



4 Reasons to Get Excited About HVAC

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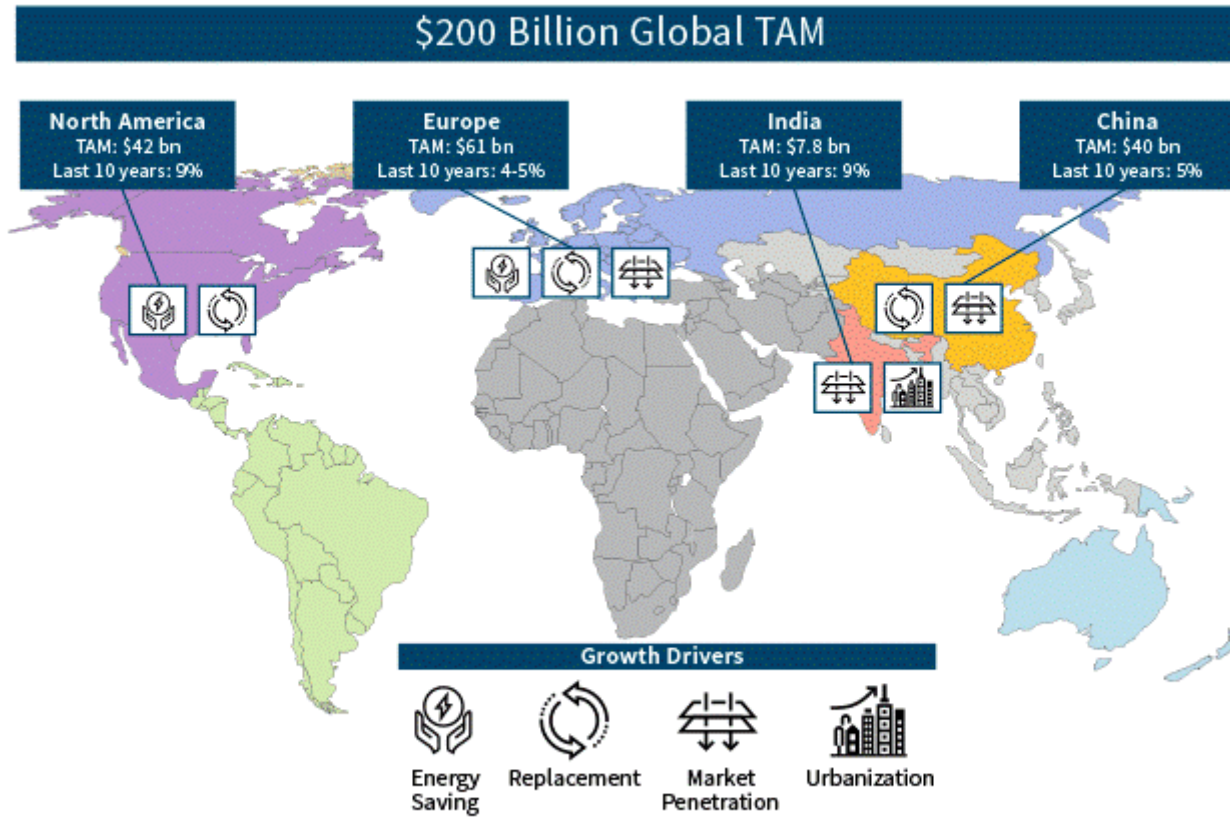
Investment analysts are constantly asking themselves: Is growth in my sector getting better, getting worse, or staying the same? And looking at one key area of industrials—heating, ventilation, and air conditioning (HVAC)—we believe there are enough tailwinds to suggest solid growth. Pricing tends to be at least as good as, if not better than, inflation. And energy efficiency is driving compelling changes to the industry. Let's take a deeper dive.

1. The TAM Is Large and Exploitable

At a high level, HVAC offers a \$200 billion global total addressable market (TAM), which refers to the entire revenue opportunity that exists within a market for a product or service. This is a large and attractive opportunity set.

Moreover, we believe growth in most markets either is improving or will be better than we initially expected coming out of COVID, driven by increasing regulation and a focus on energy efficiency and air quality.

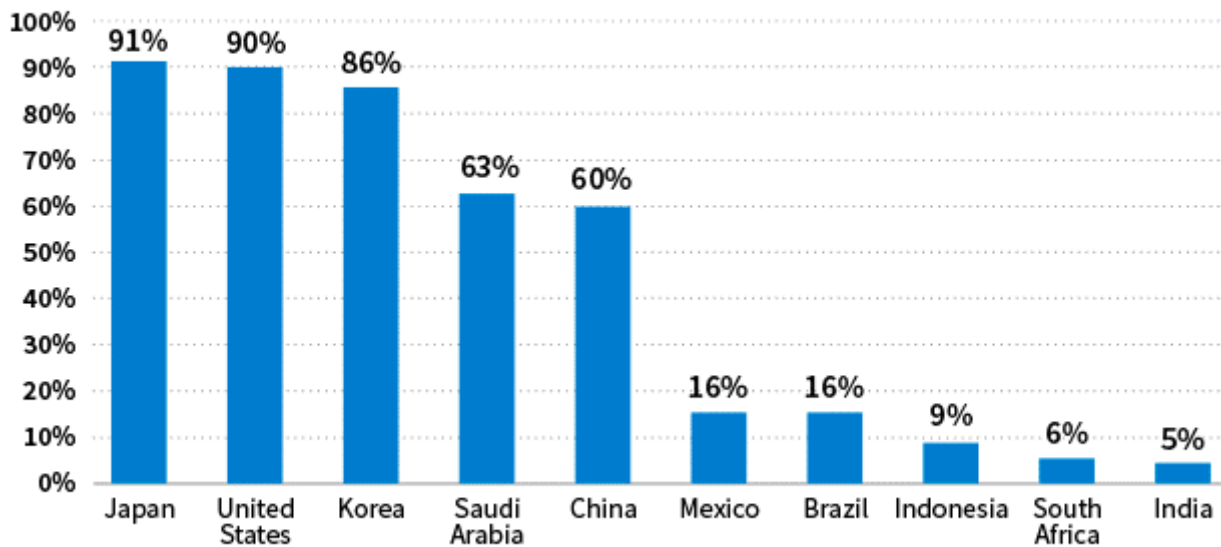
HVAC: A Compelling Opportunity



Source: William Blair, as of April 2023.

We believe the opportunity set is extensive, with a broad range of companies across geographies and verticals addressing various aspects of HVAC. For example, mature markets such as the United States and Europe already have high penetration rates, so 70% to 80% of demand is driven by replacement. In these markets, the opportunity is for higher-value upgrades such as heat pumps. In emerging markets, growth is driven by increasing penetration rates as a result of rising income levels and urbanization.

Percentage of Households With Air Conditioners



Source: International Energy Agency, as of 2018.

2. Regulatory Support Is Driving Demand

The heating and cooling of buildings makes up 15% of global emissions, according to the International Energy Agency (IEA). Continued environmental, social, and governance (ESG) pressure is now increasing regulatory support and government incentives for reducing these emissions, driving innovation that is leading to adoption of cleaner technologies.

The downside for the consumer—the fact that these cleaner technologies tend to come at a higher cost than traditional technologies—is an upside for HVAC companies, which could see higher profits and thus stock returns.

3. The Heat Pump Is Here

One of these cleaner technologies is the heat pump. Unlike a traditional furnace, which uses oil or gas (and a lot of energy) to heat the air, a heat pump uses electricity. Essentially, heat pumps heat or cool air by moving it over either warm or cool coils—but they only require electricity to transfer thermal energy between locations.

This means heat pumps have lower operating costs and an energy efficiency that is three to five times higher than traditional HVAC systems. Heat pumps are also much cleaner because they don't have the emissions associated with oil and gas.

So why isn't everyone moving to heat pumps? The upfront costs are still quite high, varying by country and type of heat pump. And actual operating costs vary by how expensive electricity costs are in the location of operation. The good news is that upfront costs are decreasing with government incentives, and broadly speaking, operating a heat pump tends to be cheaper than operating a traditional furnace.

We believe an additional growth driver in the United States will be a proposed rule by the U.S. Environmental Protection Agency (EPA) to ban the use of a current refrigerant (called R-410A) in new units starting in 2025. The

goal of the regulation is lower emissions associated with cooling. The new refrigerant will not work with older units that used R-410A, and that means the repair/replace equation will likely tip toward replace as the supply of old refrigerants becomes scarce.

4. Regional Opportunities Abound

In the United States, heat pumps are starting to catch on. Heat pump year-over-year growth has outpaced the shipment of traditional home HVAC units over the past couple of quarters, with government incentives for both manufacturers and consumers driving adoption. A tax credit of up to \$2,000 is available for heat pump installations, and low- to moderate-income homeowners can receive a rebate of up to \$8,000 for a heat pump HVAC system.

Europe also has high HVAC penetration, with demand driven by replacement. But the current energy crisis is driving the adoption of cleaner energy heating and cooling solutions, and heat pumps have emerged as the preferred solution, thanks to government incentives driving adoption. We believe there's a long runway for growth in heat pumps, with penetration rates still below 20% in most European countries. Most original equipment manufacturers (OEM) are working to increase capacity in Europe to address this growing demand for heat pumps.

India is a penetration story, with only 5% of households owning an air conditioning unit in 2018, as the chart above shows (and closer to 8% today). In China, penetration is higher, but it still lags developed countries in Asia such as Japan. We're optimistic about India, but the near-term outlook in China is murky because of the slowdown in the property market.

Limitations

To summarize, we believe the growth opportunity in HVAC remains strong; however, we would be remiss not to mention some of the limitations the industry is facing, such as the cost of new technologies and labor shortages.

The upfront cost of energy-efficient HVAC solutions can be as much as two to four times that of traditional HVAC solutions, making them cost-prohibitive in certain situations. The good news is that generous government incentives are bringing the costs down, helping accelerate adoption.

In terms of labor shortages, it's not only the number of workers that is lacking, but also workers who are trained on new technology. Installing a heat pump is different from installing a traditional furnace. There's a bottleneck in Europe now, and we're likely to see a similar situation in the United States if the technology takes off as it did in Europe.

Our bottom-up approach, which involves feet on the ground around the world, helps us assess risks and opportunities. Some industry participants we're watching include an Italy-based provider of residential thermal comfort solutions; a distributor of commercial/industrial refrigeration and HVAC equipment that also manufactures refrigeration plants and heat pumps; and a producer of actuators and valves for HVAC systems with a good balance between air and water applications. This illustrates just how broad the applications and opportunities are in HVAC.

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