

India

Underweight (no change)**Highlighted Companies****Amber Enterprises****HOLD, TP Rs3810, Rs3602 close**

Increased insourcing in the RAC business will erode the company's TAM. It is looking at diversifying into other segments, particularly PCBs, with its acquisition of Ascent, which is an end-to-end PCB manufacturer. The company has good growth prospects in the mobility space, with orders coming in from Indian Railways.

PG Electroplast**REDUCE, TP Rs1612, Rs1830 close**

PG Electroplast is expected to witness margin erosion in 4QFY24F, as it faces increased competition due to insourcing in the RAC industry. We expect its margins to decline by 165bp YoY. The company is expected to face strong headwinds in the RAC space due to increased insourcing of brands. Moreover, with no tie-ups with leading brands, gaining a foothold in the TV space is a challenge.

Summary Valuation Metrics

P/E (x)	Mar24-F	Mar25-F	Mar26-F
Amber Enterprises	76.1	44.58	33.1
PG Electroplast	39.53	39.51	30.67
P/BV (x)	Mar24-F	Mar25-F	Mar26-F
Amber Enterprises	5.97	5.26	4.53
PG Electroplast	4.38	3.59	2.91
Dividend Yield	Mar24-F	Mar25-F	Mar26-F
Amber Enterprises	0%	0%	0%
PG Electroplast	0%	0%	0%

EMS**Indian AC market's growth is nearing its end**

- We believe the market growth for air-conditioners or ACs in India is nearing its end, as ACs will be owned by 59m households by FY25F.
- Rising temperatures will not lead to additional AC demand, as we believe they will lead to more sales of coolers and not room air-conditioners or RACs.
- We believe that upcoming AC manufacturing facilities, coupled with slowing demand from FY26F, would lead to price wars. Retain REDUCE on PGEL.

Rising temperatures are more linked with coolers rather than ACs

On the surface, it seems that hotter temperatures mean a rise in AC purchases. However, on examining the relevant data from various government sources, it seems that higher temperatures have no correlation whatsoever with room AC penetration level. In fact, purchasing power rather than rising temperatures acts as the main trigger for buying room ACs. Rajasthan, Punjab, Haryana, Uttar Pradesh and Bihar, whose districts have experienced the most heatwave days, don't seem to have a high AC penetration. Only 3.6 per cent, 8.1 per cent and 1.5 per cent of the households in these states, respectively, own ACs. However, the states having a higher heat wave days do have the highest cooler penetration in the country.

Around 59m households to own ACs by FY25F

We have assumed incremental AC demand to be generated from two factors: replacement demand and new users. In FY23, replacement ACs accounted for 18% of the total ACs sold. We expect this trend to continue for at least the next three years. Interestingly, room ACs in India have an average life of 15 years, far higher than in other geographies. This number will gradually come down, but there are still five-to-six years before replacement demand starts happening in a significant manner. Moreover, on segregating new AC demand and replacement demand, we have arrived at the conclusion that around 59m households would own ACs by FY25F.

Rooftop solar panels won't create any incremental demand for ACs

The bullishness on account of installation of rooftop solar panels is misguided, according to our view. There are two reasons for the same. Firstly, rooftop solar panels will mainly work during daytime, wherein most of the power consumption in India, including by RACs, occurs during night time. India does not have a grid-level BESS (battery energy storage system) which can store power from solar panels in the day to be used during the night. Hence, we believe that until and unless an efficient BESS network is developed in the country, rooftop solar panels will not lead to any significant power cost savings. Moreover, rooftop solar panels also have significant cost barrier ex-subsidies and hence, this too will act as a barrier for setting up rooftop solar panels in India.

Remain pessimistic on AC EMS; retain REDUCE rating on PGEL

We believe the landscape of India's room AC industry is about to change in the coming years. With brands setting up their inhouse capacities and certain brands like Blue Star indicating their intent to increase capacities, AC electronics manufacturing services or EMS manufacturers like PG Electroplast or PGEL and Amber Enterprises will be in for tough times. This, coupled with a softer demand scenario expected from FY26F, will lead to price wars and depleting margins for EMS players. We retain our REDUCE rating on PGEL because RAC is supposed to be the biggest growth driver for the company and headwinds here will lead to margin and profit dilution.

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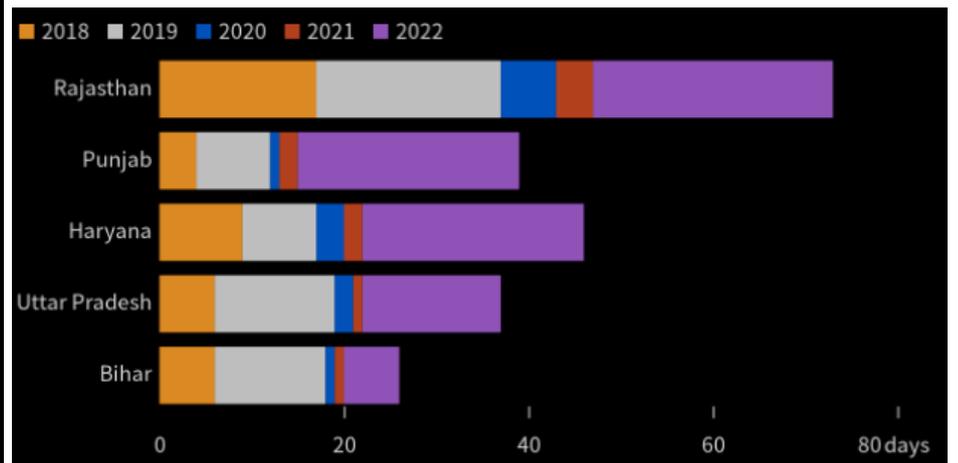
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AC purchases have not much correlation with rising temperatures >

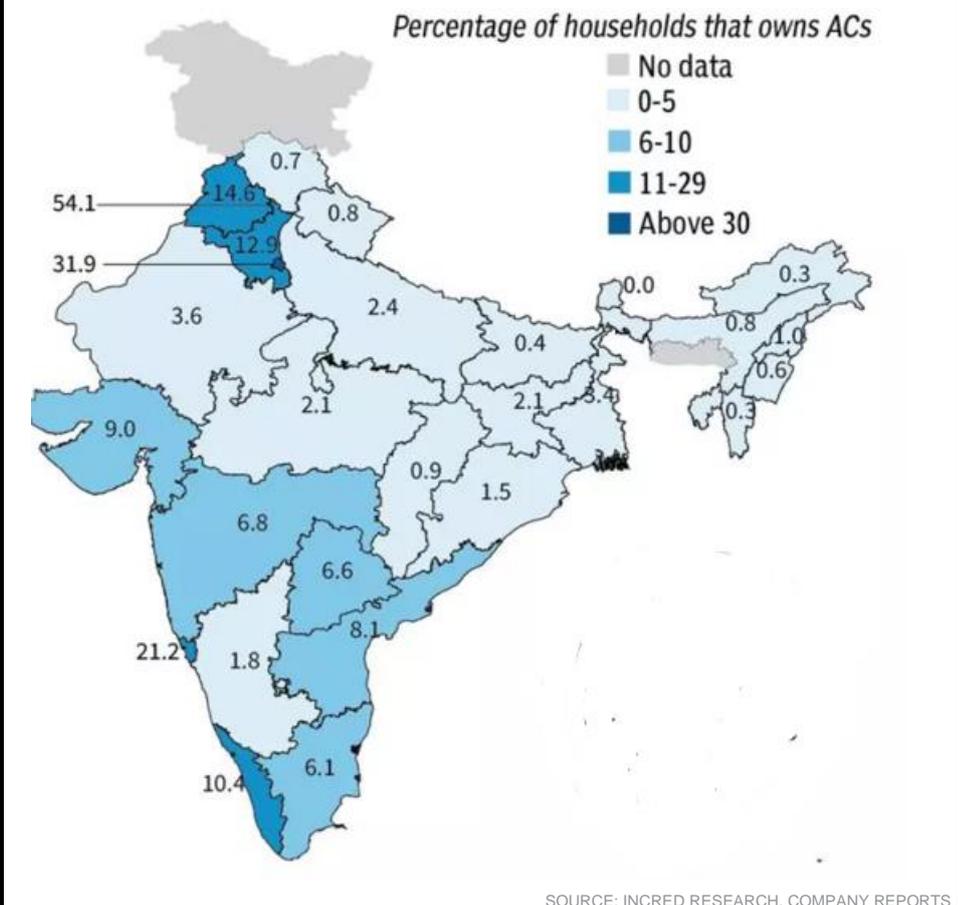
On the surface, it seems that hotter temperatures mean a rise in AC purchases. However, on examining the relevant data from various government sources, it seems that higher temperatures have no correlation whatsoever with the room AC penetration level. In fact, purchasing power rather than rising temperatures, acts as the main trigger for buying room ACs.

Figure 1: States in India facing the maximum number of heatwave days from CY18



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 2: Percentage of households that own ACs



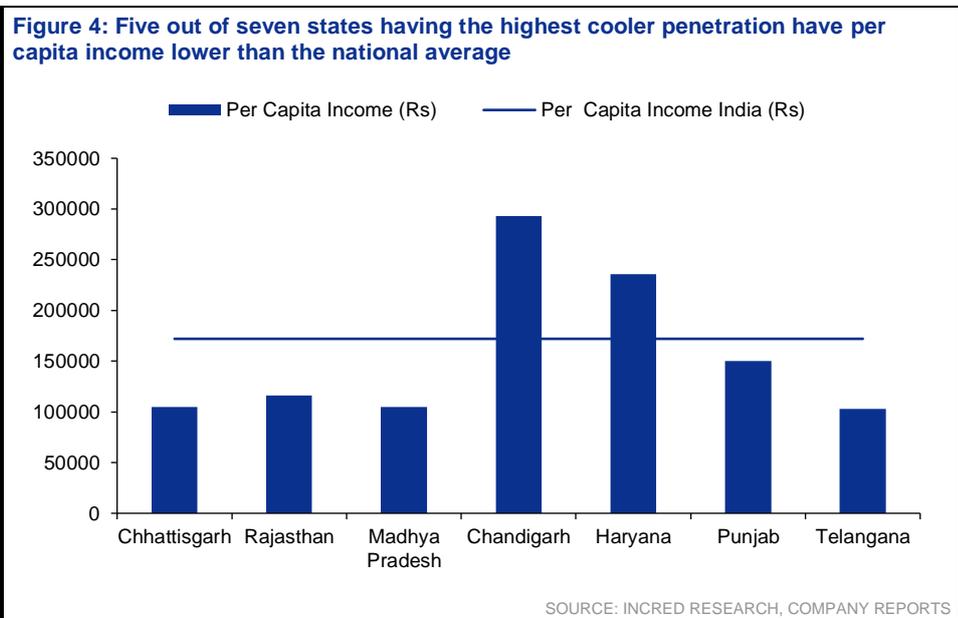
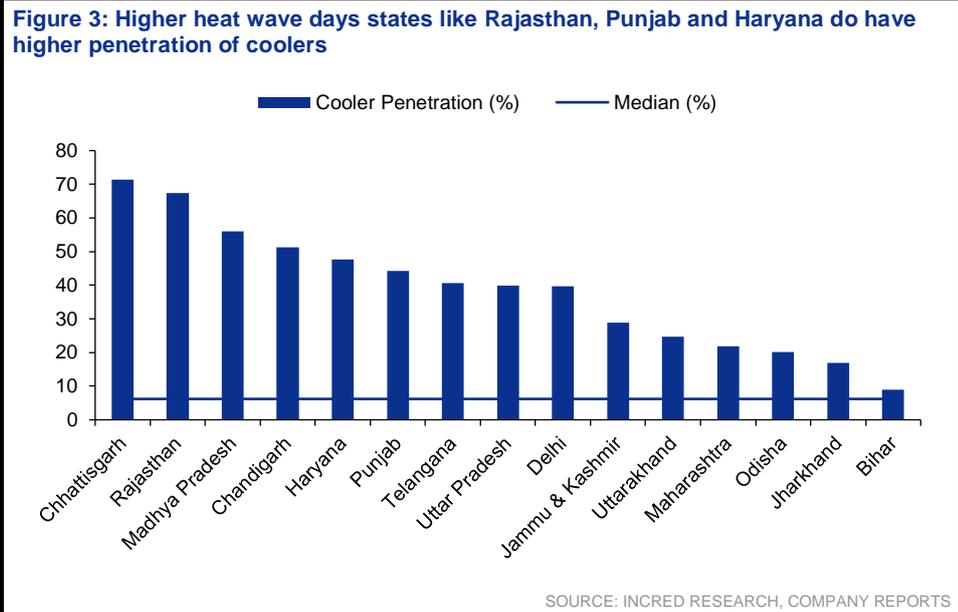
SOURCE: INCRED RESEARCH, COMPANY REPORTS

Rajasthan, Punjab, Haryana, Uttar Pradesh and Bihar, whose districts have experienced the most heatwave days, doesn't seem to have a high AC penetration

level. Only 3.6 per cent, 8.1 per cent and 1.5 per cent of the households in these states respectively, own ACs. States and Union Territories or UTs having a high AC penetration level like Delhi, Chandigarh and Goa haven't faced high heatwave days.

Coolers and not ACs are more correlated with higher temperatures >

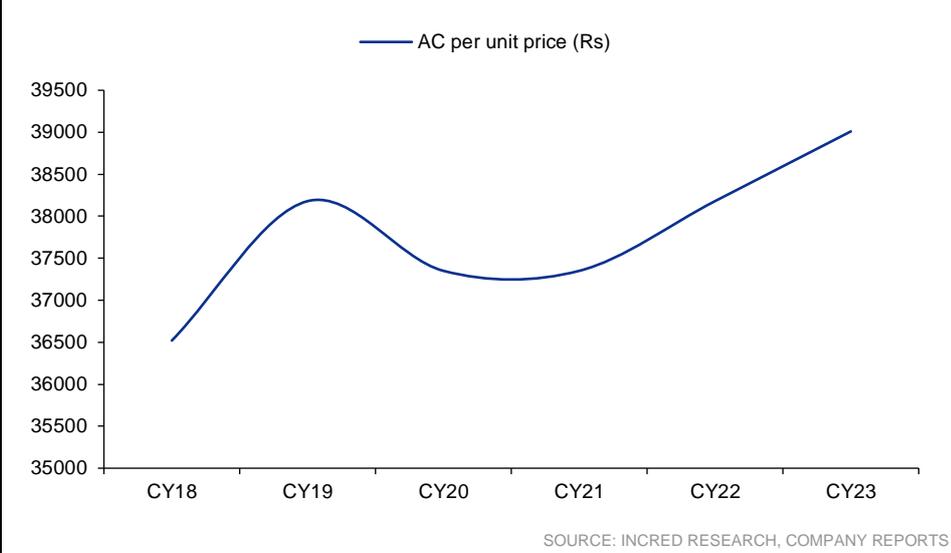
However, the states having higher heat wave days do have the highest cooler penetration in the country. Coolers are significantly cheaper than ACs and have lower running costs. As a result, income doesn't play a big role here, it's more closely linked with comfort, whereas on the other hand, ACs are still considered a luxury item in India.



AC prices have been rising in India at a CAGR of just 2% >

Even though ACs are heavily dependent on commodities like copper (whose prices have been volatile), the pricing CAGR of ACs is close to 2% over CY18-CY23. ACs are a consumer-facing industry that is price-sensitive, and with brand loyalty not counting for much in the case of ACs (one buys an AC once in 10-12 years), generally price becomes the only differentiator and hence, AC brands are reluctant to go for price hikes.

Figure 5: AC prices are not growing in sync with inflation due to increased price wars



One-year cost of ownership is still high for many Indians, even with negligible price hikes by the AC industry ➤

Figure 6: Yearly cost of ownership of ACs assuming an 8-hour/day operation for 180 days; average power cost is assumed to be Rs6.6/unit

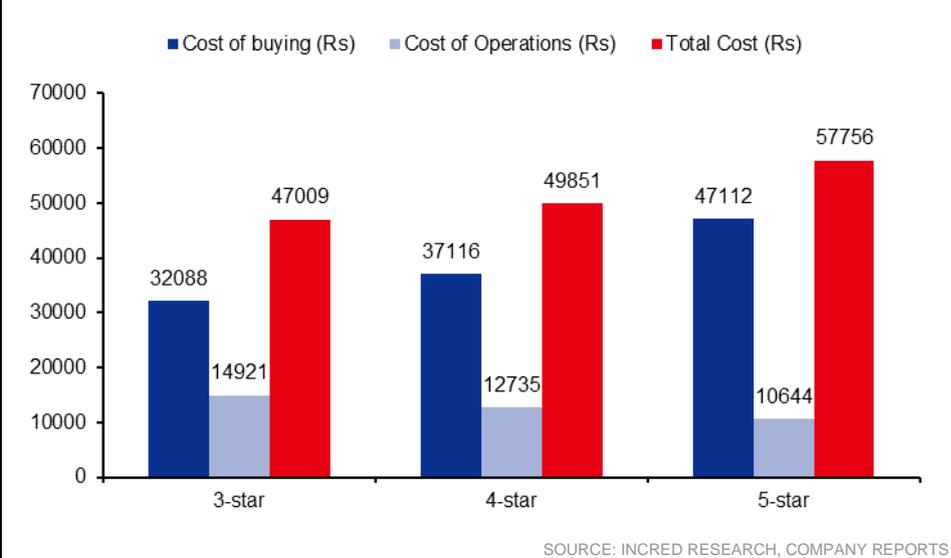
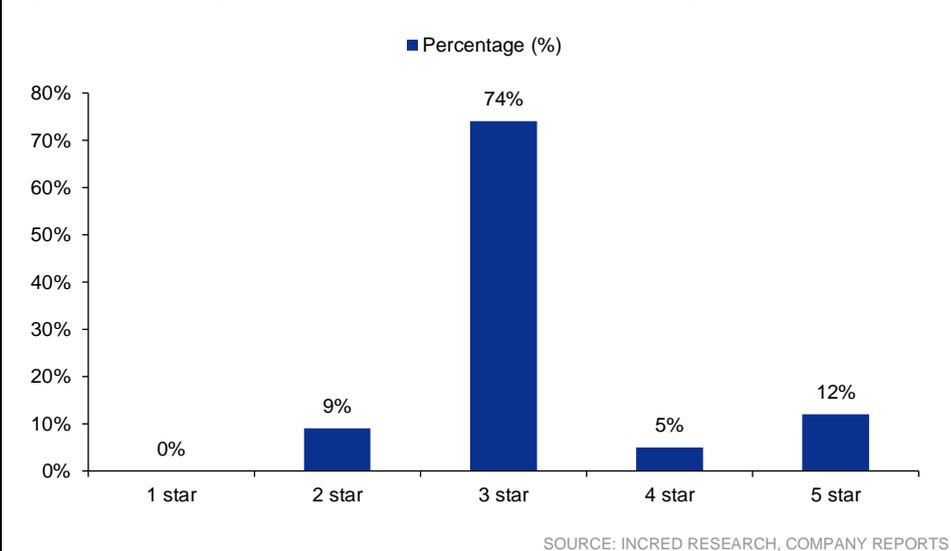


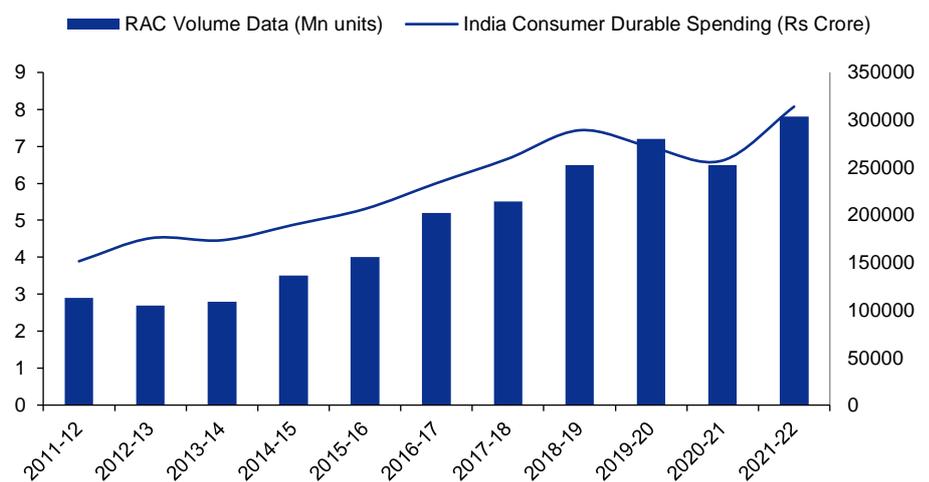
Figure 7: Percentage breakup of AC sales in India by star rating



To own an AC in India, annual household income must be atleast more than Rs700,000 ➤

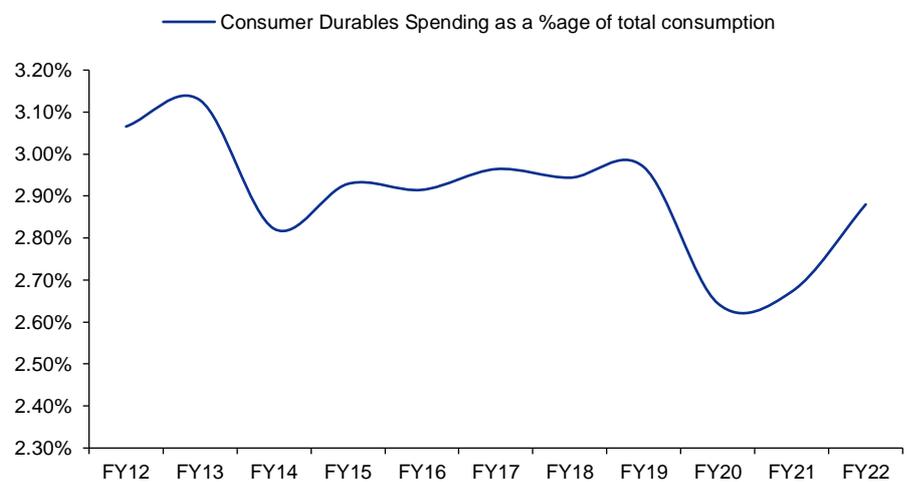
Let's try to understand what minimum monthly income is required to afford room ACs in India. Based on our calculations, we conclude that on an average Indian households own roughly two ACs per household. However, as we are looking at the total addressable market (TAM), let's try to understand monthly income to own a single room AC. To understand this, we turn to private final consumption expenditure (PFCE) data. With the advent of increased credit card penetration, a lot of room ACs are being bought on equated monthly instalments or EMIs and we assume for simplicity's sake that every room AC is being bought via EMI. A typical 3-star room AC costs around Rs30,000 and assuming an interest rate of 15% and a maximum loan period of two years, the monthly EMI comes out to around Rs. 1,500. Based on PCFE data, Indians spend about 3.5% of their total expenditure on consumer durables. This translates to a monthly total expenditure of Rs39,384. Now PCFE is 69% of per capita income, and so for incurring an expenditure of Rs39,384, the individual must earn a monthly salary of Rs57,079. Hence, a yearly income of close to Rs700,000. Please note that we have not taken incremental electricity costs into account for running an AC, but we are trying to be as optimistic as possible, and so we can ignore this aspect.

Figure 8: Consumer durable spending is a reliable indicator of AC sales in volume terms



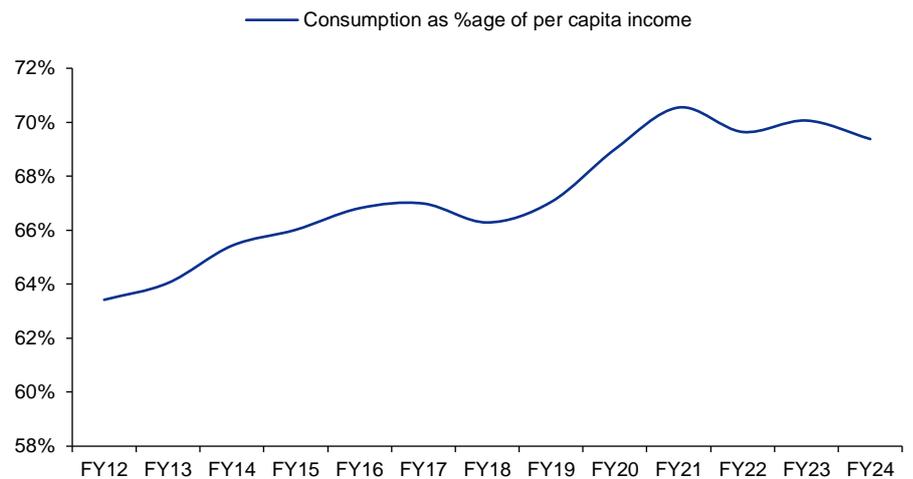
SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 9: Spending on consumer durables as a percentage of total consumption



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 10: Consumer expenditure as a percentage of per capita income

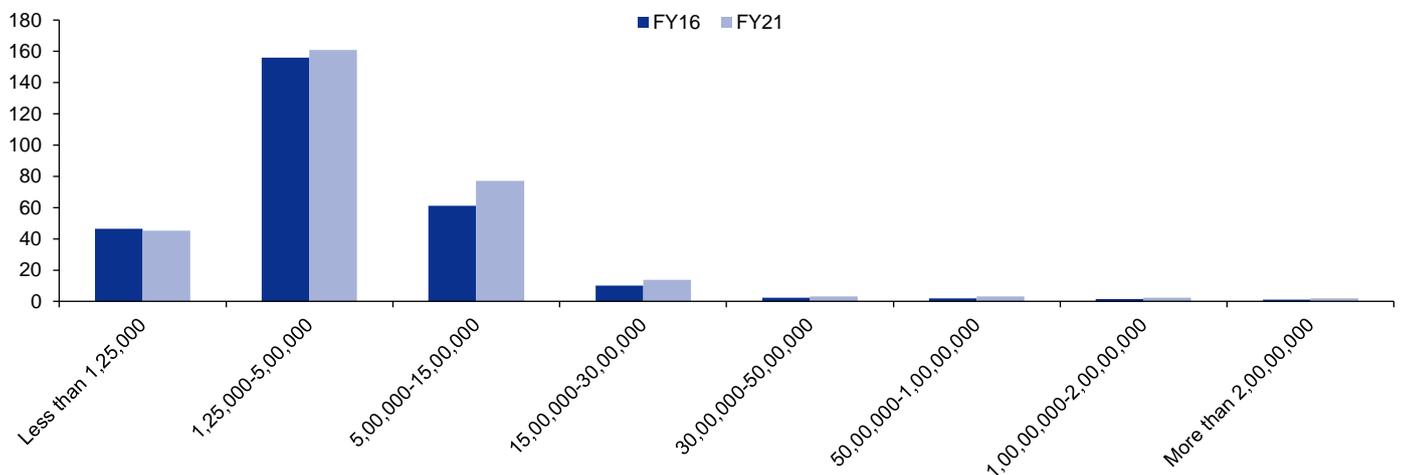


SOURCE: INCRED RESEARCH, COMPANY REPORTS

Based on household income distribution, approx. 65-70m households can afford room ACs in India ▶

Once we derived that to afford a room AC in India, a household’s annual income must be at least Rs700,000, we tried to look how many such households currently exist in the country. There are multiple sources to look at this, but we looked at the recently concluded PRICE (People’s Research on India’s Consumer Economy) Survey. This data gives us a reliable estimate of households that can afford room ACs. Approx. 65-70m households can afford room ACs in India.

Figure 11: Number of households having annual income within the specified range; households earning more than Rs700,000 per annum are our target households

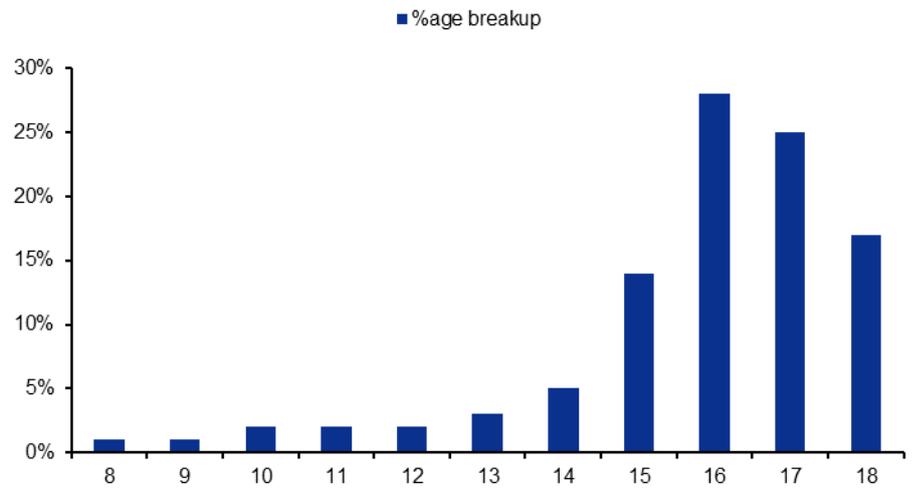


SOURCE: INCRED RESEARCH, COMPANY REPORTS

Approx. 59m households in India would own ACs by FY25F ▶

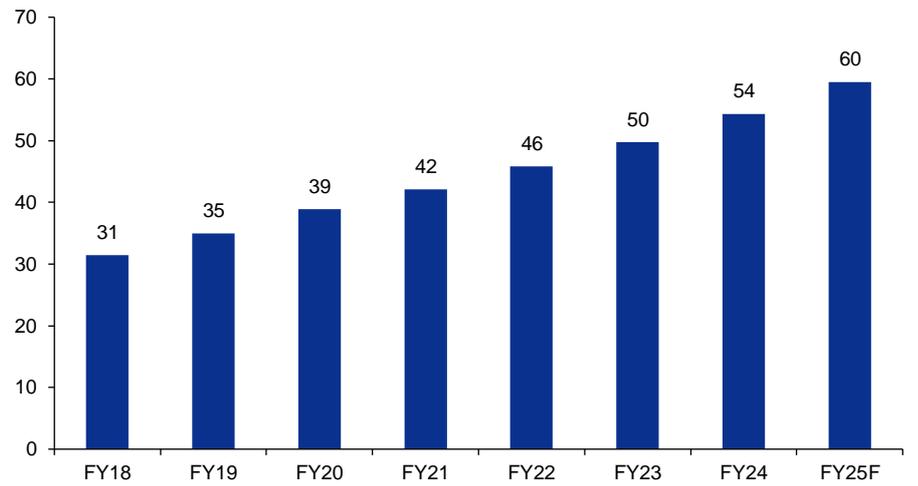
We have assumed incremental AC demand to be generated from two factors: replacement demand and new users. In FY23, replacement ACs accounted for 18% of the total ACs sold. We expect this trend to continue for at least the next three years. Interestingly, room ACs in India have an average life of 15 years, far higher than in other geographies. This number will gradually come down, but there are still five-to-six years before replacement demand starts happening in a significant manner. Moreover, on segregating new AC demand and replacement demand, we arrived at the conclusion that around 59m households would own an AC by FY25F.

Figure 12: The average age of room ACs in India is around 15-17 years



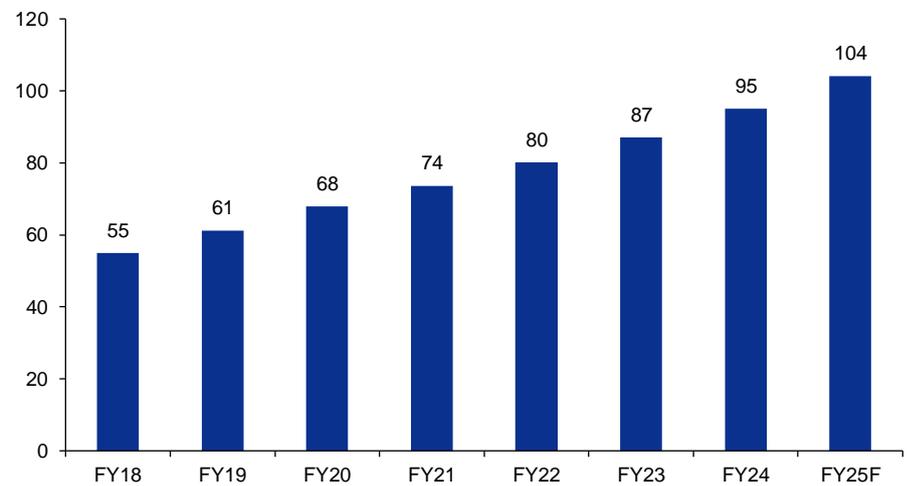
SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 13: Number of households owing a room AC, assuming 1.75 room ACs per household



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 14: Cumulative room ACs sold; approx. 104m room AC sales likely by FY25F, excluding replacement demand



SOURCE: INCRED RESEARCH, COMPANY REPORTS

India's room AC penetration is higher than in the Philippines, Thailand and Indonesia ➤

Examining room AC penetration data, it's not logical to compare penetration level with all households but its more logical to compare penetration among households which can afford to own a room AC. For this reason, we have chosen to compare India's room AC penetration level with other fast-growing southeast Asian countries like the Philippines, Thailand, and Indonesia. We find that AC volume growth has started slowing in these countries, even with robust per capita income growth.

Figure 15: Real GDP per capita of southeast Asian economies is also posting a robust recovery

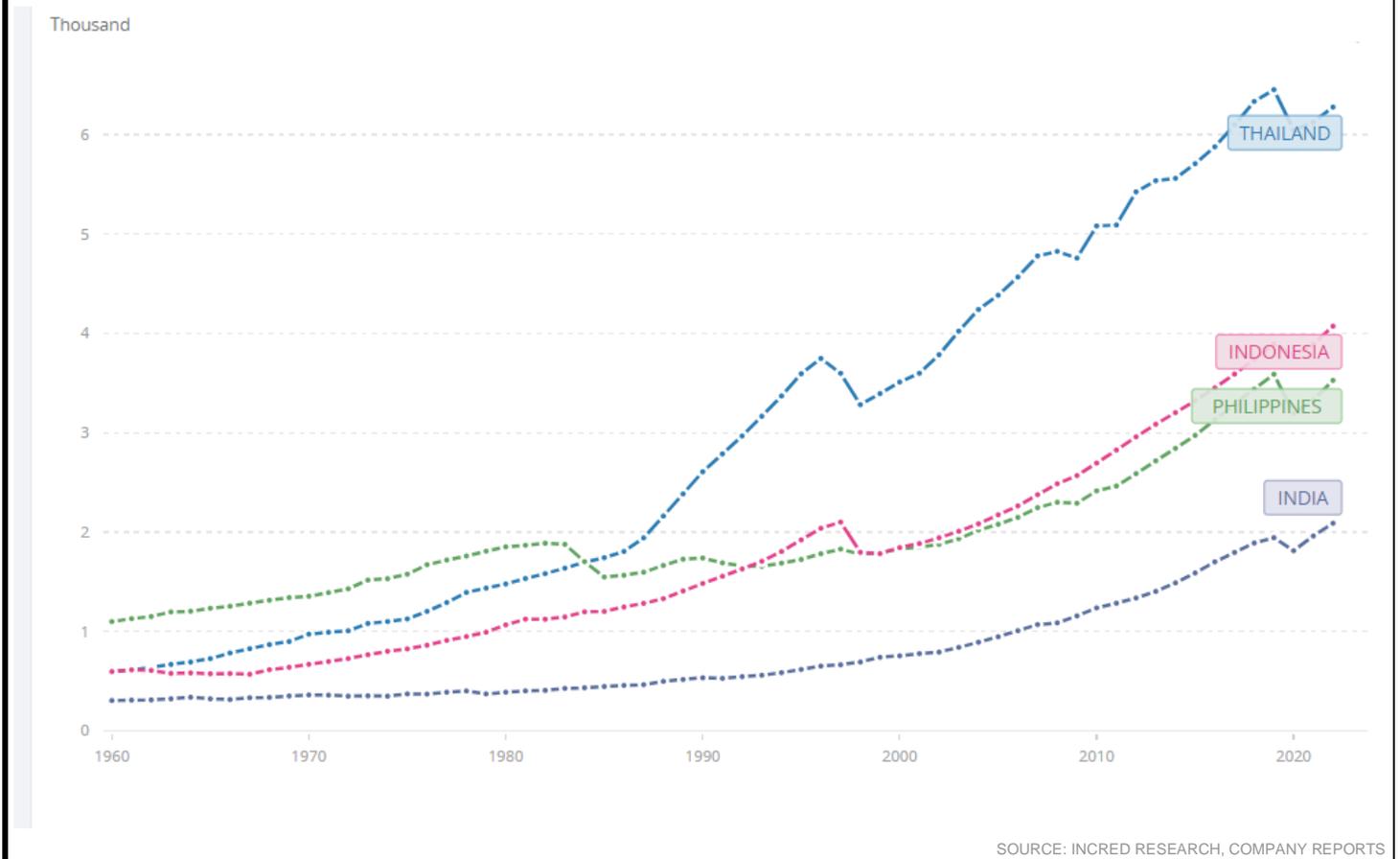
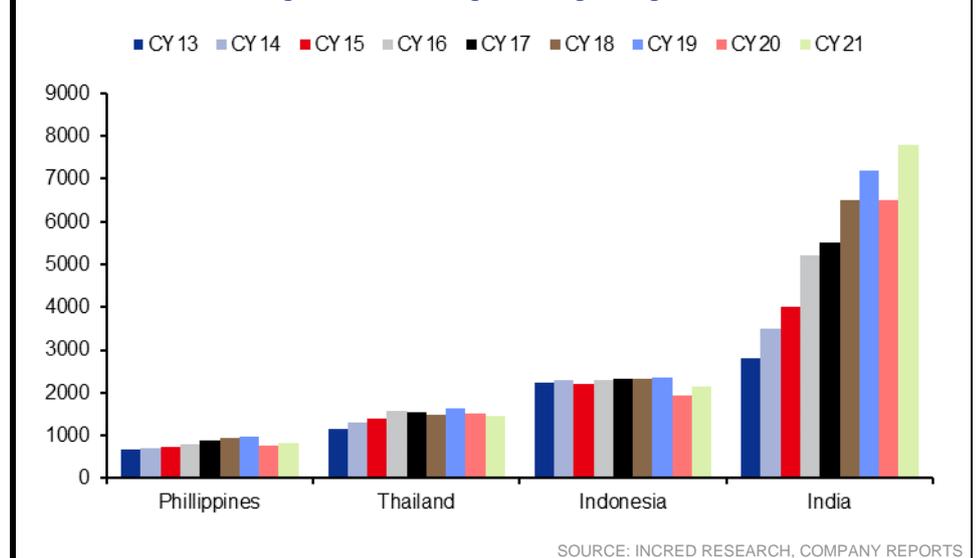


Figure 16: AC sales volume data (thousand units); sales volume of RACs in southeast Asian countries has stagnated even though PCI is growing



Rooftop solar panels will not create any additional demand for room ACs in India ➤

The bullishness on the account of installation of rooftop solar panels is misguided, according to our view. We believe it will not create any additional RAC demand in India. There are two reasons for the same. Firstly, rooftop solar panels will mainly work during the daytime, whereas most of the power consumption in India occurs during night time. India does not have a grid-level BESS (battery energy storage system) which can store power from solar panels in the day to be used during the night. Hence, we believe that unless and until an efficient BESS network is developed in the country, rooftop solar panels will not lead to any significant power cost savings. Moreover, rooftop solar panels also have a significant cost barrier ex-subsidies and hence, this too will act as a barrier for setting up rooftop solar panels in India.

Figure 17: Most households using room ACs require setting up a solar panel of above 3KW

Average Monthly Electricity Consumption (units)	Suitable Rooftop Solar Plant Capacity	Subsidy
0-150	1-2 kW	Rs. 30,000 to Rs. 60,000
150-300	2-3 kW	Rs. 60,000 to Rs. 78,000
>300	Above 3 kW	Rs. 78,000

SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 18: Costs that need to be incurred for setting up rooftop solar panels will act as a significant barrier to entry

Solar System Size	Estimated Price Range
1 kW Solar System	₹65,000- ₹75,000
2 kW Solar System	₹1,40,000- ₹1,50,000
3 kW Solar System	₹1,80,000- ₹1,90,000
5 kW Solar System	₹2,50,000- ₹2,70,000
7.5 kW Solar System	₹3,70,000- ₹3,90,000
10 kW Solar System	₹4,90,000- ₹5,10,000
15 kW Solar System	₹7,00,000- ₹7,50,000
20 kW Solar System	₹9,00,000- ₹10,00,000

SOURCE: INCRED RESEARCH, COMPANY REPORTS

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