomed!' You have to be optimistic irrespective of the way things are. It is lonely and you can't pass on that pressure, but that's also the fun part of the job.

ON life after five years

We are beginning to diversify into many categories. Five years down the line, I hope we're known as an AI plus IoT brand, rather than just a smartphone brand. We build a lot more AI into everything that we do, except for maybe pens and T-shirts. But in all our big categories, we introduce AI and try and make everything smart. Of course, smartphones will be a big part of it, but I would be happier if we were known as an IoT company and not just as a smartphone company. We make devices smarter, but we can't claim to be smartest. F

COURTESY: ATHER ENERGY

(From left) Tarun Mehta and Swapnil Jain, co-founders and CEO and CTO, respectively

Electric, And How!

Because Ather Energy has built its electric scooters from scratch, it is defining what an electric two-wheeler is capable of being

By **HARICHANDAN ARAKALI**

When we started Ather, five years ago, it was a daunting challenge that we were preparing ourselves for—that we will build this cool vehicle, but most people will come in with the expectation that 'electric isn't fun and it will be a poor experience,'" says Tarun Mehta, co-founder and CEO of Bengaluru's Ather Energy. "And we were preparing ourselves to educate potential customers about Ather's scooters."

Five years on, customers have surprised Mehta, and co-founder and CTO Swapnil Jain, by opting mostly for the more expensive Ather 450 (₹1,13,715 on-road in Bengaluru) over the cheaper Ather 340 (₹1,02,460). It is a sign that electric vehicles (EVs) are being seen as genuine upgrades, Mehta adds. Because he is betting on the electric scooter market really taking off in India in the next few years—the company, however, does not divulge its sales figure—Ather is investing in a new factory to manufacture close to half a million scooters a year. At present, their Bengaluru factory has a capacity of 30,000 units a year. The new factory is expected to be in one of the southern Indian states.

The key to Ather's success will be its product development prowess and after-sales customer experience, with features such as unobtrusive software updates on the go, says Mehta. He adds that more upfront investments in deep research and development [R&D] will be needed in the country—as against just selling imported scooters—if India aspires to build a strong ecosystem of EV manufacturing.

At Ather, it has taken five years of development to ensure that the scooters are much more than just electric two-wheelers, says Jain. It's a platform to do many things, much like a smartphone. The built-in computational ability, coupled with the touchscreen user interface, makes several features, such as location-based services, possible. In future, software developers may even be able to build apps for electric vehicles such as these scooters.

The biggest challenge is to build a computationally intensive combination of hardware and software. This means "bringing in more smartness" into the vehicle, Jain says. Adding more sensors, ensuring they work reliably, and creating a "communication architecture" that ensures different components talk to each other in the way they are meant to. Jain says: "We have created a complete hardware and software stack for the two-wheeler environment. There is work on embedded systems, operating systems, applications, data analytics and so on."

Developing algorithms for using data that the scooters generate, right from the lab to the roads, is an ongoing exercise. The data is used to add features and improve the

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ride and performance. "How do you determine a turn has been taken, or if the scooter hits a pothole; how do you determine whether there is a single rider or a pillion rider as well? These sort of algorithms are being developed," Jain says.

Ather has the ability to push software upgrades to its scooters on the go, and it has done five so far. The upgrades improve performance, for instance, through riding modes. "Now we have three modes: Eco, ride and sport," he says. Navigation, too, now shows multiple routes between two points compared to the single route it would show when it was rolled out.

Other features include 'guide-me-home'—where the headlamps stay lit for 10 seconds after the vehicle is switched off—and turning indicators that switch themselves off, usually found in cars; rider analytics provide data on how the scooter has been used. A dark mode for the display, and range estimation based on routes are expected in the future.

Product development and engineering was "both situational and intentional", Jain says. "On the one hand there was very little available off-the-shelf, and on the other, we didn't want to be just a vehicle assembler," he says. "The electric power train and the software [that Ather has built] are areas where no conventional original equipment manufacturer in India has a good understanding."

Ather has put together a 200-strong product development and engineering team, which is based in Bengaluru. The company can now innovate at a pace that no one else can in the country, says Jain. "It took us five years to bring this all together, but now the possibilities for innovation will develop exponentially."

So far, Ather has raised $91 million in funding from investors such as Hero MotoCorp, Sachin Bansal and Binny Bansal (founders of ecommerce platform Flipkart),

"Companies such as Ather have really made electric scooters cool. Even though they're priced higher, that is where strategy should have been in the first place."

VINAY PIPARSANIA,
COUNTERPOINT RESEARCH

[redacted]

and InnoVen Capital. It has applied for 51 patents in India, of which one has been granted; internationally it has applied for 11 patents.

Indigenisation is a very important aspect, because if the government wants India to become a global player in electric two-wheelers, it can't be done through just manufacturing. "You first need to own the product, the engineering," says Mehta. Therefore, what companies such as Ather are doing becomes important for the entire ecosystem, he adds; there must be an appetite for investing in engineering and product development.

But this doesn't mean everything has to be done in-house. For instance, Ather's batteries, frame and wiring harnesses are built in-house, while motors are sourced from a European vendor. Jain expects they can make their own motors in the foreseeable future, but switching to them will depend on cost viability.

"Companies such as Ather Energy have designed electric scooters from scratch, and have really made the scooters cool," says Vinay Piparsania, global consulting director-automotive at Counterpoint Technology Market Research. "Even though they have priced their scooters higher [than comparable 125 cc petrol scooters], that is where the strategy should have been in the first place", just like Tesla, which didn't come out with a basic car, but a luxury one. Buyers in this segment don't care so much about the price and are early adopters, he says.

"Ather has created quite a niche for itself by starting afresh, giving a high power motor, high range, connectivity and features that made the scooters appealing to affluent early adopters," Piparsania says. For instance, compared to the similarly priced Okinawa Praise Pro (from Gurugram-based Okinawa Autotech), Ather 450 offers higher engine power and top speed. They have addressed other aspects of the ecosystem too, such as the retail experience and charging stations, which will make them a fairly successful company, he adds.

Ather is trying to address the entire experience of owning an EV, including how it's charged and serviced, says Ravneet Phokela, its chief business officer. For now, it installs charging ports at customers' homes for free, and is expanding its public charging network. Scooters are usually charged overnight at homes, while charging at public places tends to be a top-up.

The way in which EVs are maintained and serviced are very different from conventional vehicles. In vehicles with internal combustion engines, usually the only way to figure out what is wrong is to take them to a service centre, where the vehicles are opened up. The servicing of EVs is very different, where both technology and customer experience are concerned.

Ather sells it scooters online, although it has customer experience centres in Bengaluru and Chennai, and expects to expand to Hyderabad and Pune. It offers doorstep servicing, and replacement vehicles when required, and customers are unlikely to ever see an actual service centre, which is a backend process and not a customer-facing one. With Ather's scooters, data is readily available and can be analysed in real time. Financing, too, can be structured differently for vehicle servicing and sales, with data on the vehicle's performance and usage making the process more transparent. F

MEXY XAVIER

MOD Founder Lokesh Bharwani believes that growth need not always be fast-paced

"There was no rush to go crazy horizontally. The nature of the business also made sense to go for vertical expansion."

LOKESH BHARWANI,
FOUNDER, MAD OVER DONUTS

Slow, Steady, Heady

How Mad Over Donuts pipped Dunkin to become the biggest donut brand in India

By RAJIV SINGH

Lokesh Bharwani narrates the Hare and Tortoise story to his son almost every night. And the six-year-old—hooked to car racing games—unfailingly asks how the slow tortoise can win the race. For Bharwani, founder of Mad Over Donuts (MOD), speed is an anathema and the tortoise the hero.

In a decade since MOD rolled out its first outlet in Delhi in 2008, it has expanded to just four cities with 51 stores. In contrast, American brand Dunkin Donuts began its India innings in Delhi in 2012 and by the first quarter of 2017, raced ahead with a presence in 23 cities and 77 outlets.

Fast forward to 2019 and there is a twist in the tale. Dunkin's existence has shrunk to 10 cities and 30 stores whereas MOD is steady with 58 outlets in four cities, making it the biggest donut brand in India. The brand enters Chennai this year, Hyderabad in 2020, and intends to increase its store count to 100 in six cities by next year.

"There was no rush to go crazy horizontally," says Bharwani, explaining his decision to go for vertical expansion in the four cities rather being all over the place. "We are confident that we will have our market," he adds and goes on to say that now the plan is to scale up and grow aggressively. Back in 2008, the reality of the donut business helped Bhawani temper any notions of speeding that he may have entertained. The donut was an alien and non-mainstream product. The concept of breakfast-on-the-go was missing and the donut was, at best, a snacking option. "When we started, very few people knew what donuts were or how they looked," he recalls.

Bharwani resisted the temptation of expanding to multiple cities by opening a solitary outlet. Going deep into one city made more sense.

First, it helped gauge the mood of the consumers. Second, multiple exposure points in one city helped people get familiar with the product. Third, being present in a top metro also meant that a sizeable section of travellers would get accustomed to the product in overseas markets, and then familiarity would drive consumption.

More importantly, Bharwani wanted to err on the side of caution. "I wanted to be profitable before scaling," he says, claiming that the brand closed FY19 at a little under ₹60 crore and is profitable.

MOD, reckon branding experts, made a smart move by taking a sedate approach. "It is not easy to change snacking or food habits," says N Chandramouli, CEO of TRA Research, a brand insights company. A brand that stays invested in a country over time, understanding the habits and choices of customers, has a much better chance of making inroads into the hearts and stomachs of its people. The vertical, 'go-deeper' strategy of MOD was appropriate because India is many countries with different tastes.

Today, the brand has crossed the experimentation and understanding phase. "Now it can use its experience and knowledge of India to invest money in growing the market faster," says Chandramouli. "The investments of the last decade are sure to pay off."

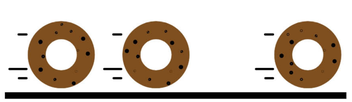
MOD's journey was not without its share of trial and errors. An early mistake was opting for a business model focussed on 'takeaway' rather than experience. Though smaller store sizes reduced operational costs, they came with a price: Indian consumers loved to spend time at the store. Even with a grab-and-go product, recalls Bharwani, people needed those five minutes to eat before they moved on. This realisation made him open new stores with a seating capacity of about 10 people. "They turned out to be more sustainable than the zero seats one," he says.

What turned out to be the biggest differentiator for MOD was that it has stayed true to its name. "The reason people walk into our stores is donuts," says Bharwani. Other offerings of the brand, he explains, would complement donuts, not overshadow them. "We never competed with a pizza or burger brand."

Food experts believe MOD has the right product and inward focus. "MOD insulated itself from what was happening outside," says Bakshish Dean, celebrity chef who brought American restaurant franchise Johnny Rockets to India.

Unlike the West, donuts cannot replace what people have for breakfast in India. "This explains why it took so long for MOD to keep itself confined to just four cities. And the patience has paid off," says Dean.

Sticking to the fundamentals of the business also yielded fruitful results. "Making each outlet cash positive before moving to the new one was a trick that worked," says Dean. He explains that not scaling up at a brisk pace may look less glamorous, but hasty expansion leaves a bad taste. "Speed is an addiction, and at times a wrong one," explains Dean. F



MOD: Slow and Steady

2008
Opens first outlet in India in Delhi.
By the end of the year, MOD had three stores in two cities, including Mumbai

2018
51 stores across 4 cities; added just two more cities—Pune and Bengaluru—over a decade

...and now the Ramp-up

2019
58 outlets in 4 cities; rolling out in Chennai this year, and Hyderabad next year

2020 (Projected)
100 stores across 6 cities

(Note: All years are March-ended)

What worked for MOD...

VERTICAL EXPANSION: The chain opened more outlets in a few cities rather than spreading horizontally across multiple cities

STAYING TRUE TO CORE: The focus was always on donuts, not burgers or other unrelated products

FOCUS ON OPERATING METRICS: Making existing stores cash positive and then opening new ones

What's The Word?

A crop of startups and MNCs working with translations and interpretations is using modern technology to take businesses beyond English-speaking urban circles

By NAINI THAKER

About 89 percent of people buying cars in India spend time reading reviews and researching online. If these are only in English, imagine the number of customers large corporations will miss out on," says Nilesh Dorik, general manager (India) of Thebigword, UK-based professional translators and interpreters. "This is where we come in."

India's multilingual culture, with 22 official languages, makes it a lucrative market for translators, with the emphasis on localisation for business expansion over the past decade giving the industry a push. Thebigword is the latest company looking to enter the space, opening a centre in Pune in early September.

Dorik's conviction can be backed by numbers from a report by Common Sense Advisory, an industry research firm, claiming that about 55 percent of international shoppers do not buy products from a website that isn't in their mother tongue. Besides, in India, he adds, there are about 234 million online users [as per a KPMG report] who are local language consumers, "and that is growing faster than native English speakers on the internet".

"In the last five years, I have seen multinationals such as General Electric, Chrysler, and IBM wanting to expand to countries like India and looking into localisation as a core extension of their business," says Nihat Akran, global CEO, Thebigword. But localisation isn't just about translating the website or a document into the local language, it is about understanding the culture. This philosophy is pushing a number of multinational corporations (MNCs) to move beyond their headquarters and set up shop on foreign shores.

One of the largest global players in this market is US-based Lionbridge, which clocked a turnover of $647 million last year and translates about 350 languages. The company began its India operations in September 2003, long before the translation market had really picked up.

Many of the legacy companies in the space still continue to provide traditional face-to-face translations, but these MNCs and a crop of home-grown startups are making forays in the field using modern technologies like artificial intelligence (AI) and machine learning (ML). With technology widening its functions, these firms are looking to overcome the hurdles of limited use that interpretors have faced so far, "like escorting a CEO coming to India", as Sarath Divella, country head–Lionbridge India, puts it, or in the unorganised manner in which the sector functions.

In 2009, one of the first translation startups that adopted technology was Reverie Language Technologies. This was when smartphones were just being introduced in the market and Arvind Pani, the co-founder, identified a major gap as the display text had no Indian languages. "Our objective was to ensure that Indian language users can do everything on the internet, with the same kind of ease, as any other English language user," says Pani.

CHAITANYA DINESH SURPUR

A decade later, Reverie has been acquired by Reliance Industries Investments & Holdings (RIIHL), a subsidiary of Reliance Industries, and counts among its clients companies like Practo, Vijaya Bank, Ola, and Reliance Jio. It provides end-to-end translation services, including transliteration and machine translation for vernacular languages to expand the reach of businesses. Reverie is also conducting beta-testing of a product called the Prabhandhak that has incorporated features like Indian language spell checkers, machine translation and translation memory.

Pani believes the problem is with user engagement in Indian languages, which cannot be solved in bits and pieces. The Bengaluru-based startup is now looking at language as a service platform by ensuring, "there is content in those languages, providing the right interface required and ensuring queries are interpreted and responded to correctly".

Another startup working in this space is Gurugram-based Process 9 founded by Rakesh Kapoor, Devendra Joshi and Vidushi Kapoor in 2010. The company has raised about $1 million in funding from the Indian Angel Network. "Our focus is on ensuring that our end-user can communicate in a language of their choice and enabling an ecosystem so they are not at a disadvantage in terms of access to information," says Kapoor.

The company that runs on a software-as-a-service model has two products: MOX Gateway and MOX Wave. MOX Gateway integrates with a website, application or CRM of a business and translates the page in the easiest and quickest possible way. MOX Wave is a cloud-based machine translation and transliteration system. "Any application or website that wishes to become multilingual will use our services. We have clients like Bookmyshow, Shaadi.com and Bajaj Finance. We are focusing on Indian languages at present, but wish to move into other Asian languages soon," says Kapoor. "We plan to launch a web portal, where an organisation can come and sign up for the service at a subscription model. Depending on the details provided the website will be translated to the language of your choice within a week or two. This makes translation and localisation a lot easier for smaller organisations as well."

Taking translation and interpretation a step further is Vernacular.ai's business-to-business platform that helps companies build multilingual chatbots. Four friends from IIT Roorkee—Sourabh Gupta, Manoj Sarda, Akshay Deshraj, and Prateek Gupta—realised in 2016 that a lot of rural and urban businesses were focusing only on English-speaking Indian users. Even non-English speaking users who had access to the internet couldn't get content. "We are building the conversational infrastructure to empower the users and businesses in the country by helping them communicate with each other," says Sourabh Gupta.

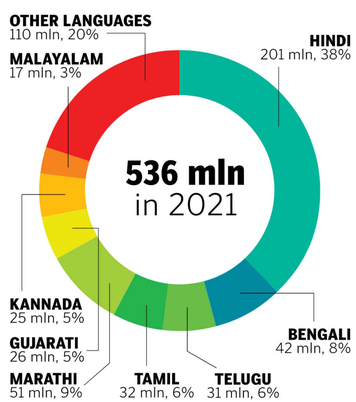
The company is monetising its automated product—a voice bot—by selling them to customer care centres to attend to incoming calls and resolve queries through human-like conversations. But it remains a work in progress. "We have faced challenges while moving away from our chat-based offerings to a completely voice-based one. We had to think differently and design our services and products in a voice-only manner," he adds.

At the end of the day, as Divella of Lionbridge says, "Translation cannot be entirely dependent on AI and ML. Although the industry is picking up in India, finding the right people can be a major challenge."

"Our objective was to ensure that Indian language users can do everything on the internet as any other English language user."

ARVIND PANI,
CO-FOUNDER, REVERIE LANGUAGE TECHNOLOGIES

Language wise internet users in 2021



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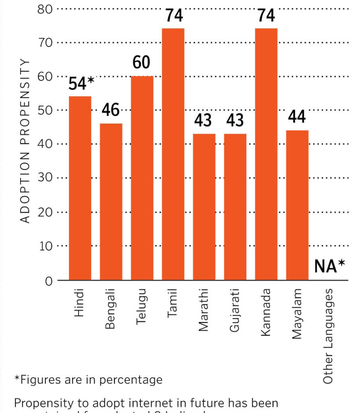


*Figures are in percentage

Propensity to adopt internet in future has been ascertained for selected 8 Indian languages

Daniel Dines, CEO and founder, UiPath, wants a robot for every person

COURTESY: UIPATH

Boss of the Bots

Daniel Dines created the world's hottest tech company, $7 billion UiPath, by unleashing virtual robots on office grunt work. He's become the first bot billionaire in the process

By ALEX KONRAD

The man who at once epitomises the hottest new growth area in tech and the burgeoning hopes for entrepreneurship in Eastern Europe twirls a marker through his fingers as he fights the mundane urge not to bark at his employees. Instead, Daniel Dines, the co-founder and CEO of UiPath, merely scowls at the digital whiteboard ahead of an October product release. One feature raises security concerns; another hasn't been designed properly for mobile.

Finally, Dines, a Microsoft veteran who pines for the simplicity of the Windows bottom-left start button, can no longer contain himself. Looking over central Bucharest, Romania, where he hatched UiPath, Dines rousts a product executive in Bellevue, Washington, where it's 6.30 am. "I want you to rethink this," Dines says. "This feels very complicated to me. It should work like Gmail works."

Interface is crucially important to Dines because his ultimate product is something invisible to the human eye. UiPath creates bots—blocks of code that automatically carry out repetitive tasks. You might associate bots with Russian election ruses or customer service stand-ins, but UiPath recently garnered a $7 billion valuation by selling a more humdrum kind that can pull numbers from invoiced PDFs into accounting software, or process insurance claims—the mindless tasks that, like those of bank tellers or telephone operators generations ago, cry out to go the way of the dodo.

This shift—which has spawned an entirely new tech category, known as "robotic process automation", or RPA—carries eye-popping potential. Japan's Sumitomo Mitsui bank group, a UiPath customer since April 2017, projects that reducing employee busywork and improving accuracy will have saved it nearly $500 million by next year. Giants like Toyota and Walmart have flocked to UiPath for similar magic. Setting up

virtual robots is faster and cheaper than assigning engineers to build an internal app, and it spares workers the low-tech alternative: Long hours creating Excel macros and filling spreadsheets. A UiPath bot does the task endlessly, without complaint, for up to $15,000 a year. Some companies use thousands at a time.

Dines, 47, didn't invent RPA, but he's adroitly positioned himself to dominate it. Two years ago, when European investors valued it at $110 million, UiPath was a little-known company of 150 based in Romania that had just booked less than $5 million in revenue. Today it's headquartered in a gleaming skyscraper on Park Avenue in Manhattan and employs 3,200 in more than 30 offices around the world. It generated $155 million in revenue last year and expects to double that this year. The shift has shot it to No 3 on *Forbes*'s 2019 Cloud 100. In April, Wall Street investors, including Wellington Management, pumped in $568 million, at a valuation of $7 billion, making Dines, who owns more than 20 percent, the world's first bot billionaire.

He won't be the last. With bots poised to create vast efficiencies via artificial intelligence (rather than just, say, generate fake pro-Trump Twitter accounts), a land grab is emerging. Blue Prism, listed on the London Stock Exchange and the category's creator, recently raised $130 million by issuing new stock. SoftBank has invested $300 million in San Jose, California-based Automation Anywhere, which claims to be beating UiPath in artificial intelligence. And tech's cloud giants—led by Microsoft—are showing signs of elbowing in.

Thus Dines's impatience in Bucharest. UiPath must continue to push the limits of how fast a startup can grow without collapsing on itself and simultaneously serve as the face of an "industry" tarred by the risks associated with malevolent bots and the prospect of lower-skilled

THE CLOUD 100

The definitive ranking of the top private companies in tech's hottest sector. For the fourth year, *Forbes* and Bessemer Venture Partners break down the cloud companies leading innovation in security, infrastructure and how we work. From bootstrapped startups to private-equity-backed giants, they share fast-growing and high sales, industry-leading valuations and strong culture, as affirmed by 40 CEO judges from their public cloud-company peers. See the top 50 below. For the full list, methodology, profiles and more, go to *WWW.FORBES.COM/CLOUD100*

1. STRIPE
San Francisco
CEO: Patrick Collison
EMPLOYEES: 2,000
FUNDING RAISED: $785 MLN
Payment processing

2. SNOWFLAKE
San Mateo, California
Frank Slootman[1]
EMPLOYEES: 1,400
FUNDING RAISED: $920 MLN
Cloud data warehouse

3. UiPATH
New York City
Daniel Dines
EMPLOYEES: 3,200
FUNDING RAISED: $1.1 BLN
Robotic process automation

4. HASHICORP
San Francisco
David McJannet[1]
EMPLOYEES: 600
FUNDING RAISED: $174 MLN
Cloud infrastructure automation

5. DATADOG
New York City
Olivier Pomel
EMPLOYEES: 1,200
FUNDING RAISED: $147.9 MLN
Data monitoring and analytics

6. PROCORE
Carpinteria, California
Tooey Courtemanche
EMPLOYEES: 1,800
FUNDING RAISED: $250 MLN
Construction management

7. TANIUM
Emeryville, California
Orion Hindawi, Fazal Merchant[1]
EMPLOYEES: 1,200
FUNDING RAISED: $800 MLN
Endpoint device cybersecurity

Tanium

Cybersecurity firm Tanium reached a $6.5 billion valuation by creating a better process for big companies to manage threats to devices like servers and laptops. No longer the new kid on the block, it's now competing with a bevy of upstarts in the space. Tanium's co-CEO Orion Hindawi, who co-founded the Emeryville, California-based company 12 years ago with his father, David, thinks their lead will last. "There are many VCs who are funding companies in security. Very few of them have the patience to wait six years for an architecture to be created," he says. —*CP*

COURTESY: TANIUM

[1]CEO is not a founder
[2]Estimate courtesy of Pitchbook

• EDITED BY ALEX KONRAD

• REPORTED BY KENRICK CAI, HALEY KIM, MONICA MELTON, MICHAEL NUÑEZ AND CATHERINE PERLOFF

8. INVISION
New York City
Clark Valberg
EMPLOYEES: 800[2]
FUNDING RAISED: $350.2 MLN[2]
Design software

9. RUBRIK
Palo Alto, California
Bipul Sinha
EMPLOYEES: 1,600
FUNDING RAISED: $553 MLN
Data management

10. CONFLUENT
Palo Alto, California
Jay Kreps
EMPLOYEES: 500
FUNDING RAISED: $205.9 MLN
Data streaming platform

11. CLOUDFLARE
San Francisco
Matthew Prince
EMPLOYEES: 1,000[2]
FUNDING RAISED: $404.3 MLN[2]
Website infrastructure and security

12. TOAST
Boston
Chris Comparato[1]
EMPLOYEES: 2,000
FUNDING RAISED: $496 MLN
Restaurant software

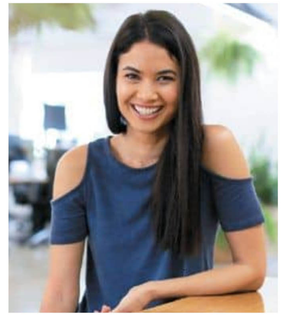
13. DATABRICKS
San Francisco
Ali Ghodsi
EMPLOYEES: 800
FUNDING RAISED: $498.5 MLN
Data analytics

14. SERVICETITAN
Glendale, California
Ara Mahdessian
EMPLOYEES: 702
FUNDING RAISED: $326 MLN
Home servicing software

15. MAILCHIMP
Atlanta
Ben Chestnut
EMPLOYEES: 1,000
FUNDING RAISED: $0
Marketing platform

16. CANVA
Sydney, Australia
Melanie Perkins
EMPLOYEES: 650
FUNDING RAISED: $140 MLN
Design software

COURTESY: MELANIE PERKINS



Canva

Professional designers have Adobe. The rest of the world has Canva, the Australian-based software startup valued at $2.5 billion. Founded by CEO Melanie Perkins, her fiancé Cliff Obrecht and Cameron Adams, Canva has become the design tool for the 99 percent—used by over 18 million people monthly for everything from menus to Instagram campaigns and flyers. Says Perkins: "The whole concept of Canva is enabling people to take an idea and turn it into a finished product—so you can design anything and publish anywhere." —*AK*

17. PLAID
San Francisco
Zach Perret
EMPLOYEES: 390
FUNDING RAISED: $310 MLN
Financial infrastructure

18. GUSTO
San Francisco
Josh Reeves
EMPLOYEES: 1,000
FUNDING RAISED: $516 MLN
HR, payroll and benefits

19. TRIPACTIONS
Palo Alto, California
Ariel Cohen
EMPLOYEES: 800
FUNDING RAISED: $480 MLN
Business travel management

20. NCINO
Wilmington, North Carolina
Pierre Naudé
EMPLOYEES: 750
FUNDING RAISED: $150 MLN
Cloud banking infrastructure

workers losing jobs. For Dines, who has never told his story in full until now, such talk seems too familiar, akin to the swipes people took at his old boss as software emerged as a societal game-changer. "Bill Gates used to talk at Microsoft about a computer in every home," Dines says. "I want a robot for every person."

Humility is one of UiPath's four main tenets, akin to Google's early maxim "Don't be evil", and it's practiced just as inconsistently. At lunch with Dines in Bucharest, the founder says he doesn't consider himself a great coder, just a very good one. By dinnertime, he says he's still better than anyone at UiPath.

Whichever Dines you believe, programming launched him out of Romania. The son of a teacher and a civil engineer who met after both were relocated by the government of dictator Nicolae Ceausescu to a new chemical factory town, Dines grew up behind the Iron Curtain wanting to be an author, only to discover he was far better at math. He started college in 1990, a year after the Berlin Wall fell and Ceausescu's regime ended in front of a firing squad. Bored with impersonal lectures, Dines skipped all but some math and computer science classes to play competitive bridge. He supported himself as a post-Communist arbitrager of Romania's inflationary currency, buying goods when they were cheaper in Bucharest and sending them home with a markup.

While running a jobs listings business in the mid-'90s, Dines heard that coders in Bucharest working on outsourced projects for US tech companies were making a relatively princely $300 a month. He borrowed a book on C++ from the library and taught himself, using a friend's computer while he slept. By 2001, he had an offer from Microsoft and moved to Seattle, where he worked as a programmer for nearly five years. "My first years were terrible," Dines

says. “In meetings, I understood 50 percent to 60 percent of what they talked about, and I couldn’t speak anything.” It was only much later that he discovered that some words—like “folder”—were more than the names of Windows icons.

In 2005, he returned to Bucharest to start a tech outsourcing company, DeskOver. In keeping with the times, Dines had forsworn bridge for poker, where his management style emerged. “He took a lot of risks, so most of the time he would lose, but he liked to make a learning experience out of it,” says Marius Tîrca, who emerged as Dines’s chief lieutenant. “He’d play sometimes with the cards on their face and ask everyone how they would play his hand.”

Those lessons were put to the test after he lost his largest outsourcing customer in 2011. Rather than fold up his little shop, he quit chain-smoking and elevated Tîrca to co-founder and, later, chief technology officer—and they focussed on the company’s side business selling software development kits, or SDKs, that helped engineers code apps faster. That proved to be a stopgap. The fundamental shift came when an Indian customer showed Dines how it was building off those tools to train software to mimic basic tasks like data entry, no engineer needed.

UiPath dispatched staff to visit the Indian company and then, it says, snatched the contract from Blue Prism, which had just coined the term “RPA” after automating back-office functions for banks. “They made it clear this was the best use of our technology,” Dines says. “Our software was completely useful in the RPA world.”

So Dines went into the virtual robot business, focusing on software programs that ran autonomously without requiring the writing of new code. By 2014, the company had $500,000 in revenue—not bad in Romania—and Dines, inspired by Hacker News message boards,

21. SQUARESPACE
New York City
Anthony Casalena
EMPLOYEES: 1,000
FUNDING RAISED: $278.5 MLN
Website builder

22. INTERCOM
San Francisco
Eoghan McCabe
EMPLOYEES: 600
FUNDING RAISED: $241 MLN
Business messaging

23. SEGMENT
San Francisco
Peter Reinhardt
EMPLOYEES: 440
FUNDING RAISED: $284 MLN
Data infrastructure

24. VLOCITY
San Francisco
David Schmaier
EMPLOYEES: 800
FUNDING RAISED: $163 MLN
Verticalised customer relationship management

25. ILLUMIO
Sunnyvale, California
Andrew Rubin
EMPLOYEES: 325
FUNDING RAISED: $332.5 MLN
Cybersecurity

26. DARKTRACE
San Francisco; Cambridge, UK
Nicole Eagan, Poppy Gustafsson
EMPLOYEES: 1,000
FUNDING RAISED: $176.5 MLN
Cybersecurity

27. VEEAM
Baar, Switzerland
Andrei Baronov
EMPLOYEES: 3,700
FUNDING RAISED: $532 MLN
Data management

28. SPRINKLR
New York City
Ragy Thomas
EMPLOYEES: 1,500
FUNDING RAISED: $239 MLN
Social media management

29. AUTOMATION ANYWHERE
San Jose, California
Mihir Shukla
EMPLOYEES: 1,750
FUNDING RAISED: $550 MLN
Robotic process automation

30. YARDI
Santa Barbara, California
Anant Yardi
EMPLOYEES: 6,650
FUNDING RAISED: $0
Investment and property management

31. WALKME
San Francisco
Dan Adika
EMPLOYEES: 787
FUNDING RAISED: $217.5 MLN
Digital adoption platform

32. GITLAB
100% remote
Sid Sijbrandij
EMPLOYEES: 844
FUNDING RAISED: $158 MLN
DevOps

33. ZAPIER
100% remote
Wade Foster
EMPLOYEES: 250
FUNDING RAISED: $1.3 MLN
Web application integrator

COURTESY: WALKME

WalkMe

Software is supposed to simplify, but an online shopper who can’t find a checkout button won’t spend a cent. That’s where WalkMe comes in. Rather than force customers and employees to wade through user manuals and how-to videos, companies like PayPal and Microsoft use WalkMe to make navigating websites and apps easier. “Why is there no GPS for the digital world? I can go to any place in the world and get from Point A to Point B, but I can’t go to my bank account and complete a task without seeing a video before,” says Dan Adika, co-founder and CEO of the eight-year-old startup valued around $1 billion. —*CP*

34. LOOKOUT
San Francisco
Jim Dolce[1]
EMPLOYEES: 300
FUNDING RAISED: $280 MLN
Cybersecurity

35. AIRTABLE
San Francisco
Howie Liu
EMPLOYEES: 150
FUNDING RAISED: $170 MLN
Software creation

36. SISENSE
New York City
Amir Orad[1]
EMPLOYEES: 700
FUNDING RAISED: $250 MLN
Business analytics

37. AVIDXCHANGE
Charlotte, North Carolina
Michael Praeger
EMPLOYEES: 1,257
FUNDING RAISED: $581 MLN[2]
Billing software

GitLab

Technically, GitLab is based in San Francisco. But try to go to its address and you’ll wind up at The UPS Store. That’s because GitLab is remote-only and has employees in 58 countries, from Iceland to Peru to Mongolia. By using modern tools like Zoom, Slack and its own software, which helps coders collaborate, GitLab ensures its employees don’t have trouble communicating. “It turns out to be easier to manage because we’re really good at writing things down,” co-founder and CEO Sid Sijbrandij says. That includes one big date: November 18, 2020, which Sijbrandij has already marked for its IPO. —*KC*

Dines turned down a $1 billion offer from SoftBank’s Masayoshi Son. “You’re welcome in the company,” Dines told him, “but you can only invest this much.”

[redacted]

targeted bigger customers and Silicon Valley-style scale. He shifted the business model to software-as-a-service subscriptions, raised $1.6 million from European funds Earlybird, Credo Ventures and Seedcamp, and hastily renamed the company UiPath, after a technical term in the startup’s code.

Instead of competing with the big auditing and consulting firms, UiPath became their partner. Companies like Cognizant and EY already had deals with multinationals to make processes like procurement more efficient. As UiPath customers themselves, they could save money per client by automating some of that work. More lucrative: Dines would encourage consultants to introduce UiPath to their clients by letting the consultants keep as much as 80 percent of the overall bot-related spend in exchange for setting up and maintaining the program. Suddenly some of the world’s biggest companies were serving as little UiPath’s sales force. In fact, it would be two years before Dines met any of his customers face to face (Swiss Re insisted Dines fly to Zurich for a $100,000 contract).

As rival Blue Prism went public in 2016 (current market cap: $750 million), Dines was determined to take UiPath global. He had already scored US clients, like a $300,000 contract with General Electric, over the phone. But Dines knew that for bigger deals he’d need boots on the ground, first with an office in outsourcing hub Bengaluru in 2016, then London and New York. By Valentine’s Day the next year, Dines had signed the term sheet for $30 million in investment at a $110 million valuation from Accel as executives waited at the airport to go open the Tokyo office. Dines had a parting shot for Accel’s London investors before jetting off. “Daniel looks at us and says, ‘I will make you guys a lot of money!’” Accel partner Luciana Lixandru says.

Funding secured and aspirations multiplied, Dines relocated his headquarters—and his family—to New York two years ago. (He still spends about a third of his time working out of the Bucharest office, now an R&D centre.) By the end of 2017, UiPath had just over $30 million in revenue, and unlike typical Silicon Valley startups, which often start selling to each other, the company claims that 60 percent of the biggest companies in America are clients. The global focus shows: UiPath’s sales come in about equal thirds from North America, Europe and the rest of the world.

This rapid, diverse growth quickly drew more blue-chip investors. Alphabet’s startup investment shop, CapitalG, shared the lead of its $153 million Series B in March 2018, which valued UiPath at $1.1 billion, with Accel returning for more.

That summer, as sales topped $100 million, Dines got the offer that has become a rite of passage for unicorn founders. Representatives of SoftBank’s Vision Fund, the $100 billion investment vehicle led by Masayoshi Son, caught up with Dines as he vacationed in France’s Côte d’Azure. Dines flew to Japan to meet with Son himself, who Dines says offered him a $1 billion investment—more dilution and board control than he was comfortable with. “I told Masa, you’re welcome in the company,” Dines says. “But you can only invest this much.” UiPath chose CapitalG and venture capital firm Sequoia to co-lead the $225 million investment that valued it at $3 billion. “Daniel is a brilliant

negotiator. He is like a crocodile in the water," says Mihai Faur, UiPath's chief accounting officer, who worked on the funding rounds. "He's relaxed on the outside. Inside, he has a fire."

Silicon Valley's hustle culture idolises CEOs who rise before dawn to exercise or meditate while the rest of us punch the snooze button. Dines wakes up most mornings and reads until he's bored, an hour or more, then takes a quick nap. Only then—11 am when he's in Romania (Dines swears he's a bit earlier in New York)—does he deign to open WhatsApp and Slack.

A dinner conversation with Dines can zip from Hermann Hesse to Byzantine history to business how-to's like the late Zig Ziglar's *Secrets of Closing the Sale*. The Microsoft programmer who didn't know what a folder was is now conversant about Amor Towles's novel *A Gentleman in Moscow*, a bestseller on Bill Gates's summer reading list. Dines is fascinated by how the protagonist, Count Rostov, changes his life for the better when he adopts a little girl. "Count and I share a lot of the same personality, the same vision," he says. "I work really hard at the company, but only at things I like. Being a lazy person, I had to build better pattern recognition in life."

That means Dines now spends most of his time on airplanes to keep his sprawling staff on the same track. It's not easy. With senior executives joining from HP, Microsoft and SAP, UiPath is trying to graft corporate expertise onto a startup's ethos. Gone are the days of board meetings held over a Ping-Pong table in the local language. "It's easier to curse in Romanian," sighs Bogdan Ripa, the Bucharest-based head of product.

The marching orders are clear. Thirteen years ago, Amazon Web Services launched and cloud computing burst onto the scene, establishing a new hierarchy of tech titans dominating the $200

Dines wakes up most mornings and reads until he's bored, an hour or more, then takes a quick nap

[redacted]

billion market while relegating others to the walking dead. RPA is trying to be next. By total dollars, the RPA market is still small—just $846 million in revenue in 2018 globally, according to Gartner—but those numbers belie much larger contract values as subscription revenues recur and businesses expand their processes over time. "Pretty much everyone has started on this journey," says Sundara Sukavanam, head of the automation practice at Cognizant, where 2,500 specialists work on bots and customers, armed with beefy budgets to digitise their operations, spend millions for thousands of them. "RPA is the fabric of the future. Where there is a manual operation, RPA will exist."

Toyota has automated 86 processes in North America using UiPath across manufacturing, research and development, and corporate services, saving 40,000 labour hours a year. The bots handle everything from ordering business cards to accounts receivable for the global automaker. One pulls together all the data from Toyota's 12 major North American rail carriers into a visualisation that took hundreds of hours to produce manually before. Toyota plans to automate another 60,000 hours by year-end. And that's not counting Japan. "We've crawled, we've walked and now we are picking up to a jogging pace," says Jason Ballard, general manager of Toyota North America.

UiPath is far from alone in benefiting. Consultancies like Deloitte work agnostically with multiple RPA providers. At Automation Anywhere, customers include Juniper Networks and Symantec as well as financial services companies like Australia and New Zealand Banking Group. CEO Mihir Shukla raised $550 million in funding last year to fend off UiPath, including $300 million from SoftBank. Shukla's business doesn't disclose revenue, but he boasts its sales and customer count are bigger than those of UiPath. "The product difference looks like a Nokia phone versus an iPhone," he says. "Make no mistake, we are the largest... and our next round of funding will show you that."

The front line of the automation battle remains artificial intelligence—growth comes from making bots smarter, more durable and able to handle complex work tasks. Blue Prism made a reported $100 million AI acquisition in June; Automation Anywhere says it has offered AI tools, such as one that can approve a mortgage in five minutes or less, for the past five years.

At UiPath, visitors to the company's "centre of excellence" in Bucharest experience AI demos that predict which routine functions would be ripe to hand over to bots. In October, UiPath plans to announce several AI-focussed acquisitions of its own. "We are making investments in helping our customers interact with the robots," Dines says.

The biggest tech companies have mostly played nice for now. But the lines are getting increasingly complex. Google is a UiPath customer and an indirect investor through CapitalG, and UiPath software is mostly built on top of Microsoft software and cloud hosting tools. Microsoft is an anchor investor in SoftBank's upcoming second mega-fund, reportedly in part to work more closely with SoftBank's portfolio companies, which now include UiPath's closest rival. At the same time, Microsoft continues to invest in its own automation platform, Microsoft Flow, that some industry watchers see as a challenge to the RPA set.

38. JFROG
Sunnyvale, California
Shlomi Ben Haim
EMPLOYEES: 450
FUNDING RAISED: $226.5 MLN
DevOps

39. AUTH0
Bellevue, Washington
Eugenio Pace
EMPLOYEES: 500
FUNDING RAISED: $210 MLN
Identity management

40. FRESHWORKS
San Mateo, California
Girish Mathrubootham
EMPLOYEES: 2,000
FUNDING RAISED: $250 MLN
Customer engagement

41. ASANA
San Francisco
Dustin Moskovitz
EMPLOYEES: 580
FUNDING RAISED: $213.2 MLN
Work collaboration

42. TURBONOMIC
Boston
Benjamin Nye[1]
EMPLOYEES: 500
FUNDING RAISED: $150 MLN
Application resource management

43. KEEPTRUCKIN
San Francisco
Shoaib Makani
EMPLOYEES: 1,350
FUNDING RAISED: $227.3 MLN
Fleet management

44. CARTA
San Francisco
Henry Ward
EMPLOYEES: 600
FUNDING RAISED: $447.8 MLN
Asset management

45. UPTAKE
Chicago
Brad Keywell
EMPLOYEES: 500
FUNDING RAISED: $258 MLN
Industrial AI

46. DIGITALOCEAN
New York City
Yancey Spruill[1]
EMPLOYEES: 500
FUNDING RAISED: $123 MLN
Cloud infrastructure

COURTESY: KEEPTRUCKIN

KeepTruckin
New regulations forcing the $700 billion trucking industry to roll out electronic record-keeping spelt opportunity for KeepTruckin cofounder and CEO Shoaib Makani. "There are so many blue-collar industries that have been ignored by tech entrepreneurs," he says. Drivers of more than 250,000 vehicles use KeepTruckin software and hardware to help manage their rigs and cargo today, making it one of the largest networks of connected trucks. Up next: an open marketplace. "Because we have a deep understanding of where the truck is and what the load is, we have the ability to match needs with jobs. We have the data," Makani says. —*MN*

47. APPDIRECT
San Francisco
Dan Saks, Nicolas Desmarais
EMPLOYEES: 700
FUNDING RAISED: $320 MLN
Subscription commerce platform

48. DATASTAX
Santa Clara, California
Billy Bosworth[1]
EMPLOYEES: 600
FUNDING RAISED: $190 MLN
Cloud infrastructure

49. PINDROP
Atlanta
Vijay Balasubramaniyan
EMPLOYEES: 300
FUNDING RAISED: $207 MLN
Voice-based security

50. MONDAY.COM
Tel Aviv, Israel
Roy Mann
EMPLOYEES: 285
FUNDING RAISED: $234.1 MLN
Team management

A shift to automation means workers will need a lot more retraining—not every company will do it

[redacted]

Then there's a potential political hot potato: Whether RPA, and its promise of efficiency, comes at the cost of human jobs. Marie Myers, UiPath's CFO, says when she spread the use of bots across former employer HP's accounting operations, employees willingly retrained with RPA to work on, and add more, bots. Still, such a shift means workers will need to learn new skills—including how to maintain these automated systems. "I've talked to many firms and asked, 'Give us your data and we'll evaluate whether you're actually creating as many jobs as you're destroying'," says MIT economics professor Daron Acemoglu. "At that point, the conversation stops."

As for UiPath, Dines says the goal is to be IPO-ready by the end of 2020, with an eye to going public in 2021. "I don't care at all about ringing that bell. Zero. But you can't be a really big private company," he says. "At some point you have to be public." Before then, UiPath could raise money again, as soon as early next year. If it does, it would fetch a far higher price, assuming it achieves its goals of $300 million in revenue by the end of this year and a run rate of $1 billion in 2020.

"UiPath isn't a company where you can predict in six months what the company will look like, because nobody's done this before," Dines says. "It's like a book: It's constantly changing." F

Long on Hair

Meet the world's first venture-backed human-hair-extension company. The dream? To be the Airbnb of salons

By SUSAN ADAMS

TIM PANNELL FOR FORBES

Mayvenn founder Diishan Imira at Moods Beauty Bar in Oakland, California

At Moe's Hair Hut in Harlem, Raven Johnson, 24, wants to look good for her upcoming baby shower. She's used to paying as much as $500 for a weave. That includes $250 for long, silky human-hair extensions and another $250 for the stylist who sews them into the tight braids of Johnson's own hair.

But this time, thanks to a startup called Mayvenn, she'll pay $250 total. After three hours of meticulous labour by stylist Ericka Barksdale as R&B blasts over the sound system, flowing tresses tumble over Johnson's shoulders. Beaming, she says, "This is the best deal I've ever had—purchasing hair and getting a free instal."

Founded in 2013 by African-American entrepreneur Diishan Imira, 38, Mayvenn is the only venture-backed startup to take aim at the $6 billion US market for human-hair extensions. With $36 million from investors, including Serena Williams and Silicon Valley powerhouse Andreessen Horowitz, Mayvenn is valued at $100 million. "Mayvenn is a high-growth, two-sided marketplace with hundreds of thousands of beauty experts on one side and millions of customers on the other," says Ben Horowitz of Andreessen Horowitz. "It's important to understand that this is not an ecommerce business or a hair business."

Before Mayvenn launched, black women bought their hair mostly from Korean-controlled beauty-supply stores. "All the money was flowing outside the black community," says Imira. He's sitting in front of a Mac laptop and a 27-inch monitor in his office in downtown Oakland, California. Aside from two cases of Hennessy VSOP stacked by the door, a gift from a friend, the office is bare. His studio apartment in Oakland's gentrifying Lakeshore neighbourhood is similarly sparse.

He conceived of Mayvenn in 2012 after a stylist friend in Los Angeles (LA) asked if he could get her a direct connection to human hair from China. Back in 2003, during a post-college job in Shenzhen teaching English, he'd learnt how to import Chinese goods while picking up conversational Mandarin. He started with $20 Air Jordan knockoffs he sold to friends for $70. When he moved to Miami in 2005, he ran an all-cash furniture-import business. He had fun pocketing six figures a year, sporting his fake Jordans, driving an Acura and partying. But, he says, "I didn't have a company, I had a hustle—it had no longevity to it."

He realised he had no concept of business basics. "I didn't have anyone in my family with the financial wherewithal to explain that," he says. His black father, a criminal defence lawyer, disappeared from his life when he was five. His Jewish mother, an ob-gyn who worked in clinics for low-income women, raised him and his younger sister.

He enrolled in an international business programme at Georgia State University, studying in Brazil and at the Sorbonne in Paris and doing internships in China and at Ernst & Young's office in Addis Ababa. In 2010, MBA in hand, he wanted to start a business but didn't know what kind. He moved in with his mother in Oakland, working menial jobs, like parking cars, and mulling his next move. He describes the succeeding two years as "pretty rough for me psychologically".

That's when LA stylist Reina Butler, a surrogate sister who had shared a home with his family in Oakland, asked him to find her a Chinese hair supplier. In 2012, he flew to China and found that human hair was a great export. It was cheap to ship, and retail markups ran as high as 400 percent.

"I started to think of this as a venture-scale business that could do hundreds of millions in revenue," he says. With enough startup capital, he could launch an online business that would sell through black stylists whom he'd recruit as distributors, giving them a 15 percent to 20 percent cut. "I could sell something and make a lot of money," he says, "and I could also really positively impact the black stylist community."

In Silicon Valley, he knew that venture capitalists were "writing multimillion-dollar cheques to startup founders, but I didn't know a single person there, and I didn't know how to get there." To find his way in, beginning in late 2012, he went to panel discussions hosted by venture firms and to Wednesday-night gatherings of a group called Black Founders at a San Francisco bar.

He started plugging Mayvenn (the name comes from the Yiddish word for "expert") at pitch competitions where white and Asian investors had trouble grasping the market for black hair products. He finally scored with 500 Startups, a Menlo Park accelerator, which invested $50,000 and made introductions to a dozen angel investors.

One of them was David Shen, a partner at seed investing firm Launch Capital. Imira took him to a salon in Oakland and two Korean-run beauty-supply stores. "I loved that Diishan knew this business and was willing to put the time and effort and knowledge into disrupting it," Shen says.

Learning to shoot for big cheques was a process. "For many African-American founders, it's not natural to ask for $10 million," Imira says. It helped that Ben Horowitz, whose wife is black, understood Mayvenn's market. "I knew the problem he was solving," says Horowitz, who sits on Mayvenn's board.

By late 2017, Mayvenn had recruited 50,000 stylists to distribute its hair. But Imira had failed to anticipate the sharp rise in ecommerce. Challengers, especially AliExpress, the giant Chinese retail site owned by billionaire Jack Ma's Alibaba Group, were undercutting Mayvenn's prices by 80 percent. "We were still growing, but I could see the writing on the wall," he says.

Late last year, he pitched a new approach to investors and raised $23 million. Instead of relying on stylists to distribute its hair, Mayvenn now buys instal appointments from stylists for $100. Then it offers the appointments free to customers who buy Mayvenn hair. In less than six months, 3,000 stylists are already listed on the site by Zip Code.

With $36 million from investors, Mayvenn is valued at $100 million

Though stylists have to accept a discount, they benefit by gaining customers with little effort. Oakland stylist Ariahnn Turner, 25, has gotten 26 new clients since she joined the Mayvenn programme in January.

Though the company is not yet profitable, hair markups are robust enough to make each transaction profitable. Imira expects 2019 revenue to exceed 2018's $30 million.

Imira won't reveal the source of Mayvenn's hair, except to say that it comes from Asia, where he uses trusted suppliers. Women who buy inexpensive hair on AliExpress don't know what they're getting, he says, while Mayvenn hair comes with a 30-day money-back guarantee.

He believes he can expand Mayvenn's sales to high-markup products like shampoos, conditioners and bonnets that black women wear at night to protect their hair. And he welcomes customers of all hair types and backgrounds who are wearing extensions in increasing numbers (Kim Kardashian's locks are not all her own).

"I want to be the largest hair salon the way Airbnb is the largest hotel," he says. "Airbnb takes underutilised capacity in housing and they fill it. I'm taking underutilised capacity in salons and filling that." F

Startup Nation

Rates of entrepreneurship across races—people aged 20 to 64 who start a business in a given month for which they work at least 15 hours a week—have held steady for the past two decades among whites and Asians; Latinos and African-Americans have seen a big jump

RATE OF ENTREPRENEURSHIP

YEAR	WHITE	BLACK	LATINO	ASIAN	TOTAL
1996	0.33%	0.21%	0.32%	0.29%	0.32%
2000	0.28	0.23	0.29	0.22	0.27
2004	0.31	0.22	0.34	0.28	0.30
2008	0.31	0.22	0.46	0.34	0.32
2012	0.29	0.21	0.40	0.31	0.30
2017	0.30	0.30	0.50	0.31	0.33

SOURCE The Kauffman Foundation

NIKOLA MOTOR COMPANY

Trevor Milton, founder of Nikola, believes that hydrogen can power heavy-duty trucks

Zero-Pollution Fuel

Hydrogen vehicles keep flopping, but entrepreneur Trevor Milton thinks he can finally make them pay

By ALAN OHNSMAN

Trevor Milton rumbles toward his audience of 2,000 in the ultimate green-energy vehicle—a red beer wagon drawn by eight Budweiser Clydesdales. "They represent how America was built," he says of the massive horses. The audience, a mix of trucking execs, shippers, journalists and Anheuser-Busch InBev reps, roars its approval into the cavernous event centre in Scottsdale, Arizona, that's hosting the April launch party for Nikola Motor Co. Then comes Milton's pitch. Just as diesel replaced the Clydesdales, a new fuel source is going to make petroleum obsolete: Hydrogen.

The most abundant element in the universe is a zero-emission fuel. Convert it to electricity, and the only by-products are water and heat. Hydrogen, says the 37-year-old founder and chief executive of Nikola, can power heavy-duty trucks. It goes into a fuel cell and comes out as current to power electric motors.

Hydrogen power has been an enticing mirage for six decades. General Motors unveiled a hydrogen Electrovan prototype in 1966 but never made a business of it. Shares of Ballard Power, a pioneer in fuel cells, climbed to $140 in 2000 but now languish below $5. President George W. Bush poured taxpayer money into hydrogen-fuelled-car research, but fewer than 7,500 hydrogen-fuel-cell vehicles are on US roads now.

From a Phoenix headquarters that will also build prototype semis, Milton has raised $265 million from such investors as the hedge fund ValueAct, the Norwegian energy company Nel Hydrogen and Worthington Industries, a metals manufacturer. But he needs at least $1 billion to build a factory in Coolidge, Arizona, put the first trucks on the road and open ten fueling stations in California and Arizona.

"It's not just about building one part. It's about actually delivering a product that can compete against a diesel and beat it," Milton says.

Elon Musk, whose battery-powered Teslas have done much to wean American drivers off gasoline (and who plans to sell a battery-electric big rig), derides "fool cells" and has called hydrogen "stupid". But hydro is looking less stupid these days.

For one thing, a growing surplus of solar energy in the Southwest opens the possibility of siphoning off excess power at midday to make hydrogen fuel cheaply out of water. For another, batteries aren't suited to long-haul trucking. They take a while to recharge, and they're heavy.

Nikola's truck cab—a 1,000-horsepower system comprising carbon fibre tanks, hydrogen fuel and a fuel-cell stack—will push an 18-wheeler up to 750 miles and weighs 20,000 pounds. The same juice would demand a lithium-ion battery that would add at least 5,000 pounds to a truck with the same range, says Nikola. AB InBev's order for 800 Nikola semis, leased for seven years at up to $1 million each (fuel included), goes some way toward proving hydrogen's case.

If Nikola can deliver the trucks, the brewer will use them to haul Budweiser from the West Coast to distribution centres hundreds of miles away. Subject to the same "if", Nikola will collect on $10 billion in preorders from such firms as the fleet operator US Xpress.

Milton isn't the only hydro visionary. Hyundai Group is putting $6.7 billion into hydrogen projects. In July the engine maker Cummins bought Hydrogenics, which makes fuel cells, for $290 million. Next year, GM and Honda will open an $85 million fuel-cell factory in Michigan, and Toyota is opening a refi nery at the Port of Long Beach to turn cow manure into hydrogen to power trucks developed with Kenworth.

A lifelong garage tinkerer, Milton became obsessed with how things work when he was 6 during a train ride arranged by his father, a retired Union Pacifi c manager. He tried college in Utah but dropped out after less than six months. A Mormon mission to favelas in Brazil got him thinking about wider problems, particularly environmental ones. "That was probably one of the biggest eye-openers of my life," he says.

In 2010, he founded dHybrid Systems, a Salt Lake City designer of natural gas fuelling systems for trucks. In 2014, Worthington bought that business. Milton left for Nikola, recruiting his former mentor at Worthington, Mark Russell, to be the startup's president.

Milton aims to build 25 trucks next year and 400 in 2021. If all goes well, by 2022, he'll be making eight tonnes of hydrogen daily from renewable electricity at each station, enough to keep 250 trucks running. He thinks he can get the cost of making a kilogram of compressed hydrogen gas—which provides the same amount of energy as a gallon of diesel—down to $2.50. This is far less than the California hydrogen retail price of $14. He wants to expand his fuelling capacity from the West to a 700-station cross-country network by 2028.

Change is coming, perhaps faster than what the manufacturers of diesel engine trucks expect. The European Union passed emissions rules that could ban diesel trucks by 2030; California is leaning toward a similar mandate. Milton claims that Nikola has a lead of three to five years on his rivals.

"Whether you're Republican or Democrat or independent, no one wants to go jogging down the road and breathe diesel smoke in," he says.

If all goes well, by 2022, Milton will be making enough hydrogen to keep 250 trucks running

Haul Of Fame

NIKOLA MOTOR COMPANY

If you're moving goods from A to B, you're almost certainly doing it on 18 wheels: More than 90 percent of all transportation of products within the US is by truck. Those big rigs hemming you in on I-95? They're likely full of laptops, cans of tuna, thresher parts, bagged salad, gasoline and automobiles. (Not all in the same truck, presumably.)

Top Freight Shipped by Dollar Value, 2017

1. **Motorized vehicles** (complete cars, pickups, car and truck bodies, truck cabs): **$903.9 bln**
2. **Electronics** (personal computers, servers, laptops, mainframes): **$587.6 bln**
3. **Gasoline: $586.8 bln**
4. **Misc. Foodstuffs** (fruits, vegetables, dry goods, canned goods): **$585.9 bln**
5. **Machinery** (farm and construction equipment, **oil/gas** machinery, woodworking/paper equipment): **$510.6 bln**

SOURCE Bureau of Transportation Statistics; Federal Highway Administration's Freight Analysis Framework

America's Top 250 Wealth Advisors

Despite turbulent markets and a flood of disruptive technologies, the nation's best wealth managers are thriving

JAMEL TOPPIN FOR FORBES

Brian Pfeifler	Jeff Erdmann	Louise Gunderson	Kevin Myeroff	Raj Sharma
Morgan Stanley Private Wealth Management	Merrill Private Wealth Management	UBS Financial Services	NCA Financial Planners	Merrill Private Wealth Management

Key

RANK ADVISOR
Company
LOCATION
TEAM ASSETS
MINIMUM TO OPEN

1 JEFF ERDMANN
Merrill Pvt Wealth Mgmt
GREENWICH / $8.6 BLN / $2.5MLN

2 BRIAN C PFEIFLER
Morgan Stanley Pvt Wealth Mgmt
NYC / $5.2 BLN / $25 MLN

3 CHRISTOPHER ERRICO
UBS Pvt Wealth Mgmt
NYC / $2.2 BLN / $2 MLN

4 MARK CURTIS
Morgan Stanley Graystone
PALO ALTO / $105.7 BLN / $5MLN

5 GREG VAUGHAN
Morgan Stanley Pvt Wealth Mgmt
MENLO PARK / $22.8 BLN / $10 MLN

6 CHARLES ZHANG
Zhang Financial
PORTAGE / $3.1 BLN / $1MLN

7 ROD WESTMORELAND
Merrill Pvt Wealth Mgmt
ATLANTA / $5.2 BLN / $10MLN

8 ANDY CHASE
Morgan Stanley Pvt Wealth Mgmt
MENLO PARK / $27.7 BLN / $2 MLN

9 JAMES HANSBERGER
Morgan Stanley Pvt Wealth Mgmt
ATLANTA / $2.6 BLN / $2MLN

10 ANDY BURISH
UBS Financial Services
MADISON / $4 BLN / $1MLN

11 LYON POLK
Morgan Stanley Pvt Wealth Mgmt
NYC / $8.4 BLN / $10MLN

12 IRA WALKER
UBS Pvt Wealth Mgmt
RED BANK / $1.2 BLN / $5MLN

13 RANDY C CONNER
Churchill Mgmt Group
LOS ANGELES / $6 BLN / $750K

14 MARVIN MCINTYRE
Morgan Stanley Pvt Wealth Mgmt
WASHINGTON, DC / $3.6 BLN / $2 MLN

15 RAJ SHARMA
Merrill Pvt Wealth Mgmt
BOSTON / $7 BLN / $5MLN

16 BRIAN FRANK
Morgan Stanley Pvt Wealth Mgmt
ATLANTA / $2.3 BLN / $2MLN

17 STEVE HEFTER
Wells Fargo Advisors
HIGHLAND PARK / $2.5 BLN / $3 MLN

18 ROB CLARFELD
Clarfeld Financial Advisors
TARRYTOWN, NY / $6.3 BLN / $3 MLN

19 RICHARD SAPERSTEIN
HighTower Advisors
NYC / $14.8 BLN / $5MLN

20 ROBERT SKINNER II
IEQ Capital
FOSTER CITY / $7.8 BLN / $10 MLN

21 MARTIN HALBFINGER
UBS Financial Services
NYC / $3.3 BLN / $5 MLN

22 THOMAS MORAN
Moran Wealth Mgmt
NAPLES / $3.4 BLN / $2 MLN

23 RICHARD JONES
Merrill Pvt Wealth Mgmt
LOS ANGELES / $15.7 BLN / $10 MLN

24 REZA ZAFARI
Merrill Pvt Wealth Mgmt
LOS ANGELES / $15.7 BLN / $10 MLN

25 MICHAEL POPPO
UBS Financial Services
NYC / $1.3 BLN / $5 MLN

26 REBECCA ROTHSTEIN
Merrill Pvt Wealth Mgmt
BEVERLY HILLS / $3.2 BLN / $2.5 MLN

27 MARTIN EBY
WMS Partners
TOWSON / $2.7 BLN / $5 MLN

28 KEVIN PETERS
Morgan Stanley Wealth Mgmt
PURCHASE / $1.5 BLN / $1MLN

29 PAUL PAGNATO
Pagnato Karp
RESTON / $2.1 BLN / $10 MLN

30 JASON KATZ
UBS Financial Services
NYC / $2.6 BLN / $0

31 SUSAN KAPLAN
Kaplan Financial Services
NEWTON / $2 BLN / $1.5 MLN

32 PETER PRINCI
Morgan Stanley Graystone
BOSTON / $4.1 BLN / $2.5 MLN

33 DAVID HOU
Evoke Wealth
LOS ANGELES / $4.9 BLN / $5 MLN

34 ED MOLDAVER
Stifel
NYC / $3.6 BLN / $3 MLN

35 LOUIS CHIAVACCI
Merrill Pvt Wealth Mgmt
CORAL GABLES / $2.9 BLN / $25 MLN

36 TERRY COOK
UBS Pvt Wealth Mgmt
BELLEVUE / $1.5 BLN / $10 MLN

37 RON BASU
Morgan Stanley Pvt Wealth Mgmt
NYC / $5 BLN / $2 MLN

38 PAUL TRAMONTANO
First Republic Investment Mgmt
GREENWICH / $2 BLN / $25 MLN

39 MICHAEL VALDES
Merrill Pvt Wealth Mgmt
TAMPA / $5.1 BLN / $5 MLN

40 ALAN WHITMAN
Morgan Stanley Wealth Mgmt
PASADENA / $1.8 BLN / $1 MLN

41 DREW FREIDES
UBS Pvt Wealth Mgmt
LOS ANGELES / $4.6 BLN / $10 MLN

42 GREGG FISHER
Gerstein Fisher
NYC / $2.3 BLN / $0

43 RAJ BHATIA
Merrill Pvt Wealth Mgmt
CHICAGO / $1.6 BLN / $10 MLN

44 MARK DOUGLASS
Morgan Stanley Pvt Wealth Mgmt
MENLO PARK / $22.8 BLN / $10 MLN

45 ANDY BERG
Homrich Berg
ATLANTA / $6.1 BLN /$1 MLN

46 PETER ROHR
Merrill Pvt Wealth Mgmt
PHILADELPHIA / $4.5 BLN / $10 MLN

47 MARK SCHULTEN
Wells Fargo Advisors
LONG BEACH / $3.8 BLN / $500K

48 DREW ZAGER
Morgan Stanley Pvt Wealth Mgmt
LOS ANGELES / $7.9 BLN / $5 MLN

49 DAVID SINGER
Merrill Pvt Wealth Mgmt
CINCINNATI / $3.1 BLN / $5MLN

50 JORDAN WAXMAN
Nucleus Advisors
NYC / $2.1 BLN / $10 MLN

51 KENT PEARCE
Merrill Lynch Wealth Mgmt
TOWSON / $1.6 BLN / $2 MLN

52 BRENT BRODESKI
Savant Capital
ROCKFORD / $6.3 BLN / $250K

53 JON GOLDSTEIN
First Republic Investment Mgmt
PALO ALTO / $3 BLN / $25 MLN

54 SAL TIANO
JP Morgan Securities
PALM BEACH GARDENS / $3.9 BLN / $2 MLN

55 JOHN OLSON
Merrill Lynch Wealth Mgmt
NYC / $1.8 BLN / $1 MLN

56 WILLIAM GRECO
UBS Financial Services
HARTFORD / $3.7 BLN / $1 MLN

57 MICHAEL KLEIN
Baird
MILWAUKEE / $4.5 BLN / $10 MLN

58 GERARD KLINGMAN
Klingman & Associates
NYC / $1.9 BLN / $2 MLN

59 TROY GRIEPP
Morgan Stanley Pvt Wealth Mgmt
SAN FRANCISCO / $11.2 BLN / $10 MLN

60 HANK MCLARTY
Gratus Capital
ATLANTA / $1.9 BLN / $1 MLN

61 ELAINE MEYERS
JP Morgan Securities
SAN FRANCISCO / $2.8 BLN / $10 MLN

62 BRIAN STRACHAN
Morgan Stanley Pvt Wealth Mgmt
BOSTON / $1 BLN / $2 MLN

63 DAVID ELLIS III
UBS Pvt Wealth Mgmt
CINCINNATI / $1.6 BLN / $2 MLN

64 ADAM CARLIN
Morgan Stanley Pvt Wealth Mgmt
CORAL GABLES / $2.9 BLN / $7.5 MLN

65 NESTOR VICKNAIR
Merrill Lynch Wealth Mgmt
HOUSTON / $5.6 BLN / $3.5 MLN

66 LORI VAN DUSEN
LVW Advisors
PITTSFORD / $1.7 BLN / $10 MLN

67 JOE MONTGOMERY
Wells Fargo Advisors
WILLIAMSBURG / $1.3 BLN / $5 MLN

68 BRIAN HETHERINGTON
Merrill Pvt Wealth Mgmt
NEW CANAAN / $2.7 BLN / $10 MLN

69 JEFFREY KOBERNICK
UBS Pvt Wealth Mgmt
NYC / $3.4 BLN / $5 MLN

70 ROB SECHAN
UBS Pvt Wealth Mgmt
NYC / $3.4 BLN / $5 MLN

71 THOMAS SULLIVAN
Merrill Lynch Wealth Mgmt
GARDEN CITY / $2.4 BLN / $1 MLN

72 CHARLES MCKINNEY
Morgan Stanley Pvt Wealth Mgmt
DALLAS / $1.3 BLN / $25 MLN

73 CHUCK BEAN
Heritage Financial Services
WESTWOOD / $1.5 BLN / $1 MLN

74 WILLIAM CORBELLINI
Merrill Pvt Wealth Mgmt
DALLAS / $2.9 BLN / $5 MLN

75 KEVIN MYEROFF
NCA Financial Planners
CLEVELAND / $1.3 BLN / $500K

76 SHAWN FOWLER
Morgan Stanley Pvt Wealth Mgmt
DENVER / $3.3 BLN / $8 MLN

77 JEFF GRINSPOON
HighTower Advisors
VIENNA / $1.4 BLN / $1 MLN

78 CLARKE LEMONS
WaterOak Advisors
WINTER PARK / $2 BLN / $1 MLN

79 RON VINDER
Morgan Stanley Pvt Wealth Mgmt
NYC / $2.3 BLN / $10 MLN

80 SCOTT TIRAS
Ameriprise Financial
HOUSTON / $1.9 BLN / $1 MLN

81 SCOTT STACKMAN
UBS Pvt Wealth Mgmt
NYC / $3 BLN / $10 MLN

82 ERIC GRAY
Merrill Pvt Wealth Mgmt
LOS ANGELES / $9.3 BLN / $10 MLN

83 JESSE BROMBERG
Morgan Stanley Wealth Mgmt
SAN FRANCISCO / $1.3 BLN / $2.5 MLN

84 JOHN BARRETT
Merrill Lynch Wealth Mgmt
NYC / $1.9 BLN / $5 MLN

85 CRAIG CHIATE
UBS Pvt Wealth Mgmt
LOS ANGELES / $6.1 BLN / $20 MLN

86 SHAWN RUBIN
Morgan Stanley Pvt Wealth Mgmt
NYC / $1.3 BLN / $2 MLN

87 LAILA PENCE
Pence Wealth Mgmt
NEWPORT BEACH / $1.4 BLN / $2 MLN

88 JONATHAN BEUKELMAN
UBS Pvt Wealth Mgmt
LINCOLN / $1.6 BLN / $2 MLN

89 CHERYL YOUNG
Morgan Stanley Wealth Mgmt
LOS GATOS / $993 BLN / $3 MLN

90 MICHAEL MATTHEWS
UBS Pvt Wealth Mgmt
BELLEVUE / $1.3 BLN / $1 MLN

91 TOMMY MCBRIDE
Merrill Lynch Wealth Mgmt
DALLAS / $1.7 BLN / $1 MLN

92 SCOTT MAGNESEN
Morgan Stanley Wealth Mgmt
OAK BROOK / $3.6 BLN / $250K

93 JOHANNA WALTERS
Merrill Lynch Wealth Mgmt
BLUE BELL / $5.1 BLN / $2.5 MLN

94 SCOTT SIEGEL
Morgan Stanley Wealth Mgmt
NYC / $3 BLN / $3MLN

95 GEORGE PAPADOYANNIS
Ameriprise Financial
SAN MATEO / $850 MLN / $1 MLN

96 RICHARD PLUTA
Merrill Lynch Wealth Mgmt
NYC / $982 MLN / $5 MLN

97 LOUISE GUNDERSON
UBS Financial Services
NYC / $912 MLN / $1 MLN

98 EVAN STEINBERG
Morgan Stanley Pvt Wealth Mgmt
NYC / $2.3 BLN / $5 MLN

99 JEFFREY COLIN
Baker Street Advisors
SAN FRANCISCO / $9.1 BLN / $5 MLN

100 FRANK SEMINARA
Morgan Stanley Pvt Wealth Mgmt
FLORHAM PARK / $1.2 BLN / $2 MLN

101 PETER RUKEYSER
UBS Pvt Wealth Mgmt
NYC / $2 BLN / $10 MLN

102 ALEX WILLIAMS
UBS Pvt Wealth Mgmt
NYC / $2 BLN / $10 MLN

103 ROBERT WALDELE
Merrill Lynch Wealth Mgmt
NYC / $3.1 BLN / $5 MLN

104 RANDY CARVER
Carver Financial Services/Raymond James
MENTOR / $1.5 BLN / $500K

105 SPUDS POWELL
Kayne Anderson Rudnick
LOS ANGELES / $4.4 BLN / $5 MLN

106 RON WEINER
HighTower Advisors
WESTPORT / $805 MLN / $2 MLN

107 RON HUGHES
Merrill Pvt Wealth Mgmt
ATLANTA / $1 BLN / $25 MLN

108 WALLY OBERMEYER
Obermeyer Wood Inv Counsel
ASPEN / $1.6 BLN / $1 MLN

109 SCOTT WILSON
Morgan Stanley Pvt Wealth Mgmt
NYC / $6.7 BLN / $3 MLN

110 SEAN DILLON
UBS Financial Services
BOSTON / $1.6 BLN / $2 MLN

111 DAVID KUDLA
Mainstay Capital Mgmt
GRAND BLANC / $2.5 BLN / $200K

112 NOEL WEIL
Merrill Pvt Wealth Mgmt
NYC / $12.3 BLN / $10 MLN

113 DAVID BAHNSEN
HighTower Advisors
NEWPORT BEACH / $1.7 BLN / $1 MLN

114 MIKE SAWYER
Morgan Stanley Pvt Wealth Mgmt
NYC / $2.3 BLN / $25 MLN

115 JOSEPH JACQUES
Jacques Financial
ROCKVILLE / $895 MLN / $0

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GETTY IMAGES

Raj Sharma, a Merrill advisor based in Boston, is girding client portfolios. "Defensive sectors—utilities, health care, staples—will start to shine." **Jeff Erdmann**, with Merrill in Greenwich, Connecticut, says forget fixed income: "You're paying to park your money in bonds. High-quality global equities are the best place to be."

116 BRUCE MUNSTER
Merrill Pvt Wealth Mgmt
LOS ANGELES / $2 BLN / $20 MLN

117 BONNER BARNES
Corda Investment Mgmt
HOUSTON / $1.1 BLN / $500K

118 JAMES STACK
Stack Financial Mgmt
WHITEFISH / $1.3 BLN / $750K

119 BOB DOYLE
Doyle Wealth Mgmt
ST PETERSBURG / $982 MLN / $0

120 DANIEL FRIES
Merrill Lynch Wealth Mgmt
CHICAGO / $982 MLN / $1 MLN

121 DON D'ADESKY
The Americas Group of Raymond James
BOCA RATON / $3.2 BLN / $500K

122 DEBRA WETHERBY
Wetherby Asset Mgmt
SAN FRANCISCO / $5 BLN / $10 MLN

123 RICH ABRAMS
UBS Financial Services
NYC / $1 BLN / $1 MLN

124 CHRISTINA BOYD
Merrill Lynch Wealth Mgmt
WAYZATA / $1 BLN / $3 MLN

125 KYLE CHUDOM
Morgan Stanley Wealth Mgmt
OAK BROOK / $905 MLN / $0

126 STEVE HOLLOMON
Merrill Lynch Wealth Mgmt
SEATTLE / $2 BLN / $2 MLN

127 JOSEPH MATINA
UBS Pvt Wealth Mgmt
SHORT HILLS / $1.2 BLN / $5 MLN

128 GREG MILLER
Wellesley Asset Mgmt
WELLESLEY / $2.6 BLN / $250K

129 BARRY GARBER
Alex Brown/Raymond James
BALTIMORE / $2.2 BLN / $5 MLN

130 ROBERT GALLO
Merrill Lynch Wealth Mgmt
WALNUT CREEK / $1.3 BLN / $500K

131 CHARLES NOBLE III
Janney Montgomery Scott
NEW HAVEN / $998 MLN / $2.5 MLN

132 BRIAN BENNETT
UBS Financial Services
NYC / $778 MLN / $1 MLN

133 LEO STEVENSON
Merrill Lynch Wealth Mgmt
WYANDOTTE / $701 MLN / $500K

134 DEVIN CONDRON
Morgan Stanley Pvt Wealth Mgmt
BOSTON / $1.4 BLN / $10 MLN

135 VAN PEARCY
Van Pearcy's Wealth Services Team/ Raymond James
MIDLAND / $1.2 BLN / $1 MLN

136 SHARON OBERLANDER
Merrill Lynch Wealth Mgmt
CHICAGO / $1 BLN / $2.5 MLN

137 MALCOLM MAKIN
Professional Planning Group/Raymond James
WESTERLY / $1 BLN / $500K

138 MICHAEL BAPIS
Rockefeller Capital Mgmt
NYC / $1.3 BLN / $1 MLN

139 BUD KING
UBS Financial Services
ST LOUIS / $1.3 BLN / $500K

140 RICK BUONCORE
MAI Capital Mgmt
CLEVELAND / $5.2 BLN / $1 MLN

141 DEBRA BREDE
Commonwealth
NEEDHAM / $1 BLN / $1 MLN

142 ELLIOTT KUGEL
Merrill Lynch Wealth Mgmt
BRIDGEWATER / $1.6 BLN / $500K

143 DANA LOCNISKAR
Merrill Pvt Wealth Mgmt
TROY / $2.8 BLN / $10 MLN

144 PATTI BRENNAN
Key Financial
WEST CHESTER / $1 BLN / $0

145 DAN SCHWARTZ
UBS Pvt Wealth Mgmt
PARAMUS / $1.6 BLN / $2 MLN

146 DWIGHT EMANUELSON, JR
Merrill Pvt Wealth Mgmt
DALLAS / $2.9 BLN / $3 MLN

147 JEFFREY FRATARCANGELI
Wells Fargo Advisors
BIRMINGHAM / $1.3 BLN / $3 MLN

148 ROB METCALF
UBS Pvt Wealth Mgmt
MINNEAPOLIS / $1.6 BLN / $20 MLN

149 MARK SMITH
MJ Smith & Associates/Raymond James
GREENWOOD VILLAGE, CO /$786 MLN / $500K

150 DAVID MAGRONE
Merrill Pvt Wealth Mgmt
NYC / $3.1 BLN / $10 MLN

151 RICHARD S BROWN
JNBA Financial Advisors
MINNEAPOLIS / $1 BLN / $500K

152 LEIGH COHEN
Merrill Pvt Wealth Mgmt
NYC / $12.4 BLN / $10 MLN

153 GLENN DEGENAARS
First Republic Investment Mgmt
NYC / $2 BLN / $5 MLN

154 SHANE BRISBIN
Morgan Stanley Pvt Wealth Mgmt
SAN FRANCISCO / $3.8 BLN / $10 MLN

155 MITCHELL WICKHAM
Merrill Pvt Wealth Mgmt
CHARLOTTE / $10 BLN / $2.5 MLN

156 STEWART MATHER
The Mather Group
CHICAGO / $4.3 BLN / $1 MLN

157 ROBERT DYER
Merrill Pvt Wealth Mgmt
NYC / $1 BLN / $5 MLN

158 SEAN YU
Morgan Stanley Pvt Wealth Mgmt
PASADENA / $900 MLN / $5 MLN

159 PHILIP APPEL
Merrill Lynch Wealth Mgmt
BLOOMFIELD HILLS / $2.5 BLN / $250K

160 PAMELA ROSENAU
HighTower Advisors
ASPEN / $1.1 BLN / $3 MLN

161 MIKE MOELLER
Wells Fargo Advisors
CHESTERFIELD / $1.7 BLN / $250K

162 MARK THORNDYKE
Merrill Lynch Wealth Mgmt
CHICAGO / $1.1 BLN / $1MLN

163 MICHAEL KANIGHER
UBS Pvt Wealth Mgmt
LOS ANGELES / $4.6 BLN / $10 MLN

164 CHRISTOPHER COOK
Merrill Lynch Wealth Mgmt
FLORHAM PARK / $2 BLN / $3 MLN

165 JOSH MALKIN
Morgan Stanley Pvt Wealth Mgmt
NYC $1.2 BLN / $5 MLN

166 MARK SEAR
Evoke Wealth
LOS ANGELES / $4.9 BLN / $5 MLN

167 WILLIAM SULLIVAN
UBS Pvt Wealth Mgmt
BOSTON / $1.4 BLN / $5 MLN

168 TOM VACHERON
Merrill Pvt Wealth Mgmt
FAIRFIELD / $1.7 BLN / $3 MLN

169 RICHARD BLOSSER
Wells Fargo Advisors
LOS ANGELES / $1.7 BLN / $10 MLN

170 JEFF LEVENTHAL
HighTower Advisors
BETHESDA / $975 MLN / $2 MLN

171 JACQUELINE WILLENS
UBS Financial Services
NYC / $930 MLN / $2.5 MLN

172 ERIN SCANNELL
Ameriprise Financial
MERCER ISLAND / $1.3 BLN / $0

173 BILL KING
Merrill Lynch Wealth Mgmt
VERO BEACH / $976 MLN / $1 MLN

174 JOSEPH KARAS
Morgan Stanley Pvt Wealth Mgmt
NYC / $1.5 BLN / $5 MLN

175 MARK BINDER
UBS Pvt Wealth Mgmt
LAS VEGAS / $6.1 BLN / $20 MLN

176 MARY DEATHERAGE
Morgan Stanley Pvt Wealth Mgmt
LITTLE FALLS / $2.6 BLN / $5 MLN

177 JASON STEPHENS
UBS Pvt Wealth Mgmt
NAPLES / $981 MLN / $2 MLN

178 HAROLD TRISCHMAN
Morgan Stanley Wealth Mgmt
GREENWICH / $1.7 BLN / $1 MLN

179 DARRELL PENNINGTON
Ameriprise Financial
HOUSTON / $899 MLN / $500K

180 MARGARET STARNER
The Starner Group of Raymond James
CORAL GABLES / $1.1 BLN / $1 MLN

181 JASON DWORAK
UBS Pvt Wealth Mgmt
LINCOLN / $818 MLN / $2 MLN

182 DANA JACKSON
Morgan Stanley Pvt Wealth Mgmt
MENLO PARK / $42 BLN / $5 MLN

183 SIMON HAMILTON
Baird
RESTON $2.1 BLN / $500K

184 PAUL RIED
Paul R Ried Financial Group
BELLEVUE / $761 MLN / $300K

185 NICK KAVALLIERATOS
Morgan Stanley Wealth Mgmt
NYC $3 BLN / $0

186 BUCK WILEY III
Merrill Pvt Wealth Mgmt
ATLANTA / $2.2 BLN / $10 MLN

COURTESY: UBS

Louise Gunderson, a UBS advisor in New York, emphasised the need for one year of cash flow for everybody.The value these advisors provide their wealthy clients goes way beyond investing and financial planning. They keep client emotions in check. Says **Kevin Myeroff**, founder of NCA Financial Planners in Cleveland: "Robos have cold hands; people need us."

187 RANDY GARCIA
The Investment Counsel Co
LAS VEGAS / $1.2 BLN / $1 MLN

188 MICHAEL J MERLIN
Morgan Stanley Pvt Wealth Mgmt
ATLANTA / $1.4 BLN / $2.5 MLN

189 MOSS CROSBY
HighTower Advisors
HUNTSVILLE / $1 BLN / $5 MLN

190 DANIEL O'CONNELL
Merrill Lynch Wealth Mgmt
GARDEN CITY / $1.3 BLN / $1 MLN

191 JOHN CULTRA
William Blair & Co
CHICAGO / $3.4 BLN / $2 MLN

192 STEVE BRAVERMAN
Pathstone
ENGLEWOOD / $12.8 BLN / $2 MLN

193 TIM EMANUELS
Morgan Stanley Pvt Wealth Mgmt
SAN FRANCISCO / $6.9 BLN / $5 MLN

194 PETER BERMONT
The Bermont Advisory Group of Raymond James
CORAL GABLES / $2.1 BLN / $7 MLN

195 MARK CORTAZZO
MACRO Consulting Group
PARSIPPANY / $417 MLN / $1 MLN

196 MARY MULLIN
Merrill Lynch Wealth Mgmt
BOSTON / $2.3 BLN / $1 MLN

197 JIM MORIARITY
Morgan Stanley Pvt Wealth Mgmt
CHICAGO / $1.8 BLN / $15 MLN

198 BRIAN COOKE
Cooke Financial Group at Noyes
INDIANAPOLIS / $2 BLN / $5 MLN

199 J CHRIS COOKE
Cooke Financial Group at Noyes
INDIANAPOLIS / $2 BLN / $5 MLN

200 DAVID BIEBER
Morgan Stanley Pvt Wealth Mgmt
NYC / $1.2 BLN / $2 MLN

201 MICHAEL TAGGART
JP Morgan Securities
NYC / $755 MLN / $3 MLN

202 CHRISTOPHER AITKEN
UBS Pvt Wealth Mgmt
PONTE VEDRA BEACH / $773 MLN / $2 MLN

203 TED DAVIS
Morgan Stanley Wealth Mgmt
CHICAGO / $720 MLN / $500K

204 LOUISE LANE
William Blair & Co
CHICAGO / $1 BLN / $2 MLN

205 JOSEPH D ANDERSON
Pure Financial Advisors
SAN DIEGO / $2.3 BLN / $0

206 ANDREW SCHULTZ
Morgan Stanley Wealth Mgmt
MIAMI BEACH / $738 MLN / $2 MLN

207 ALLAN FLADER
RBC Wealth Mgmt
PHOENIX / $654 MLN / $0

208 IRA KRAVITZ
UBS Financial Services
PLANO / $809 MLN /$2 MLN

209 JIM MCLAUGHLIN
Princeton Wealth Advisors of Raymond James
PRINCETON / $1.9 BLN / $100K

210 TODD SILAIKA
Merrill Lynch Wealth Mgmt
CLIFTON PARK / $1.3 BLN / $250K

211 JOHN SHADDEN
Morgan Stanley Pvt Wealth Mgmt
LONG BEACH / $3.5 BLN / $1 MLN

212 THOMAS SALVINO
William Blair & Co
CHICAGO / $1.4 BLN / $500K

213 PHILIPPE HARTL
Merrill Pvt Wealth Mgmt
LOS ANGELES / $5.5 BLN / $10 MLN

214 ADAM EPSTEIN
UBS Pvt Wealth Mgmt
NYC / $1.4 BLN / $5 MLN

215 JAMES DETTERICK
Morgan Stanley Graystone
NYC / $9.9 BLN / $2.5 MLN

216 TODD BATTAGLIA
MG&A Wealth
PLANTATION / $899 MLN / $1 MLN

217 MATTHEW DILLIG
HighTower Advisors
CHICAGO / $1.5 BLN / $10 MLN

218 JOSH GULLY
Morgan Stanley Pvt Wealth Mgmt
NYC / $2.7 BLN / $10 MLN

219 JUDITH MCGEE
McGee Wealth Mgmt/Raymond James
PORTLAND / $632 MLN / $1 MLN

220 MIKE ABRAMS
Wells Fargo Advisors
PALO ALTO / $6.5 BLN/ 5 MLN

221 BENJAMIN KLEIN
Merrill Lynch Wealth Mgmt
NORTHBROOK / $856 MLN / $1 MLN

222 RIP HALE
Morgan Stanley Wealth Mgmt
BEAVERCREEK / $1.1 BLN / $500K

223 EMILY RUBIN
UBS Financial Services
NYC / $1.2 BLN / $5 MLN

224 PJ SCHWARZ
Morgan Stanley Pvt Wealth Mgmt
NYC / $2.4 BLN / $5 MLN

225 ADAM ZIPPER
JP Morgan Securities
NYC / $1.1 BLN / $1 MLN

226 MICHAEL RICCA
Morgan Stanley Wealth Mgmt
FLORHAM PARK / $4.1 BLN / $2 MLN

227 DAVID WEINERMAN
Morgan Stanley Wealth Mgmt
FLORHAM PARK / $4.1 BLN / $2 MLN

228 JAMES MCCABE
Wells Fargo Advisors
BEVERLY HILLS / $1.6 BLN / $5 MLN

229 WES MOSS
Capital Investment Advisors
ATLANTA / $2.5 BLN / $500K

230 ROGER WACKER
UBS Pvt Wealth Mgmt
LOS ANGELES / $1.9 BLN / $10 MLN

231 GLEN STRAUSS
Wells Fargo Advisors
LOS ANGELES / $1.3 BLN / $1 MLN

232 RYAN SPROWLS
Wells Fargo Advisors
ALEXANDRIA / $1.3 BLN / $1 MLN

233 RAJ PATHAK
Morgan Stanley Wealth Mgmt
BOSTON / $708 MLN / $1 MLN

234 MARK FENDRICK
UBS Financial Services
MOUNT LAUREL / $997 MLN / $1 MLN

235 VICTOR LIVINGSTONE
Morgan Stanley Pvt Wealth Mgmt
BOSTON / $1.3 BLN / $10 MLN

236 JAY CANELL
JP Morgan Securities
NYC / $2.1 BLN / $3 MLN

237 NEIL CANELL
JP Morgan Securities
NYC / $2.1 BLN / $3 MLN

238 DEAN TRINDLE
Morgan Stanley Wealth Mgmt
CINCINNATI / $636 MLN / $250K

239 SONNY KOTHARI
Merrill Lynch Wealth Mgmt
BREA / $1.3 BLN / $2 MLN

240 ADAM GOLDSTEIN
Ameriprise Financial
CALABASAS / $659 MLN / $250K

241 RICK KENT
Merit Financial Advisors
ALPHARETTA / $2.2 BLN / $150K

242 ROB BERTINO
UBS Pvt Wealth Mgmt
DALLAS / $978 MLN / $10 MLN

243 CURTIS EUSTIS
Merrill Lynch Wealth Mgmt
NEW ORLEANS / $955 MLN / $1 MLN

244 FREDERICK KEATOR
Wells Fargo Advisors
LENOX / $685 MLN / $0

245 FOTIOS PINIROS
Morgan Stanley Pvt Wealth Mgmt
NYC / $3.7 BLN / $5 MLN

246 GHISLAIN GOURAIGE
UBS Pvt Wealth Mgmt
CORAL GABLES / $2.4 BLN / $2 MLN

247 LARRY CARROLL
Carroll Financial Associates
CHARLOTTE / $982 MLN / $0

248 ASH CHOPRA
Merrill Pvt Wealth Mgmt
SAN FRANCISCO / $2.8 BLN / $10 MLN

249 RON STENGER
Morgan Stanley Wealth Mgmt
OAK BROOK / $856 MLN / $250K

250 PETER SVARRE
Merrill Lynch Wealth Mgmt
NEW YORK / $1.7 MLN / $1 MLN

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www.forbes.com/top-wealth-managers-2019/

‘IT’S ALWAYS A GOOD TIME TO HAVE A SENSE OF HUMOUR’

Twinkle Khanna, whose newest venture is a digital content company targetted at women, talks about wearing the many hats of actor-producer, author, and the need for intelligent—and irreverent—women-centric conversations

By **PANKTI MEHTA KADAKIA**

I meet with Twinkle Khanna on a Monday morning at her Juhu apartment-turned-office, a space she shares with her husband, actor Akshay Kumar. Her spacious cabin is bathed in sunlight, and looks out over the sea. I’m a few minutes early, and she is already there, working at her desk and ready for me. There are books everywhere. On her desk is a bookmarked-copy of Sally Rooney’s *Normal People*, a novel that I happen to be reading too. Rooney’s writing is deep but not didactic, simple yet stirring, and loaded with a healthy dose of dark humour and irreverence. Not unlike Khanna’s own.

‘Irreverent’ is a word that crops up more than once through the morning, apt to describe the conversation, Khanna’s brazen personality and her newest venture. After dabbling in acting and interior design, writing and film production, Khanna, known for her incisive wit, now has another addition to her already-full plate. Khanna speaks to *Forbes India* about Tweak, a digital media platform for women with content that isn’t dumbed down, and conversations that go well beyond skincare regimes. Edited excerpts:

Q Why did you decide on entering the content space now, when many media houses are struggling?

I never really looked at a business in terms of whether or not it would make money. For example, on paper, *Pad Man* [the 2018 film that she co-produced] was never a money-making prospect. People said, no one wants to say the word ‘period’, and you want to make a movie about it that you think people will go and see? And I think we earned about ₹85 crore. If you really believe and you think there’s something significant you can say, or alter conversations within conversations, then you don’t have to look at money in the same way that you would in a project where your primary goal is money.

My goal has never been money, but luckily for me, it has always followed me in whatever I have done. It’s always been that I see there is a need or a gap.

I’ve had the idea for five years, but I wasn’t sure in which format we would be doing this. Initially, I thought it could be a TV show, but I’m not someone who enjoys being in front of the camera. I’m happy being behind my desk, where I don’t have to think about whether my eyelashes are flying off on one side. So I started working on this actively about a year ago. It takes that much time to put all the pieces of this puzzle together.

As to why other portals have failed, they know

DABBOO RATNANI

their business best, but what I saw was a regurgitation of the same thing. What we're trying to do is address issues that women need to know about, but not in a pedantic manner. It will be fun and irreverent. I don't know if anyone else is doing that at this point of time.

Just a couple of days ago, I saw a story on Poosh [Kourtney Kardashian's women-focussed website], where they were talking about how to clean your vagina, without using the word vagina. So they're calling it "yoo-hoo" and "down there". What we'd like to do is technically use the words for body parts, and be unabashed about it. That's also partly why we may succeed, because no one else is doing that.

Q Tell us about the name Tweak, and what its focus will be.

I don't think we're reinventing the wheel; we're just making it a better ride, filling a few potholes, so Tweak fit well.

I would look at it as a way to stretch your brain. Our thrust is not on any one thing. Our focus is not so much on fashion, I would say, but we've got style, we've got wellness, health, parenting, a large emphasis on reading and books. It's not about particular conversations, but how we address them. If you think about it, it's absurd: You need a licence to drive a car, but to parent, or guide someone through their entire lifetime, it's just guesswork. So maybe we can cater something you can rely on. We have a lot of experts and contributors on board.

We want to focus on things like mental health and women's sexuality—but not necessarily how to have nine orgasms in three minutes. We will look at it realistically and hope to take away the giggling and embarrassment we seem to have about our biology.

Q What will the writing be like?

Hopefully, it should do three things: It should give you information, make you smile, and make you think. There'll be certain pieces that just succeed in one of these, but our best pieces will certainly do all three. Some pieces will be reporting-based, interview-based, experience-based. We also have a large video vertical. We have long reads and short reads, so it's up to you how you want to consume the content.

▲ Twinkle Khanna says she struggles a lot more with the columns that she writes than with books

Q What sort of stories would Tweak never touch?

There's nothing like that, but we are trying our best not to do certain things. I see a lot of wellness platforms that are telling you that if you don't exfoliate three times a week, it's doomsday. I don't think anything is doomsday. What we're trying to say is, these are your options, there's no judgement and this is a safe space for bigger conversations.

Q Why do you think there haven't been many women-focussed content platforms that are intellectually driven?

I have no idea, because I haven't been behind those ventures. But I'm grateful that there is an opportunity. Nothing in life is guaranteed; I may do a Produnova [a gymnastic vault] and three somersaults and land on my feet, or I may fall on my a**. But I have to try, and that's what it is.

Q You've always been known for being outspoken. Do you feel there's a need to self-censor when you're running a business like this?

It depends. Everyone is self-censoring at this point to some degree; I can't lie and say that everyone is saying exactly what they're thinking.

"WITH SATIRE, THE LUCKY PART IS THAT YOU CAN STILL SAY A LOT OF THINGS THAT ARE CENSORED BY HUMOUR, BUT GET THE MESSAGE ACROSS."

TWINKLE KHANNA, actor-turned-entrepreneur

But I don't think we are working towards the topics that require self-censorship. And anyway, with satire, the lucky part is that you can still say a lot of things that are censored by humour, but get the message across. Hopefully, we'll be able to do that with Tweak as well.

Q Would you say that's the role of humour writing in the India of today?

It's always been the role of satire. It's always about punching up and not punching down—I learnt that the hard way. There's a thin line between pulling someone down and writing a humorous piece. You have to attack the elephants and not just stamp on the ants.

It's not just today. We're looking at the world right now and thinking this is the bottom, but there have been times like this before. They have passed. You need a sense of humour in every time period. At least I do.

Q How would you say you have evolved as a writer over the years?

It's a difficult question. I do two different kinds of writing: Columns and books. I've always found that I struggle a lot more over the columns than I do with books, because in the columns, I'm trying to link bizarre things. In one, I was trying to link the black hole with Shashi Tharoor and Hema Malini. Why? I don't know. But I did find a common thread!

Writing is not a tangible skill. A doctor has instruments and procedures, a writer doesn't. In the beginning, I would stress about a lot of things, worry about whether I could replicate a certain column's success. Finally now, I can believe that it is something that's within me, that I'm not going to lose. I'll be able to do that all my life till I have Alzheimer's, and then it won't matter anyway, because I won't remember [laughs]!

Q Do you have a writing ritual?

No. I prefer writing early in the morning, after my daughter goes off to school. When I start a book, I can pretty much do everything else and write. But by the end, it completely consumes me. And then, when you submit the book and all the copy-editing is done, you feel incredibly lonely. Because you have this space in your head, and you don't know what to think any more. That is pretty much my writing process.

Q You've worked on various forms of art. What's the different sort of energy that writing needs from a collaborative process like filmmaking?

The kind of energy that writing needs is a mixture of belief and being particular. You are in complete control of every aspect. I'm a bit of a perfectionist. When you work on a movie or on something like Tweak—and interiors, which is actually the trickiest—you have to give up control, which I find slightly difficult to do. There are too many moving parts. And to make sure that everyone else is doing their job thoroughly is pretty nerve-wracking for me.

With managing a production house, there's a lot more ego involved. I'm not really a people's person, and I'm not diplomatic. But I think I've managed without bowing down too much.

▼ *Pad Man*, a film that she produced in 2018, won the National Award. Here she's seen with actor and husband Akshay Kumar (left) and Arunachalam Muruganantham on whose life it was based

Q And what sort of 'boss' are you?

I'm a disciplined boss. If the office has to start at 10, for instance, I'm here at 10 am, because I think it's important to set a precedent. If I'm going to be late, I'll tell my team the day before. We can't keep asking people to turn up and then set an example where you take your privilege and rub it in someone else's face.

Q What does it take to stand out on social media today, to have your opinion land in the right places?

I don't plan it. I know there are tutorials and case studies; in fact, I've been asked to give a few lectures on social media in colleges, but really, I don't think there is a formula. I think if you have a unique perspective, and you can put it across succinctly, because attention spans have now dropped from 12 seconds to eight, then you do have a chance. I've been lucky that I have a platform, and I have to use it responsibly. It's not about being infallible.

Q What have you learnt from putting together a business like Tweak?
I've had a big leap in learning about equity, digital marketing, search engine optimisation, content management systems, all sorts of things. Because this is new to me, I'm finding all of it fascinating. I've been in board meetings giving presentations and have had to hold my ground on how much to give away or not give away. I spoke to about 20 well-established people in the media business, because I just wanted to get their advice—is this the right platform, what are the kinds of financials I need to look at, etc, once we had our pitch deck ready. All that input went into Tweak. Getting advice from field experts is invaluable. You'll still make mistakes, but fewer.

Q Do you have investors in Tweak?
Everyone I went to wanted to invest immediately and become a 50 percent partner. That's a good problem to have. But the fact remains that I want to first build it to a point where I'm certain. At this point, I don't want my vision to be hampered by someone telling me we need to do certain things to look at profit. I will look at that, but first, I have to be true to my vision. I have a feeling, and I'm an optimistic person, that I will be able to turn that around into profit if I do.

"I THINK WOMEN HAVE THIS NOTION THAT YOU JUGGLE MULTIPLE THINGS, BUT ACTUALLY, YOU'RE FOCUSSING ON ONLY ONE THING AT A TIME. IT IS ABOUT A SINGLE-MINDED FOCUS AT THAT POINT."

Q You're juggling multiple careers. What advice do you have for women who want to engage various aspects of their personalities?
I think women have this notion that you juggle multiple things, but actually, you're focussing on only one thing at a time. It is about a single-minded focus at that point. Right now, though I want to sit and start my next book, I can't until this is off my plate to a large degree. You have to also be aggreable to the fact that sometimes your family may suffer because of your work, and sometimes your work may suffer because of your family. What is your priority at that point?

Just yesterday, my daughter's best friend's mom said she wanted to have a play date, and my daughter said, "Don't call my mumma, these days she's very busy and she's always on the phone." It broke my heart, but it is a fact. So all of Sunday, I was just with her and doing nothing else. You have to balance that out. It's not perfect, and it never will be. On a stressful day, I'm commuting and also listening to a meditation app, doing some strange kapalbharti in the car. The idea is to take each little bit of time separately. If you look at it in a larger sense, it's overwhelming, but each day, it's fine. Cut it up.

Q What's next for your production house, Mrs Funnybones Movies?
I'm the only producer who became one because I found a compelling story—it wasn't the other way. So I need a compelling story. I hope it comes to me soon.

Q But you got huge validation by winning a National Award for *Pad Man*... were you expecting it?
You know, I say a lot of nonsense. When we were making it, I would often joke and say, we'll win the National Award for this. But then, I also said I'll become the health minister, so who knows! Maybe that will also happen.

Of course, it's validating, but more than that, to just see that a movie can affect things in such a tangible manner: There was the GST rollback on sanitary pads; sanitary pad machines at railway stations, suddenly; and I don't think people are now as hesitant while talking about their period as they used to be. When you have 15 people holding sanitary pads on your Instagram feed, and a movie with a big actor holding a sanitary pad in his hand and putting it in a pink underwear, that's bigger than any commercial [advertisement]. What it did socially was equally validating—probably more than the National Award.

Q Do your husband and you have a bearing on each other's business decisions?
I don't think a relationship works when you enforce your stand. I'm a sounding board and I give advice; he's a sounding board for me too. He knows every aspect of Tweak. We are happy to give each other advice, but we are not bound to always follow it. In fact, I don't think he listens to me more than half the time.

Q What's next for you?
I'm a human being! Is there space for what's next? I think I just need to go hiking for a month, throw my phone away; a digital detox would do me good. F

THE HOOPLA COMES TO TOWN

The US's NBA strengthens its India presence with two pre-season games in Mumbai

By **ARUN JANARDHAN**

MICHAEL HICKEY / GETTY IMAGES

Indiana Pacers and Sacramento Kings face off in the US last December. The teams will play two pre-season games in Mumbai in October

It was perhaps the next logical, and inevitable, step forward in the US National Basketball Association's (NBA's) nearly decade-long tryst with India. The two pre-season NBA games due to be held in Mumbai in October will be the first time an international sports league will conduct matches here, although not regular season games.

When the Sacramento Kings play the Indiana Pacers at the NSCI Dome on October 4 and 5, it will be another step for NBA towards conquering what their commissioner Adam Silver had once called the "final frontier". India is the only meaningful market left in the world—NBA already has a strong presence in China where it has held two pre-season games annually since 2004—with its large, young population presenting a great fit for the sport.

The country's sporting infrastructure, too, has caught up with international standards, having hosted the Fifa Under-17 World Cup two years ago, and presents a fertile ground for sports businesses to tap into.

"Through these games, we are making a

statement that India is a priority market for us," explains Diane Gotua, vice president, global business operations commissioner's office of the NBA.

The first regular-season NBA game outside North America was held in 1990 between Utah Jazz and Phoenix Suns in Tokyo. The league has held pre-season or regular games in 20 countries, including in cities like Manila, Beijing, Rio de Janeiro and Mexico City.

"It has always been my dream to play an NBA game in India. I am so grateful to Adam Silver for making these games, in my hometown, a reality," says Vivek Ranadive, the India-born chairman and owner of Sacramento Kings.

For the teams, travelling abroad helps grow their fan base. "If we put up a good performance, they would possibly become lifelong fans," says Kevin Pritchard, Indiana Pacers' president of basketball operations. "Players want to develop their own brands, build their social platforms and get noticed. Also, business opportunities are not just in the US anymore."

None of the Pacers' players have been to India, Pritchard suspects, while Ranadive mentions Harrison Barnes who recently visited India and ended up playing cricket with a group of students in Mumbai.

All stakeholders reiterate the scale of the October matches, with structural engineers checking out the venue two years ago—even before the games were decided upon—to ensure it could be transformed into an NBA-quality venue. "There are markets where we would love to take the game but [they] don't have an arena to work with," says Gotua. "We also utilise these games to keep our [sponsor] partners happy."

"It's similar to a regular game, except it's a longer trip," says Pritchard. "We will try to make the trip a learning and bonding experience; we don't want to waste time on the flight. We have nine new faces [for the season], which is incredible, out of a roster of 15 to 16." The Indiana Pacers usually travel with 55 to 60 people in a normal NBA setting, and will have a few more for this offshore game.

Beyond the games, the players will participate in basketball camps for young enthusiasts. "Even if fans can't attend the game, they will know NBA is in town," adds Gotua.

More than 80 percent of tickets to the games were sold out within a week of them going on sale online, says Albert Almeida, COO, Live Entertainment, BookMyShow; with the ₹8,000 category selling out in under half an hour. Ticket

COURTESY: NBA INDIA

The NBA academy in Noida started two years ago and now trains 24 boys

prices range from ₹4,500 to more than ₹18,000. The venue has a seating capacity of 8,000.

NBA's seriousness about India is apparent from the time, effort and resources it has invested in the country. Since opening an office in Mumbai in 2011, it started an academy in Noida—one out of seven in the world—over two years ago with 24 boys aged between 14 and 17. The academy selects trainees through a talent search, gives them a 100 percent scholarship and provides them training . The students get to participate in tournaments, camps and try-outs in the US and other countries. In partnership with Reliance Foundation, NBA also claims to have conducted basketball camps and tournaments for about 10,000 schools in 34 Indian cities.

"The best way for any sport to grow is by strengthening the grassroots level. NBA has added to the exposure, knowledge and mentoring for basketball," says Raspreet Sidhu, a player in the Indian national team and head of sports at Shiv Nadar School, in the NCR.

The league's growth is centred on creating more fans, getting higher viewership, encouraging larger numbers to play the sport and, ultimately, finding an Indian to star in the NBA in the US, starting with helping them get college scholarships.

"Through grassroots-level activity you get this massive pool of children with the hope that some will become super fans," says Jonathan Rego, co-founder of content site Nation of Sport. "The moment you play, you get drawn to the best, which is the NBA. Focussing on the stories of local heroes makes sense simply because someone in Varanasi, while he wants to understand LeBron James [of Los Angeles Lakers], knows he or she stands a better chance at becoming a Vishesh Bhruguvanshi or a Divya Singh."

Broadcaster Sony Pictures Networks India has helped broaden NBA's base by starting Hindi commentary two years ago; of the over 300 games it aired last season, 85 had Hindi commentary. While, initially, there were sceptics of the move—partly because of the perceived American nature of the sport and the translation of its nuances into a local language—viewers took to it. "Like kabaddi and cricket, it ensured people understand the game. The tempo of the Hindi commentary has not been bad either," says Sidhu, part of the experts' panel on Sony's show NBA Around the Hoop. Since 2017, all NBA seasons have been aired with Hindi commentary for some games; the 2018-19 season had over 90 million viewers in India, according to Sony.

It's an investment to operate the Noida academy, explains Gotua, one that's focussed on elite talent development. "It's not a monetisation push for us. There are studies that show our brand and product is much more relevant in markets where we have been able to find local talent."

An Indian playing in the NBA will make a huge difference to the sport's popularity in the country: Yao Ming (formerly with Houston Rockets) is the most cited example, for his influence in China. From the roughly 450 players in the NBA, about a quarter are from countries outside of the US, which has a direct impact on NBA's business.

In the past, four Indian players have listed with NBA teams or it's G-League affiliate. These are Sim Bhullar (Canada-born but of Indian descent, for Toronto Raptors, Raptors 305), Satnam Singh (Dallas Mavericks, Texas Legends), Amjyot Singh (Oklahoma City Blue, Wisconsin Herd) and Palpreet Singh (Long Island Nets). Sanjana Ramesh (Northern Arizona University), Vaishnavi Yadav (Pensacola State), Sunishka Karthik (Woodside Priory), Asmat Taunque (Lawrenceville) and Khushi Dongre (ASA College) are five players from the NBA Academies Women's Program

"CULTURALLY, BASKETBALL MIRRORS THE SWAGGER AND ATTITUDE FROM BOLLYWOOD AND CRICKET COMMUNITIES, WHICH IS ONE REASON I THINK IT IS BECOMING SO POPULAR IN INDIA."

VIVEK RANADIVE, CHAIRMAN AND OWNER OF SACRAMENTO KINGS

to play college basketball in the US. Recently, Jagshaanbir Singh committed to attending Golden State Prep, becoming the first male player from the academy to get a scholarship.

While these opportunities are still work in progress, players talk positively about its impact. "My game changed because when I was playing in the US, I realised all that I had been doing earlier was wrong," says Amjyot Singh (27), from Chandigarh, who has moved back to India, plays for Punjab Steelers, and is the No 1 3X3 player in the rankings of the International Basketball Federation (Fiba). "My whole perspective changed. It enhanced my game so much." Sanjana Ramesh

COURTESY: NBA INDIA

Vaishnavi Yadav (in white) is among five players from the NBA Academies Women's Program to have played college basketball in the US

(18), who hails from Bengaluru and is now based in Arizona, says, "It helped me understand what's expected from a US college and how much to get in the SATs [for a basketball scholarship]."

"NBA is an aspirational brand. You now have access to it. Can I become an NBA star? The answer was distant or non-existent five to six years ago. Now, it's more realistic," says Yannick Colaco, managing director of sports aggregator FanCode, and former MD of NBA. Even if the scholarships and opportunities to play abroad do not achieve that goal immediately, players would return to enhance the Indian team, and carry the inspiring tag of having played in the US.

"Culturally, basketball mirrors the swagger and attitude from Bollywood and cricket communities, which is one reason I think it is becoming so popular in India," says Ranadive. F

‘INDIAN CUISINE NEEDS TO BE CATALOGUED’

Garima Arora, the country’s first woman chef to win a Michelin star, is looking to rebrand Indian food for the global audience

By **KATHAKALI CHANDA & PANKTI MEHTA KADAKIA**

At her Michelin-starred restaurant Gaa in Bangkok, Garima Arora has drawn from her Indian roots and techniques to elevate dining to global standards. Now, Arora, 33, wants to further the conversation through Food Forward India, a not-for-profit initiative that will bring together multiple stakeholders of the food and beverage industry to find ways in which to reimagine Indian food for the world “minus any presumptions”. Ahead of the first chapter that will take place in Mumbai on October 17, Arora tells *Forbes India* what she intends to achieve. Edited excerpts:

PANYA LEARDVISETKUL

Q What is the trigger for the Food Forward India initiative and what sort of platform will it be?

For the longest time, people were asking what we would do in India. It started with people asking us to do four-hands dinners and pop-ups, but we wanted to do something more meaningful, something that would take the focus a little away from what we do at Gaa to the larger picture. The way we are looking at it is an afternoon of good conversation about Indian food, what we understand of it, and how people around the world understand it. We are going to start out without any presumptions, and hear what everyone—colleagues, culinary professors, food scientists, students and historians—have to say, and hopefully together we can come up with a narrative that we can promote internationally.

Q You’ve mentioned the initiative would re-evaluate and re-examine Indian food. Why does Indian food need to be relooked at?

Over the last year and a half, since we’ve gotten so much attention from the world media, I figured what they understand of Indian food is really primitive and superficial. For them, Indian food is nothing beyond naan and curry. They haven’t even heard of the basics we’ve grown up with, the way we eat at home. That’s where I figured there is something wrong in the narrative that we are promoting.

Q What sort of education is required for all the stakeholders involved?

That’s what we’ll figure out together. This is my idea, but I alone can’t represent Indian food—all of us need to come together. When I spoke to chefs in India last October, they all agreed that we don’t understand Indian food. At Gaa, we’ve been able to create a modern tasting menu, but it’s completely based on Indian traditional techniques; it’s not fusion, not deconstruction, it is trying to understand what Indian food can give us in terms of resources to make something new and different. We’ve been able to scratch the surface and understand a little bit, but there is so much more we need to get done.

The reason French cuisine is so popular with chefs around the world, or the reason it’s the basis of anything new, is that it’s catalogued and scientifically broken down. Auguste Escoffier sat down a century ago and jotted down these recipes, so if chefs today want their egg whites in a certain way, they would look for a French recipe to follow. In India we do everything *andaaz se* (through guesstimates). As much as that has gotten us to this point, we have to start cataloguing what we’ve mastered. But, then again, these are just my ideas and I have to listen to what everybody else is saying.

Q Could you give a few examples of the techniques you are talking about?

One of the things I am passionate about is negative food pairing. Let me explain this. Every ingredient you use in a recipe has a tasting note. Science has been able to identify 1,022 notes. In any given recipe of the West, or anywhere outside India, most of these ingredients will have a lot of flavour notes in common with each other. Only in Indian cuisine will the ratio be very low.

Dr Ganesh Bagler, a professor at IIIT-Delhi, is a physicist and a computational biology expert; he has co-authored a paper on how Indian cuisine has the highest instances of such negative pairing. I came across the paper by chance and realised instinctively that is exactly what we do at Gaa. We pair the most unusual flavours, textures and techniques. Between caviar and strawberry, you have only one flavour note in common, but at Gaa, we bring it together for one of our most outstanding signature dishes through a technique that I derived from Indian cuisine—that even if two ingredients have just one common note, you can put them together by using fat as a medium.

At Gaa, Garima Arora pairs unusual flavours, textures and techniques

These surprise people because it’s not instinctive to do it. But to us Indians, it comes so naturally. Bagler was the first to describe it in scientific terms. It’s one of the inspirations that sparked the idea. I don’t think there are too many Michelin-starred restaurants besides Gaa that serve a vegetarian main course as a tasting menu. The way we are able to draw out umami flavours from vegetarian food is something we should play to our advantage.

“THE WAY WE ARE ABLE TO DRAW OUT UMAMI FLAVOURS FROM VEGETARIAN FOOD IS SOMETHING WE SHOULD PLAY TO OUR ADVANTAGE.”

Q How do you define modern Indian cuisine?

Indian cuisine is not limited to India. It’s in Thailand, Malaysia, Indonesia, Singapore. It spread across Asia with the Silk Route and with Buddhism. If we were to push the envelope and make a contribution to Indian cuisine, what would we do? For me, it needs to be a bit more of an intellectual exercise than what it has been in the past.

Q Are we going to see an Indian outpost of Gaa anytime soon?

Absolutely not. Gaa will always remain in Bangkok. But that is not to say I will never do something in India. I will, and that is my eventual goal. India won’t see Gaa, but it will see Garima for sure. F

THOMAS LUSTH / SHUTTERSTOCK

THE SOUNDS OF SILENCE

Isolated and protected, New Zealand's Doubtful Sound holds a unique marine habitat

By **MALAVIKA BHATTACHARYA**

In 1770, when British navigator Captain James Cook sailed the Endeavour on his first expedition to New Zealand, he came upon its southwest coastline, fragmented by water channels that extended like long, slender tentacles into the land. As he contemplated entering a narrow inlet of water just south of Secretary Island, he wrote in his journal: 'A little before noon we passed a small opening in the land where there appeared to be a very snug harbour formed by an island lying in the middle of the opening. The land on each side of the entrance of this harbour riseth almost perpendicular from the sea to a very considerable height.' Cook doubted whether the westerly winds would allow him to sail back out, and so he left the channel unexplored, naming it Doubtful Harbour.

Cook is a central figure in New Zealand's history, credited with the first European mapping of the country. Like the country's tallest mountain, Mount Cook, many of its points of interest are named after, or by, the early explorer.

Doubtful Harbour was renamed Doubtful Sound in the early 1800s, when sealers and whalers frequented the 40 km-long water inlet. Somewhat confusingly, Doubtful Sound is not actually a 'sound'—a geographical feature formed when rising seas flood a river valley—but a fjord created millions of years ago. In the Ice Age, massive glaciers chiselled the landscape to form deep valleys and rifts in the mountains. As the glaciers retreated, the sea rushed in to flood the valley that remained, leading to the creation of the fjord.

▲ Doubtful Sound is the second longest of the 14 fjords in New Zealand's Fiordland region

Doubtful Sound is the second longest of the 14 fjords in New Zealand's Fiordland region, and since the days of Cook's Endeavour, several vessels have charted a course along it. On an overnight cruise aboard the three-masted *Fiordland Navigator*, I chart the same course, sailing between mountains of granite even as slim flute-shaped clouds hang low beneath the mountaintops. These are the very clouds New Zealand is named after. Aotearoa, the Maori name for the country, translates to 'the land of the long white cloud', and a map of New Zealand bears a striking resemblance to the formations I see.

As the ship sails out towards open water, the Tasman Sea greets us with great swells, dousing everyone on the lower deck. I stand at the bow of the upper deck, with a sweeping, 180-degree vista of the watery wilderness. A solitary albatross glides ahead, slender, dark wings unruffled, even as our vessel rises, rocks, and falls in the waves. Icy winds gather force as they rush across the Tasman Sea and funnel through the fjords in sharp blasts. Captain Dave Allen ensures we stay out on deck with a simple announcement: "Fur seals, up ahead".

At the mouth of Doubtful Sound, where it opens into the Tasman, the Nee Islets are a jagged, rocky outcrop iridescent in the fading sunlight. As my eyes adjust to the light, I spot the silhouettes of small, wobbling creatures on the rocks. Like blobs of jelly, the New Zealand fur seals drag themselves across the rocks to eventually flop down on sunlit patches.

In the 1800s, these fur seals were hunted close to extinction for their blubber and skin. It was only in 1946 that they gained protection, when their hunt was banned in New Zealand. Today, there are over 200,000 New Zealand fur seals across the country.

As the *Navigator* retreats from the sea back into the calm waters of the fjord, Captain Dave and on-board naturalist Kelvin Wilson keep up a constant dialogue on the landscape that surrounds us. We sail between mountains of granite, dark slate, and limestone, dressed in forests of silver beech trees. In the absence of a topsoil layer, the trees lock their roots and cling to the rock face. Fiordland receives around 7 m of rain in a year, and with no proper support, the forests are periodically washed down the mountainside. We pass walls of bare rock riddled with deep gashes, where an avalanche of trees has left the cliffs naked. The forest regenerates itself every 90 to 100 years, sustaining on a diet of nutrients from lichen and moss.

Dave describes Doubtful Sound's unusually dark waters as "a cup of tea without milk". Rainwater runoff brings with it tannins and stains from the forest, and settles atop the heavier seawater, resulting in a nearly opaque fresh water-saltwater sandwich.

It is when we get off the ship, and into solo

kayaks, that I get a real close-up view of New Zealand's spectacular landscapes. In the shadow of sheer cliffs, I navigate a 2-km stretch along the icy black waters of Doubtful Sound. The dark top layer of water blocks out the light and tricks deep-sea species into thriving just 10 m below the surface. At its deepest, Doubtful Sound is around 400 m, but all marine life exists only in the top 40 m. Beneath that is only darkness.

With rainforests and waterfalls, seals, dolphins and penguins, Doubtful Sound is a true water wilderness. Over the course of two days, I had seen dazzling blue sunlit skies and honey-coloured sunsets, and now, an ominous forest loomed ahead of my kayak. Rowing close to the rock face, I see curling green tendrils of moss hang above the water's edge. The only sounds are that of my paddle hitting the water, and the distant rush of a waterfall.

For the duration of the cruise, there is no other vessel or human activity in sight along the inlet. While nearby Milford Sound, also in Fiordland, is among New Zealand's most popular tourist spots, Doubtful Sound remains quiet because of its remote location and no direct road access.

To get here, I've had to take a bus from Queenstown to Manapouri to board a catamaran across Manapouri Lake, which sails past the Southern Alps to deposit us on the lake's western bank, where the Manapouri Power Station is located. This is the country's largest hydroelectric power station. From there, another bus ferried me across a 21-km mountain road that was built to aid the construction of the power plant. New Zealand's most expensive road winds past the 2,100 feet-high Wilmot Pass to Deep Cove, where our cruise finally began.

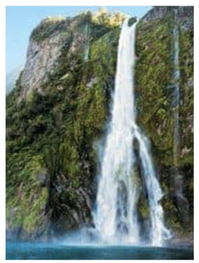
▼ With rainforests, waterfalls, and marine wildlife, Doubtful Sound is a true water wilderness

Isolation and conservation efforts go hand in hand in protecting the ecology of this Unesco World Heritage site. On my second morning aboard the ship, as we cruise down Hall Arm, Captain Dave gets our attention once again when he turns off the engines. "Dolphins!" he says. Metres ahead of us, a handful of adult and baby common bottlenose dolphins put on a show as they leap in and out of the water. Glistening silver in the sunlight, they swim very fast, coming up to the ship's edge and vanishing into the depths of the water. "There is a pod of around 69 dolphins that live in this stretch," says Wilson. "Doubtful Sound is home to one of the southernmost populations of these dolphins. They have adapted by growing larger in size to combat the cold water temperatures."

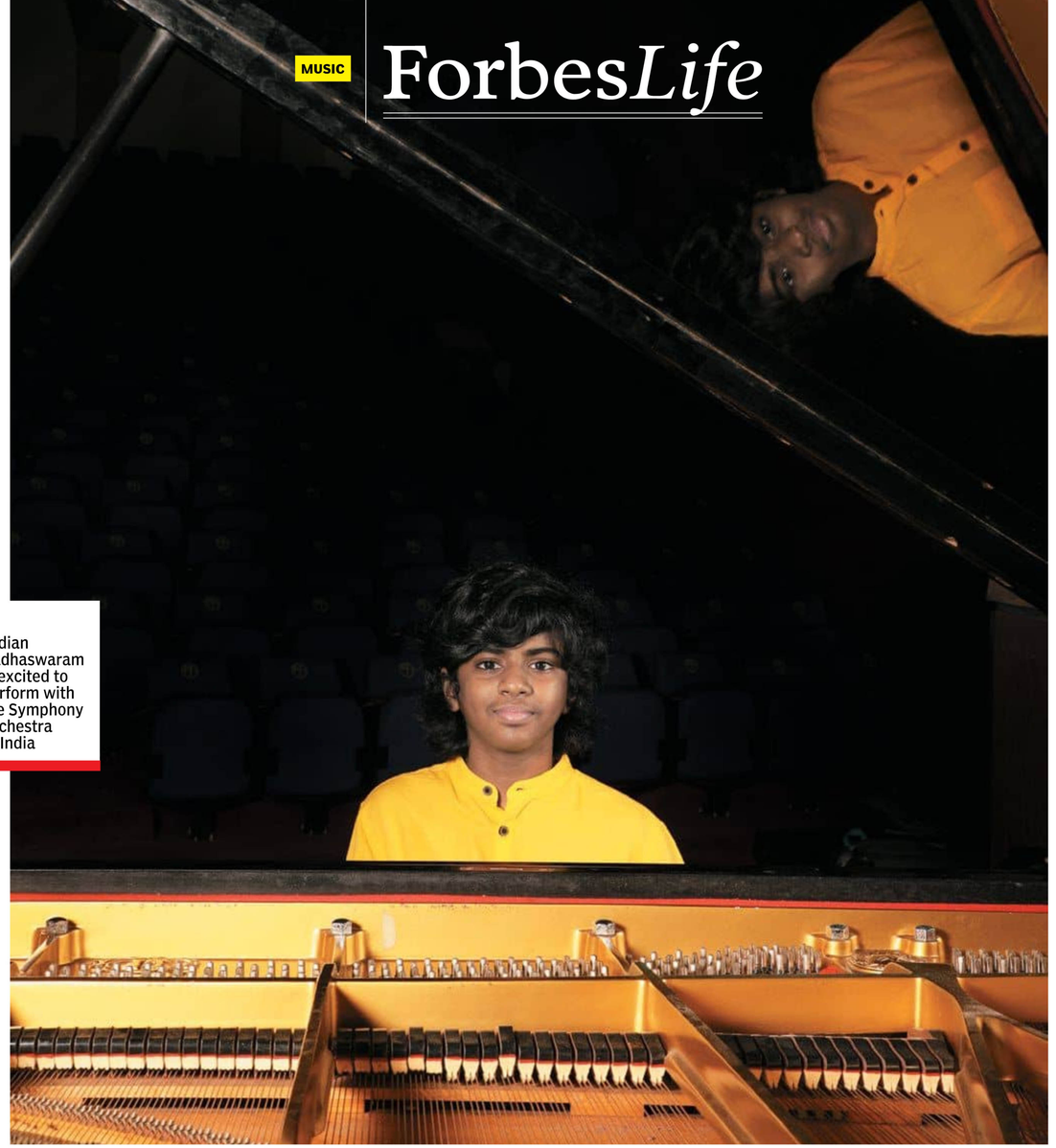
To protect these creatures, the Department of Conservation has defined Dolphin Protection Zones where vessels are not permitted to cruise. Motorised vessels are not allowed within 200 m of the shore, and there are limits on the number of commercial ships that can ply the fjord. Similar checks are in place for other species that inhabit these parts. Guidelines also specify that all marine life encounters should be left up to chance.

The playful dolphins stay with our ship all along Hall Arm, gliding in the shadow of the vessel's bow. From my spot on the deck I can clearly see their blowholes, and their slender snouts look like they are stretched into smiles.

As we approach the narrow end of Hall Arm, where the cliffs appear to close in on us, Captain Dave turns off the ship's engines and for the first time, the generators as well. As the thrum of machinery dies away, he has a request for everyone on board. "Grab a spot, put your phones away, and save your conversation for a little later please," he asks of us. Footsteps on the steel decks stall, the click-click of phones pauses, and voices dissipate. For the next 10 minutes, the noises of the everyday world we live in are replaced by the faraway sounds of nature: The distant whoosh of a thread-thin waterfall gushing down the rock face; the piercing tweet of a bird from deep within the bush; the soft plop of fine rain hitting the water's surface. For the first time in a long while, I tune in completely to the sounds of silence. F



PHOTOGRAPHS: SHUTTERSTOCK



ADITI TAILANG

▼ Lydian Nadhaswaram is excited to perform with the Symphony Orchestra of India

ADDING MUSIC TO HIS YEARS

Pianist Lydian Nadhaswaram has won global acclaim, prize money of $1 million and an offer to score music for Mohanlal's directorial debut. And, at 13, he's only getting started

By **KATHAKALI CHANDA**

Lydian Nadhaswaram digs fancy cars. Once in a while, the 13-year-old surfs the internet looking for YouTube videos on cars. Not speed monsters, but classy, luxury ones. "I love a Rolls-Royce," he says with a disarming smile. Little coincidence perhaps that the object he showers most of his affection on at home is a Steinway, the Rolls-Royce equivalent among pianos.

The Steinway grand piano reached Lydian in 2017 from halfway across the globe. Billionaire American investor Michael Novogratz had it shipped to his Chennai

house after he heard him play at a music salon in the US. Then 11, and after barely two years of playing the piano, Lydian had impressed the New York socialite circle with a mastery over complicated Western classical pieces—from Beethoven to Mozart, Chopin and everything in between—that were beyond his pithy frame and years.

Lydian's teen growth spurt has now pushed him inches over his father's shoulder, and his mop top's a tad more outgrown and dishevelled. But he still prefers to clutch on to his father while crossing the road. Once he's in front of the piano, though, he needs no handholding. At Mumbai's National Centre for the Performing Arts (NCPA), where Lydian and his father, Tamil music director Varshan Sathish, arrived recently in matching canary yellow kurtas for a photo shoot with *Forbes India*, there was no tearing him away from the piano: His left fingers kept tapping away when he would turn right for the camera and vice versa. Each time the squeak of the camera flash rose above the music, he echoed it on the instrument, perfect to the note and the pitch. It takes a village to put together a concert, but all Lydian needs is a piano.

On September 27, he performed at the NCPA along with the Symphony Orchestra of India (SOI) at its season finale, where he joined the SOI to play Franz Haydn's piano Concerto Number 11 in D Major (*Forbes India* met him a fortnight before the concert). "This will be my first performance with an orchestra and a professional conductor. I need to practise well to be in sync with them," he says.

Lydian's proficiency on the piano received international acclaim earlier this year when he won the first season of *The World's Best*, a reality show on American TV channel CBS that was judged by actor Drew Barrymore, singer and producer Faith Hill, and TV personality RuPaul. He played Nikolai Rimsky-Korsakov's 'Flight of the Bumblebee' at double the average speed (325 bpm), Wolfgang Amadeus Mozart's 'Turkish March' blindfolded, and the tempestuous third movement of Ludwig van Beethoven's 'Moonlight Sonata' that he later paired with drums, and won a whopping $1 million in prize money. What does he plan to do with all that money? Buy Complan, his favourite drink, jokes Sathish.

His ode to Barrymore with a rendition of the theme song, composed by John Willams, of the 1982 science fiction movie *ET*—in which she featured as a child artiste—moved the actor to tears. "She thanked me and asked me if I could teach her daughter to play the piano," says Lydian, who repeated his blindfold act during an appearance at Ellen DeGeneres's chat show a few weeks later.

"He's got a great ear for music, he can identify any pitch correctly. Just yesterday, when we were entering the hotel, a dog barked and he immediately identified the pitch as G major," says Sathish. A skill as fitting as any for a child named after a Western classical scale (Lydian) and a South Indian wind instrument (Nadhaswaram). "Plus his fingers are very flexible. He can move from one key to another in his own way without following the grammar. Having said that, he can also follow the structure of music through notations when needed."

Louiz Banks, arguably India's greatest jazz pianist, says, "When I first heard Lydian, he had been playing the piano for about two years, and was largely self-taught. Being a pianist myself, I know how difficult it is to play Western classical pieces. But the ease with which he played them was something else. The tag of a prodigy suits him perfectly. What else would you call someone who can play different tempos with both his hands as well as his feet at such an early age?"

The synchrony of the left and the right came to the fore at *The World's Best* when Lydian first played a mash-up of popular movie scores—*Harry Potter* with his right hand and *Mission Impossible* with his left—and then, for the grand finale, Beethoven's Fur Elise and Chopin's Etude on two pianos simultaneously. "I practised the same-piano medley in the month leading up to the competition. But I thought of playing on two pianos just days before the final," says Lydian, who counts 'Moonlight Sonata' and Frédéric Chopin's 'Fantaisie Impromptu' among his favourite pieces.

Musical genius isn't anything new in Sathish's family: His elder daughter Amirtha Varshini displayed her musical proficiency when she was three and started performing on stage with him; she now plays the flute, the violin, the piano and is also a singer. But Sathish spotted Lydian's abilities when he was even younger, 18 months, at a party where he began hitting the floor with a wooden xylophone stick. "It wasn't a tantrum, it had a proper rhythm," he says. He bought him a set of drums and began to train him. In 2010, when he was four, Lydian accompanied his father and sister on drums during shows in Sydney and Melbourne, reminiscent of the Jackson 5, possibly the world's most famous family of musicians.

When he was nine, Lydian was drawn to the piano after hearing his sister play. At that time, given his percussion skills, he was learning the tabla at the KM Music Conservatory, founded by AR Rahman. There, he picked up Rimsky-Korsakov's 'Flight of The Bumblebee', a seemingly difficult piece due to its brisk tempo, just by listening to a trainee practise it on the piano. Sathish, meanwhile, had also pulled out a few YouTube videos of Hong Kong child prodigy Tsung Tsung that piqued Lydian's interest in the instrument. The shift to piano happened almost seamlessly as he studied under Surojeet Chatterji, who heads the Russian Piano Studio at the conservatory, for a year and cleared his 8th Grade Trinity College exams, equivalent to an undergraduate degree or diploma, under the aegis of Augustine Paul.

ADITI TAILANG

With both his children flourishing in music, Sathish took the not-so-difficult decision of pulling them out of school. "They were going to be musicians anyway. For that they would need some basic knowledge of the sciences and the languages. That could be provided through home-schooling. I sent them to school for a few years just to get a feel of it, but then stopped. I had no hesitation," he says. The flipside: Both Lydian and Varshini, now 16, were left with only each other as friends. But that didn't foster any sibling rivalry, Sathish claims, but only goaded them to complement each other. It also produced some happy accidents, like the time when Lydian was playing the piano and Varshini threw a towel over his head. "He continued to play without missing a note. That's when we realised he can play blindfolded."

Lydian now practises for about five to six hours each day, and rides around on his bicycle when he wants to let his hair down. He doesn't have a TV at home and his cellphone schedule is monitored: It's to be kept on flight mode when he's with his parents and switched on only when he's on his own. Varshini's SIM card just has a WhatsApp connection. The siblings have unrestricted access to the internet, but have been trained to look up mostly audio clips. "If you restrict kids, they defy you. I've trained them from a young age to look for the right things on the internet," says Sathish.

Despite his son's prodigious talent, Sathish has instilled in Lydian the discipline of practice. He'd download a video from YouTube and challenge him to ace it. Each time Lydian would play it, he'd tape, analyse and repeat until each note is as perfect as it needs to be. "He finished 'Moonlight Sonata' in three days and 'Flight of the Bumblebee' in two, with about five hours of practice per day. It takes about a year for a good student to pick up all the correct notes," he says.

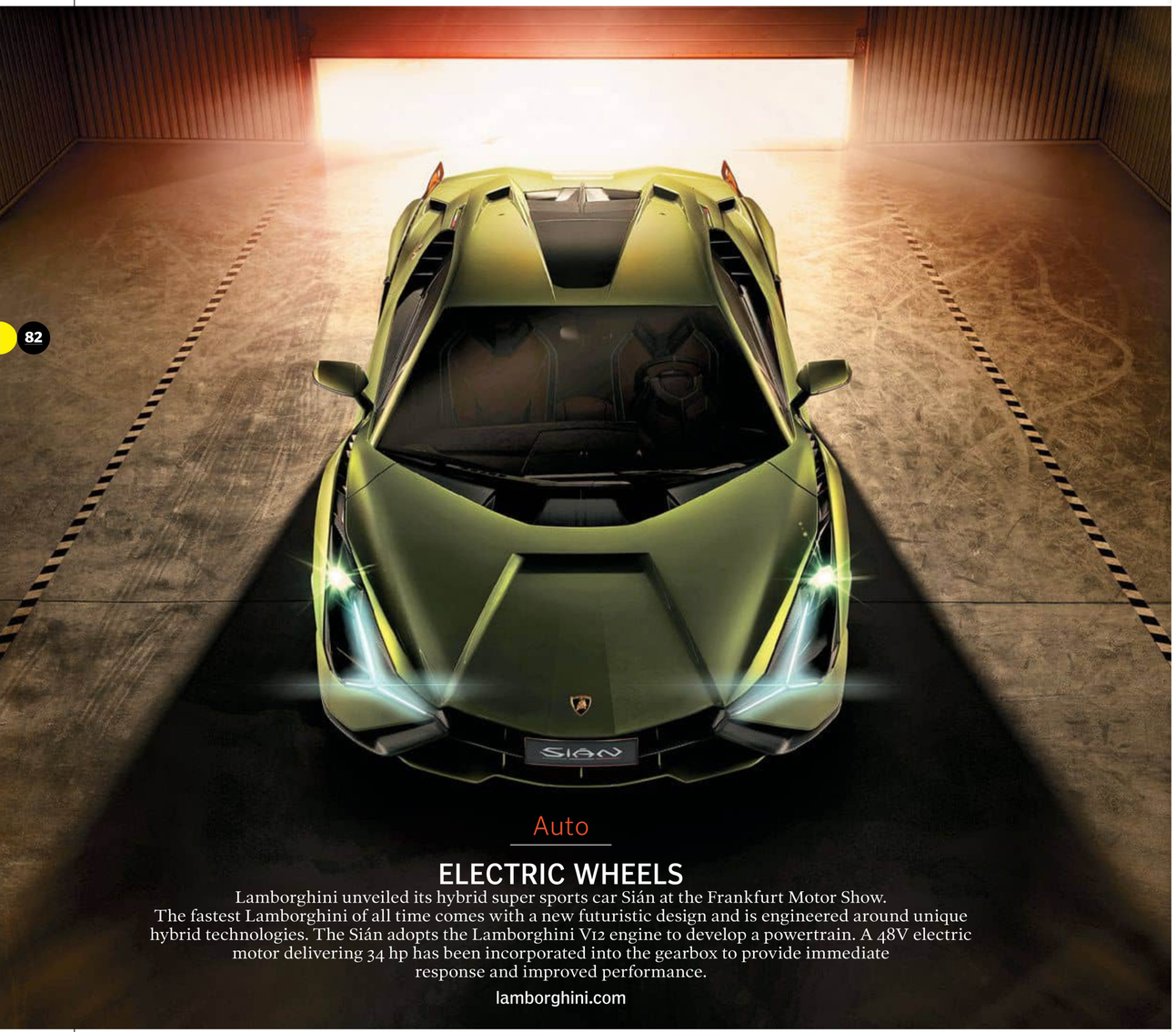
▲ Lydian won The World's Best, a reality show, in 2019. His father Varshan Sathish (right) has instilled the discipline of practice in the teenager

On most days when he's at home, Lydian moves from one instrument to another; besides piano and drums, he's now mastered the tabla, mridangam, guitar, harmonica, melodica and a few other Indian percussion instruments, and is now learning the khanjira. Simultaneously, he's also working on taking the big leap to original compositions, an ability that has already wowed actor Mohanlal, who's roped him in for his debut directorial venture *Barroz*. Says Banks, "He's fluent on music software. His compositional flair is a rare thing. A lot of prodigies replicate music of the masters, but Lydian also composes his own pieces."

As he grows in stature, what does Lydian do to keep himself grounded? "It's incredibly important for the guardians to look after child prodigies and help them maintain a balance. For every Evgeny Kissin or Maxim Vengerov that flourishes, there are many more who flame out," says Marat Bisengaliev, noted violinist and SOI's music director. Word of caution from Banks about not crossing that line between confidence and overconfidence helps, so does advice from his father about respect. "Not just his own, but everyone else's," says Sathish.

Right now, Lydian's set his eyes on the moon, to take his piano there and play the 'Moonlight Sonata'. With the start he's got, he looks all set to make that journey. F

A pick of the best, the latest, the greenest, the quirkiest, the most luxurious that money can buy



Auto

ELECTRIC WHEELS

Lamborghini unveiled its hybrid super sports car Sián at the Frankfurt Motor Show. The fastest Lamborghini of all time comes with a new futuristic design and is engineered around unique hybrid technologies. The Sián adopts the Lamborghini V12 engine to develop a powertrain. A 48V electric motor delivering 34 hp has been incorporated into the gearbox to provide immediate response and improved performance.

lamborghini.com

Home

MOON ROCK

This black matte porcelain and gold lustre sculpture from Lladro pays tribute to the British rock band The Police—its name Walking on the Moon is inspired by a song composed by Sting—and commemorates 50 years of man setting foot on the moon. The pieces are handcrafted in Spain, and have been sculpted by Marco Antonio Noguerón.

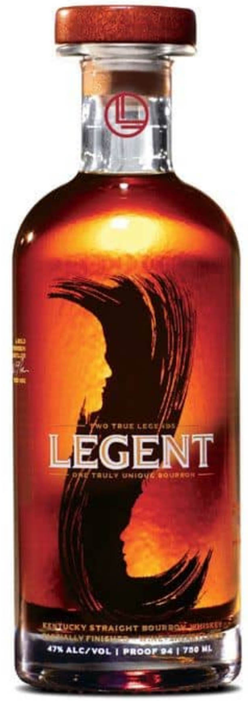
lladro.com

Style

A DAZZLING TIME

The Dazzling Rendez-Vous Moon from Jaeger-LeCoultre pays tribute to feminine strength and beauty by placing a moon phase function in a magnificent new setting. Echoing the beauty of the night sky, the icy sparkle of diamonds is warmed by pink gold and complemented by glowing white mother of pearl. The bezel comprises 108 diamonds in two concentric rings around the watch case, while the bracelet comprises 310.

jaeger-lecoultre.com



Drink

TWO MASTERS, ONE BOURBON

Ever since Suntory purchased Jim Beam in 2014 for nearly $14 billion, whiskey (also spelled whisky) lovers have been dreaming of a collaboration between the two spirits brands. This year, East finally met West with the release of Legent (pronounced "lee-gent"), a bourbon created by two legends: Fred Noe, the seventh generation master distiller at Jim beam, and Shinji Fukuyo, the acclaimed chief blender at Suntory. The new spirit breaks the traditional rules of bourbon country by blending straight bourbon aged for at least four years with bourbon aged in red wine and sherry casks. The result is a whiskey ($35) that's both fruity and spicy, with a long, mellow finish that does Kentucky and Kyoto proud.

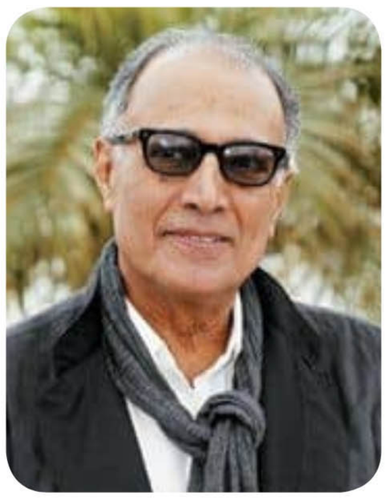
legentbourbon.com

Moon rock, courtesy Better Interiors

DAVID FARRELL / GETTY IMAGES

My formula for success is rise early, work late, and strike oil.

—J PAUL GETTY



SHUTTERSTOCK

The day we run out of petrol is the day Iran will be free.

—ABBAS KIAROSTAMI

Oil has allowed us to think about economics as though energy doesn't matter.

—ANDREW NIKIFORUK

Petroleum is a more likely cause of international conflict than wheat.

—SIMONE WEIL

Let me tell you something that we Israelis have against Moses. He took us 40 years through the desert in order to bring us to the one spot in the Middle East that has no oil!

—GOLDA MEIR

The use of solar energy has not been opened up because the oil industry does not own the sun.

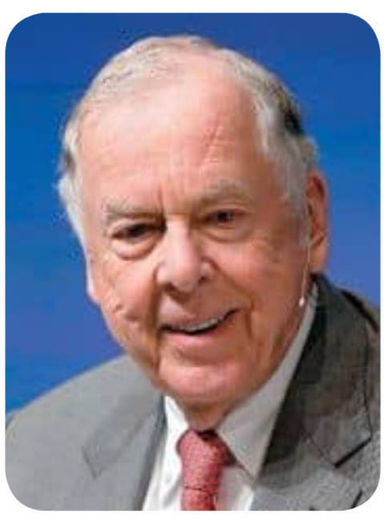
—RALPH NADER

I am convinced that Nigeria would have been a more highly developed country without the oil. I wished we'd never smelt the fumes of petroleum.

—WOLE SOYINKA

Officials at BP have filed for permits to drill for oil again in the Gulf of Mexico. They say oil is easier to find than ever because its mostly on top of the water.

—CONAN O'BRIEN



JONATHAN ERNST / REUTERS

There is no free market for oil.

—T BOONE PICKENS

We are the addicts, the oil producers are the pushers.

—THOMAS FRIEDMAN

Our oil supply is secure, not because our government threatens to use force against those who would make it insecure, but because the world's oil suppliers want to make money.

—DAVID R HENDERSON

A century ago, petroleum —what we call oil— was just an obscure commodity; today it is almost as vital to human existence as water.

—JAMES BUCHAN

Oil creates the illusion of a completely changed life, life without work, life for free. Oil is a resource that anaesthetises thought, blurs vision, corrupts.

—RYSZARD KAPUSCINSKI

LEON NEAL / GETTY IMAGES

By 2020, we'll be able to live without oil.

—MOHAMMAD BIN SALMAN