



**BOSCH**

The Manager (Listing)  
National Stock Exchange of India Limited  
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MUMBAI – 400 051

The Manager (Listing)  
Corporate Services Department  
BSE Limited,  
Regd.Office: Floor 25,  
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L85110KA1951PLC00761

15.07.2021

Dear Sirs,

**Sub: Compliance under Regulation 47 of SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015.**

Pursuant to Regulation 47 of the Securities and Exchange Board of India (Listing Obligations & Disclosure Requirements) Regulations, 2015, please find enclosed Public Notice published today (i.e. 15.07.2021) in the Newspapers (including e-Newspapers) viz.-Business Standard (in English) and Kannada prabha (in kannada), informing about the 69<sup>th</sup> Annual General Meeting of the Company to be held on August 05, 2021 through Video Conferencing/Other Audio Visual Means.

Kindly take the same on record.

Thanking you,

Yours faithfully,  
for Bosch Limited,

Rajesh Parte  
Company Secretary & Compliance Officer

Encl.: as above.

# A chip in global recovery

Vehicles, computers, mobile phones and other smart gadgets, with sticker prices ranging up to thousands of dollars, are stuck on assembly lines for lack of components that may just cost a couple of dollars

DEVANGSHU DATTA  
New Delhi, 14 July

In the last three months, many large global and domestic auto manufacturers — Tata Motors, Ford, Mahindra, Volkswagen, Audi, Fiat, General Motors — have issued advisories stating production levels will be held well below capacity. Electronics giant Apple has also said it cannot produce iPhones fast enough to meet demand. Sony has struggled to meet demand for its new PlayStation5. Moreover, many of these companies have stated that they expect production cuts to last until mid-2022, at least.



The opportunity costs of lower production will run into many billions. The causes are the same across diverse industries. Supply chains are stuttering due to a shortage of chips. Even Intel, Qualcomm, and AMD, chip manufacturers themselves, are experiencing shortage in key components.

Semiconductor manufacturers are working desperately to increase capacity, but it will take a while. Until chip supply rises to meet demand, and the best guess seems to be mid-2022 or later, one can see an apparently absurd situation: Vehicles, computers, mobile phones, and other smart gadgets, with sticker prices ranging up to many thousands of dollars, are stuck on assembly lines for lack of components that may just cost a couple of dollars.

How did this happen? The demand for certain categories of chips surged during the pandemic. As Work from Home, Study from Home and Play from Home became the norm, people bought more PCs (the PC and laptop market witnessed its best year of growth since 2009-10), smartphones (Apple and Samsung had huge revenue growth), high-end Wi-Fi equipment and routers, printers, home theatre systems, and so on. They also bought smart home gym equipment like Bluetooth-enabled exercise cycles and treadmills; and they bought game consoles and headphones. Cloud service providers had to expand capacity to service this new demand, which meant that they needed more chips, too.

**There are very few semiconductor manufacturers in the world. Most of the contract capacity is with TSMC in Taiwan and SMIC in China, with a few other players such as Samsung**

Every one of those gadgets and gizmos, not to mention cloud servers, contains chips of some description, usually multiple types. Apart from the major processing units, there will be chips that do vital things such as manage power, monitor screen displays, connect to routers, camera sensors, and the like.

This surge in demand meant capacity in the semiconductor industry was stretched. At the same time, auto manufacturers saw a slump in sales. Cars and bikes

contain lots of chips, mostly lower-end ones. There are chips and sensors embedded everywhere in modern vehicles.

Most automobile companies (if not all) use just-in-time (JIT) manufacturing paradigms to source components. So, they cut their standing orders with semiconductor companies. Ironically, Toyota, which was a pioneer in JIT, was flexible enough to stock up on chips during the pandemic and as a result, it now claims it has several months of chip inventory and, therefore, need not cut production.

A faster-than-expected recovery in the global economy then coincided with a behavioural change in consumers. People shifted to personal vehicles from crowded public transport. That meant automakers were caught flat-footed a second time and when they tried to increase chip orders, they discovered that they were behind in the queue. Apple alone consumes more semiconductors (worth \$58 billion) than the entire global auto industry (\$40 billion) and mobile phones use higher-end, higher-margin chips compared to cars. So chip makers had little incentive to prioritise the auto industry.

There are very few semiconductor manufacturers in the world. Most of the contract capacity is with TSMC in Taiwan and SMIC in China, with a few other players such as Samsung, which consumes a large percentage of its chips internally (apart from supplying chips to rivals like Apple). There are also specialty players such as SK Hynix, which manufacture memory. In addition to the supply crunch, the US-China trade war meant SMIC couldn't import high-end manufacturing equipment to increase capacity from the US, or sell to American companies. This exacerbated the situation.

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There are many, many chip designers — but “fabless” is the normal state of affairs for a chip company. The company designs the chip and then contracts out to Taiwan or China for the fabrication. Economies of scale are vastly important.

A full-fledged fab facility of reasonable scale requires upwards of \$15 billion in investments. Even a smaller specialised facility will require at least \$3 billion in investments. Setting up new chip fabrication facilities takes quite a while. Apart from land, equipment, and skilled labour, a fabricator needs vast quantities of absolutely pure water, or it has to set up excellent water purification and recycling systems. This is a constraint. It is one reason India's initiative to encourage domestic semiconductor production and attract overseas fabricators is not going to be easy because pure water is a very scarce resource in India.

TSMC says it will spend \$28 billion to expand capacity and its new facilities will come online with full production over 2022-23. Most projections suggest the chip shortage will start easing in mid-2022, with some categories seeing faster improvements in supply, and some staying under pressure till 2023. Apart from India, the European Union is offering incentives for fabricators, and the US is thinking about it.

The shortage will, of course, mean shortages and inflated prices across many downstream categories. It could be a windfall for those who have more assured supply. Samsung and Toyota have both raised earnings estimates by over 50 per cent, which is amazing for mega-billion multinationals. Even so, Samsung, which consumes over \$36 billion worth of chips internally and sells another \$56 billion, says it would have done better if it hadn't faced a supply crunch. The management theorists will be studying what happened in the semiconductor industry for years to come.

# India's hunger crisis: Lines for free food, rations grow

ARCHANA CHAUDHARY  
14 July

Chanchal Devi's three children haven't tasted milk for almost a year. The staple was among items the 35-year-old and her husband could no longer afford after they both first lost work when India's capital New Delhi went into lockdown in March last year. Their distress deepened after this April due to a surge in Covid-19 infections. They are now borrowing money to buy food and watch their school-aged kids eat less, often going to bed on empty stomachs.



"I can't sleep at nights," said Chanchal from her home in Lal Gumbad Basti, a neighbourhood of migrant workers about 20 minutes away from Parliament. "I'm so tired of worrying about arranging the next meal." Families like Chanchal's — two wage-earners with some savings, living in rented accommodation — are among legions of Indians who saw their economic toehold ripped away in lockdowns over the last 12 months. More than 15 million Indians lost their jobs in May alone at the height of a devastating wave that overwhelmed hospitals and crematoriums, according to the Centre for Monitoring the Indian Economy.

All of that is leading to an increase in hunger, particularly in urban areas, in a nation that already accounts for nearly a third of the world's malnourished people. While few statistics are available, workers at food distribution centres in major Indian cities say they can't remember seeing lines this long of people yearning for something to eat. "This desperation for food and the long lines for rations in families with two wage-earners is unprecedented," said Aditi Dwivedi, who works with migrant communities in the capital at Satark Nagrik Sangathan, a group that works on transparency and accountability in government that has advocated for more food aid

for the needy. As India's economy shrunk by 7.3 per cent last year, the daily average wage for about 230 million Indians — enough to make the world's fifth-largest nation — dropped below the ₹375 (\$5) threshold, according to a study by the Azim Premji University in Bengaluru. "An alarming 90 per cent of respondents" reported "that their households had suffered a reduction in food intake as a result of the lockdown," it said.

The number of people living in households with daily incomes below \$5 level spiked from 298.6 million at the start of the outbreak in March 2020 to 529 million at October-end, the study said. "If last year was harrowing, it's tough to get a true sense of the extent of the crisis this year," said Amit Basole, director of the Centre for Sustainable Employment at Azim Premji University and co-author of the *State of Working India* report. "This year, people have depleted savings and are paying back debt. We don't expect anyone to be back to January-February 2020 levels of income this calendar year."

In southeast Delhi, 45-year-old Naresh Kumar had to line up outside his local food distri-

bution shop at 5 am nearly every day in June to ensure he got there before supplies ran out. And at least he was eligible: more than 100 million people remain outside the government's public distribution system because coverage is calculated on outdated census data, according to a study last year by economists Reetika Khera, Meghana Mungikar and Jean Dreze. "On days when they had food, rations got over before my turn arrived," said Kumar, who is still struggling to find work after both he and his wife lost their jobs last year. "On other days, they said they had nothing to distribute."

The government is required by law to provide 5 kg of rice, wheat and coarse grains at subsidised rates as low as one rupee per kilo to India's poorest each month. In June 2020, after millions of migrants walked back to their villages on foot from locked-down cities, Prime Minister Narendra Modi announced an additional 6 kg a month per person until November, at a cost of ₹1.5 trillion (\$20 billion). The programme was restarted in April and has been extended to November 2021.

For Modi, who has faced widespread criticism for his government's pandemic response

and slow vaccination rollout, delivering basic goods for the poor is crucial to his efforts to keep the Bharatiya Janata Party as the most dominant political force in India. "In this time of the pandemic, the government is standing by the poor for their partner for their every need," Modi said in his address to the nation on June 7.

The Prime Minister's office didn't respond to questions on his government's plans to relieve food distress. State governments have also struggled to deliver food to the poor. Responding to an order from the high court to resume hunger relief measures amid Delhi's lockdown in April, Chief Minister Arvind Kejriwal announced plans to provide free foodgrains for two months to 7.2 million ration card holders and financial aid of ₹5,000 to 156,000 autorickshaw and taxi drivers. Abhinandita Mathur, a spokeswoman for the Delhi government, said on July 7 that food rations were being replenished after stocks ran out in June, leaving many stranded.

In Mumbai, Swaraj Shetty co-founded the Khaana Chahiye, or Want Food collective, last April to distribute meals and dry rations. What was expected to be a short-term effort by a group of citizens widened to respond to increasing distress calls for food through its "Report Hunger" initiative from beyond Mumbai and as far off as cities like Pune and Bengaluru, she said. "Last year it was mostly migrant workers, but this year we've been seeing people from the middle-class line up for help," Shetty said. India's middle-class, defined as those with incomes between \$10 and \$20 per day, shrank by 32 million during the 2020 recession amid the pandemic, according to Pew Research Center.

Sujata Sawant, 44, has also seen demand grow at a community kitchen she started in April. After initially feeding 300 people with the help of local women, her group now gives meals to more than 1,300 people every day. "We can't cater to so many who need it," she said. "The numbers are increasing daily. The costs are prohibitive."

**BLOOMBERG**

# 95% firms to go on with remote working for 2 yrs

SHINE JACOB  
Chennai, 14 July

Around 95 per cent of Indian companies are planning to stick with remote working for the next two years, at least, according to a survey by ManageEngine, the IT management division of Zoho Corporation, a Chennai-headquartered tech firm that makes web-based business tools.

The survey covered 1,210 IT executives and technology professionals from North America, the United Kingdom, Australia, New Zealand, Singapore and India. In India, 202 respondents from businesses with more than 500 employees across 18 industry verticals completed the survey.

Overall, 89 per cent of the respondents said implementing a work-from-home policy had increased security challenges for their organisations. The risk posed by shadow IT was especially high, with 89 per cent of companies having no control over the software that employees purchase and install on their devices.

At least 97 per cent of the companies had increased their reliance on cloud solutions owing to the Covid-19 pandemic, and around 96 per cent said they had seen an increase in business analytics and artificial intelligence, with AI improving business insights, operations and customer satisfaction.

More than nine out of 10 executives and IT professionals reported that the pandemic had increased cloud use. And around 91 per cent of the companies said there was increased confidence in

AI, with 89 per cent firms reporting better results because of it.

The study also revealed that the tech leadership team is heavily trusted to lead the company into the future. This was reinforced by 86 per cent of the respondents believing that IT leaders are better equipped and qualified to assume the chief executive officer's mantle compared to those occupying roles in other departments such as sales, marketing and finance.

"The report shows that IT remains a critical business enabler, especially in times like the present. Companies are realising that dynamic, quick, data-driven decision-making is key to build differentiation and deliver a great customer experience, which increases their reliance on AI and deep analytics," said Rajesh Ganesan, vice president of products at ManageEngine. ManageEngine has grown by 35 per cent in the last one year, while cloud platform and applications (under Zoho) posted a growth of around 50 per cent.

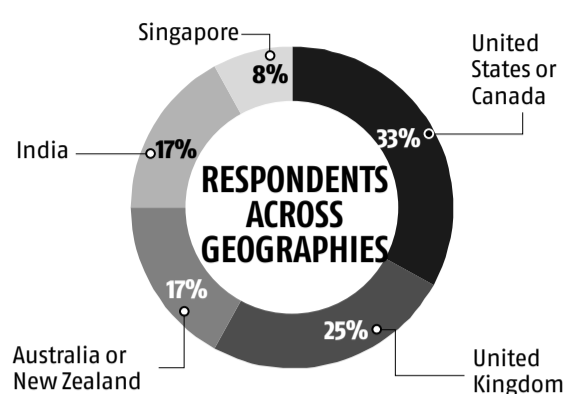
"The focus on security is the top priority, as a majority of those surveyed revealed that remote workers increase security risks, specifically threat vectors to employees including phishing, targeted employee devices, malware, account hijacking, and social media exploits," the report said.

It found that India is leading most global averages in the new skills IT professionals need to learn, with public cloud topping the list. For Indian companies, the adoption of new technology is driven by the need to improve reliability, security and competitiveness.

**GOING DIGITAL**  
97% Organisations that increased their reliance on the cloud

91% Respondents who said their confidence in AI has increased during the past two years

86% Respondents who believe that IT leaders are better equipped to assume the CEO mantle  
89% Increase in security challenges organisations faced due to work-from-home policy



## SKILLS & SECURITY

Questions	Global average	India-specific data
What new tech skills has the pandemic required you to learn?	Remote worker support (47.8%)	Public cloud usage/services (48%)
At your company, which security threats have increased?	Phishing (51.6%)	Malware (47.7%)
What security actions has your company taken?	Raised employee awareness (71.4%)	Employee training on cybersecurity (71.1%)
At your company, which groups have increased use of business analytics?	IT (62.6%)	IT (66.3%)
At your firm, what drives decisions to adopt new tech?	Improve security (55.9%)	Increase reliability (59.4%)
What have employees purchased without IT approval?	Online meeting tools (38.3%)	Online meeting tools (50.5%)
What would increase your firm's confidence in cloud-based solutions?	Increased security (56%)	Increased performance (61%)
Which groups have increased their use of cloud solutions?	IT (59.5%)	IT (65.3%)

## Bosch Limited

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Tel: +91 80 6752 1750; Website: [www.bosch.in](http://www.bosch.in);  
E-mail: [investor@in.bosch.com](mailto:investor@in.bosch.com); CIN: L85110KA1951PLC000761

### NOTICE OF THE 69<sup>TH</sup> ANNUAL GENERAL MEETING AND REMOTE E-VOTING

Notice is hereby given that the 69<sup>TH</sup> Annual General Meeting ('AGM') of the Company will be held on Thursday, August 05, 2021 at 11:30 a.m.(IST) through Video Conference (VC) / Other Audio Visual Means (OAVM) without physical presence of the members at a common venue in compliance with General Circular numbers 02/2021, 20/2020, 14/2020 and 17/2020 and all other applicable laws and circulars issued by the Ministry of Corporate Affairs (MCA), Government of India and Securities and Exchange Board of India (SEBI), to transact the business set forth in the Notice of the AGM.

In compliance with the above circulars, only electronic copies of the Notice of the AGM and Annual Report 2020-21 has been sent through electronic mode to those Members whose email addresses are registered with the Company or Depository Participant(s). The notice of the 69th AGM and Annual Report for Financial year 2020-21 is also available on the Company's website at [www.bosch.in](http://www.bosch.in) under Shareholder Information and stock exchange websites i.e., [www.bseindia.com](http://www.bseindia.com) and [www.nseindia.com](http://www.nseindia.com). AGM notice is also available at [www.evotingindia.com](http://www.evotingindia.com) on the website of the Central Depository Services (India) Limited (CDSL).

Members can attend and participate in the AGM through VC/OAVM only. The instructions for joining the AGM and the manner of participation in the remote e-voting or casting vote through e-voting system during the AGM are provided in the AGM Notice.

Pursuant to the provisions of Section 108 of the Companies Act, 2013 (the Act) read with Rule 20 of the Companies (Management and Administration) Rules, 2014, as amended, and Regulation 44 of the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 and the Secretarial Standard on General Meetings issued by the Institute of Company Secretaries of India, the Company is providing the facility to its members holding shares either in physical form or dematerialized form, as on July 29, 2021 (cut-off date) for casting their votes electronically on each item as set forth in the Notice of AGM through the electronic voting system provided by Central Depository Services (India) Limited

All members are hereby informed that:

- The ordinary and special business as set out in the Notice of AGM may be transacted through voting by electronic means;
- Date of completion of dispatch of Notice of AGM and Annual Report: July 13, 2021;
- The remote e-voting shall commence on Monday, August 02, 2021 at 9.00 a.m. (IST);
- The remote e-voting shall end on Wednesday, August 04, 2021 at 5.00 p.m. (IST);
- The remote e-voting shall not be allowed beyond Wednesday, August 04, 2021 5:00 p.m. (IST);
- The cut-off date for determining the eligibility to vote through remote e-voting or at the AGM will be July 29, 2021;
- Any person, who acquires the shares of the Company and becomes a member of Company after dispatch of Notice of AGM and holds shares as of cut-off date i.e. July 29, 2021 may obtain the Login ID and password by sending a request to the Company or its RTA at the address/email IDs given under point no. 11 below. However, if the member is already registered with CDSL for remote e-voting, then such member shall use the existing User ID and password for casting his/her vote. Members can also login by using the existing login credentials of the demat account held through Depository Participant registered with NSDL or 'CDSL for e-Voting facility;
- The facility for voting through "electronic voting system" shall be made available during the AGM and the members attending the meeting through VC/OAVM, who have not cast their vote by remote e-voting, shall also be eligible to exercise their right to cast their vote during the meeting through "electronic voting system";
- The members who have cast their vote through remote e-voting prior to the AGM may also attend the AGM through VC/OAVM but shall not be entitled to cast their vote again during the meeting;
- A person, whose name is registered in the Register of members or in the register of beneficial owners maintained by the depositories as on the cut-off date i.e. July 29, 2021 only shall be entitled to avail the facility of remote e-voting or voting through "electronic voting system" at the AGM;
- In case of any queries, the members may contact:

Particulars	Central Depository Services (India) Limited	Integrated Registry Management Services Private Limited	Bosch Limited
Address	Marathon Futurex, A-Wing, 25th floor, NM Joshi Marg, Lower Parel, Mumbai 400013	No 30, Ramana Residency, 4th Cross Sampige Road, Malleswaram, Bengaluru 560 003	Hosur Road, Adugodi, Bengaluru- 560030
Name & Designation	Mr. Rakesh Dalvi (Manager)	Mr. S. Giridhar (Chief Manager)	Mr. Rajesh Parte (Company Secretary & Compliance Officer)
Telephone	(022) 23058543, (022) 23058542	(080) 23460815 to 818	(080) 67521750
Email Id	Helpdesk.evoting@cdslindia.com	giri@integratedindia.in	RajeshDigambar.Parte@in.bosch.com

- The Manner of Casting votes through remote e-voting or through e-voting during the AGM, for members holding shares in dematerialized form, physical form and for members who have not registered their email address is provided in the Notice of AGM.
- Shareholders holding shares in physical form (who have not registered their e-mail address) are requested to furnish their e-mail addresses and mobile numbers with the Company's RTA viz. Integrated Registry Management Services Private Limited at <https://www.integratedindia.in/emailupdate.aspx>
- Members holding shares in physical form or who have not registered their e-mail addresses with the Company can cast their vote through remote e-voting or e-voting during the AGM by following the below process for obtaining the e-voting credentials:
  - In case of shares held in physical form, please provide copy of the signed request letter mentioning the Folio Number, name and address of the shareholder, scanned copy of the share certificate (front and back), Self-attested copy of the PAN card and self-attested copy of any document (e.g. Driving License, Election Identity Card, Passport) in support of the address of the shareholder by email to RTA E-mail Id: [giri@integratedindia.in](mailto:giri@integratedindia.in) or to the Company E-mail Id: [investor@in.bosch.com](mailto:investor@in.bosch.com)
  - In case of shares held in demat form, please provide Demat account details (CDSL-16 digit beneficiary ID or NSDL-16 digit DPID + CLID), Name of shareholder, client master or copy of consolidated Account statement, Self-attested copy of the PAN card and self-attested copy of Aadhaar Card by email to RTA E-mail Id: [giri@integratedindia.in](mailto:giri@integratedindia.in) or to the Company E-mail Id: [investor@in.bosch.com](mailto:investor@in.bosch.com)

By order of the Board  
Sd/-  
Rajesh Parte  
Company Secretary & Compliance Officer

Place : Bengaluru  
Date : 14.07.2021.

