

Carrier Global Corp.

The good, the bad, and the ugly

Maintain Rating: UNDERPERFORM | PO: 55.00 USD | Price: 56.76 USD

The good: divesting well, decent debt rates, synergies

Carrier has signed definitive sale agreements for Global Access Solutions (17.0x 2023E EBITDA) and Commercial Refrigeration (16.5x 2023E EBITDA). While we estimate that the Refrigeration multiple was closer to 10x on '22 EBITDA, the reality is that headlines matter and proceeds were still above our expectations of a high-single-digit multiple. CEO Gitlin noted that the Chubb's ~13x multiple would be a good baseline. While the remaining divestitures spin will have much lower headline multiples, all-in, Gitlin is likely to have delivered on his promise of divestiture multiples matching/exceeding that of Chubb. We estimate CARR's all-in debt financing for the Viessmann acquisition averages 5.2%, below our 5.75% estimate. Carrier's initial 2024 guidance is likely to be above current consensus, as it will include Viessmann (expected to close by YE23) and a partial-year benefit from assets held for sale. We see the potential for management to raise its EUR200mn 2026 target for Viessman synergies.

The bad: more assets to sell, risks to 2024 demand

Headline multiples from Industrial Fire and Residential & Commercial Fire assets are likely to be lower. We assume Industrial Fire realizes a 12x EBITDA multiple. We expect Residential & Commercial Fire to be spun-off at 8x. We assume an initial 3x net debt to EBITDA leverage. While initial 2024 guidance may look good, Carrier will face tougher comparisons in 2025 (given a partial-year benefit from assets to be divested in '24). Delays on divestiture timelines could add noise to 2H24 results. We remain concerned about greater-than-expected destocking of residential equipment by distributors. Light commercial comps should remain difficult for 1Q-3Q24. We maintain our Underperform rating on CARR given concerns about European heat pump demand and the US light commercial HVAC market.

The ugly: European demand outlook

Since the 4/26 announcement of the Viessmann acquisition, both short- and long-term prospects for European heat pump markets have weakened. On 9/8, the German government passed a weaker version of the original heating law that would have been a de facto boiler ban. The EU's EPBD was weakened recently; it now gives leeway on implementation. European construction markets remain weak, impacting demand for Viessmann's boilers. Viessmann's solar product's demand could be challenged after a court ruling potentially limits government support for domestic solar manufacturers.

Estimates (Dec) (US\$)	2021A	2022A	2023E	2024E	2025E
EPS	2.27	2.34	2.70	3.01	3.34
GAAPEPS	1.87	4.09	1.61	3.12	3.44
EPS Change (YoY)	36.7%	3.1%	15.4%	11.5%	11.0%
Consensus EPS (Bloomberg)			2.72	2.90	3.10
DPS	0.47	0.59	0.78	0.84	1.00
Valuation (Dec)					
P/E	25.0x	24.3x	21.0x	18.9x	17.0x
GAAP P/E	30.4x	13.9x	35.3x	18.2x	16.5x
Dividend Yield	0.8%	1.0%	1.4%	1.5%	1.8%
EV / EBITDA*	17.3x	17.2x	15.1x	13.9x	12.8x
Free Cash Flow Yield*	4.0%	2.9%	4.0%	4.8%	5.2%
* For full definitions of <i>IQ</i> method SM measures, see page 9.					

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Refer to important disclosures on page 10 to 12. Analyst Certification on page 8. Price
Objective Basis/Risk on page 8.

19 December 2023

Equity

Andrew Obin Research Analyst BofAS +1 646 855 1817 andrew.obin@bofa.com

David Ridley-Lane, CFA Research Analyst BofAS +1 646 855 2907 david.ridleylane@bofa.com

Sabrina Abrams Research Analyst BofAS +1 646 556 3520 sabrina.abrams@bofa.com

Devin Leonard Research Analyst BofAS +1 646 855 3698 devin.leonard@bofa.com

Stock Data

Price

Price Objective 55.00 USD Date Established 5-Oct-2023 Investment Opinion R-3-7 52-Week Range 40.28 USD - 60.04 USD Mrkt Val (mn) / Shares Out 47,624 USD / 839.0 Free Float 99.8% Average Daily Value (mn) 242.66 USD RofA Ticker / Exchange CARR / NYS Bloomberg / Reuters CARR US / CARR.N ROE (2023E) 27 3% Net Dbt to Eqty (Dec-2022A) 65.9% ESGMeter™ High

ESGMeter is not indicative of a company's future stock price performance and is not an investment recommendation or rating. ESGMeter is independent of BofA Global Research's equity investment rating, volatility risk rating, income rating, and price objective for that company. For full details, refer to "BofA ESGMeter Methodology".

F&S: Fire & Security

HVAC: heating, ventilation, and air conditioning

EU: European Union

EPBD: European Performance for Buildings Directive

56.76 LISD

iQprofile[™] Carrier Global Corp.

iQ method [™] – Bus Performance*					
(US\$ Millions)	2021A	2022A	2023E	2024E	20251
Return on Capital Employed	11.2%	11.4%	12.5%	13.2%	13.7%
Return on Equity	29.6%	26.6%	27.3%	26.4%	24.5%
Operating Margin	13.7%	14.2%	14.6%	15.3%	15.0%
Free Cash Flow	1,893	1,390	1,922	2,268	2,461
Q method [™] – Quality of Earnings*					
(US\$ Millions)	2021A	2022A	2023E	2024E	2025
Cash Realization Ratio	1.1x	0.9x	1.0x	1.0x	1.0
Asset Replacement Ratio	1.0x	0.9x	0.7x	0.8x	0.9
Tax Rate	20.5%	21.7%	21.8%	22.5%	22.5%
Net Debt-to-Equity Ratio	94.6%	65.9%	48.3%	25.5%	8.7%
Interest Cover	9.8x	11.7x	17.5x	20.7x	24.3>
Income Statement Data (Dec)					
US\$ Millions)	2021A	2022A	2023E	2024E	2025
Sales	20,613	20,421	22,169	23,276	24,674
% Change	18.1%	-0.9%	8.6%	5.0%	6.0%
Gross Profit	5,980	5,577	6,513	6,908	7,397
% Change	17.0%	-6.7%	16.8%	6.1%	7.1%
EBITDA	3,203	3,223	3,670	3,983	4,325
% Change	21.9%	0.6%	13.8%	8.5%	8.6%
Net Interest & Other Income	(226)	(252)	(186)	(173)	(163)
Net Income (Adjusted) % Change	2,024 38.5%	2,019 -0.2%	2,308 14.3%	2,570 11.4%	2,849 10.8%
ree Cash Flow Data (Dec) US\$ Millions)	2021A	2022A	2023E	2024E	2025
Net Income from Cont Operations (GAAP)	2,024	2,019	2,308	2,570	2,849
Depreciation & Amortization	338	380	550	533	517
Change in Working Capital	317	(336)	207	(325)	(365
Deferred Taxation Charge	(74)	(124)	0	0	(
Other Adjustments, Net	(368)	(196)	(746)	(94)	(98
Capital Expenditure	(344)	(353)	(397)	(416)	(441
Free Cash Flow	1,893	1,390	1,922	2,268	2,461
% Change			20 20/	10.00/	•
Chara / Issue Denurshase	37.2%	-26.6%	38.2%	18.0%	8.5%
Share / Issue Repurchase	0	0	0	0	8.5%
Cost of Dividends Paid	0 (417)	0 (509)	0 (661)	0 (717)	8.5% (854
•	0	0	0	0	8.5% (854)
Cost of Dividends Paid Change in Debt Balance Sheet Data (Dec)	0 (417) (551)	(509) (983)	0 (661) (846)	0 (717) (500)	8.5% ((854 (500)
Cost of Dividends Paid Change in Debt Balance Sheet Data (Dec) (US\$ Millions)	0 (417) (551) 2021A	0 (509) (983) 2022A	0 (661) (846) 2023E	0 (717) (500)	8.5% ((854 (500
Cost of Dividends Paid Change in Debt Balance Sheet Data (Dec) (US\$ Millions) Cash & Equivalents	0 (417) (551) 2021A 2,987	0 (509) (983) 2022A 3,520	0 (661) (846) 2023E 3,739	0 (717) (500) 2024E 4,790	8.5% (854 (500 2025 5,897
Cost of Dividends Paid Change in Debt Balance Sheet Data (Dec) US\$ Millions) Cash & Equivalents Trade Receivables	0 (417) (551) 2021A 2,987 2,403	0 (509) (983) 2022A 3,520 2,833	0 (661) (846) 2023E 3,739 3,015	0 (717) (500) 2024E 4,790 3,293	8.5% ((854 (500 2025 5,897 3,626
Cost of Dividends Paid Change in Debt Balance Sheet Data (Dec) US\$ Millions) Cash & Equivalents Trade Receivables Other Current Assets	0 (417) (551) 2021A 2,987 2,403 6,017	0 (509) (983) 2022A 3,520 2,833 3,526	0 (661) (846) 2023E 3,739 3,015 3,597	0 (717) (500) 2024E 4,790 3,293 3,788	8.5% ((854 (500 2025 5,897 3,626 4,028
Cost of Dividends Paid Change in Debt Balance Sheet Data (Dec) US\$ Millions) Cash & Equivalents Trade Receivables Other Current Assets Property, Plant & Equipment	0 (417) (551) 2021A 2,987 2,403 6,017 1,826	0 (509) (983) 2022A 3,520 2,833 3,526 2,241	0 (661) (846) 2023E 3,739 3,015 3,597 2,230	0 (717) (500) 2024E 4,790 3,293 3,788 2,246	8.5% (854 (500 2025 5,897 3,626 4,028 2,300
Cost of Dividends Paid Change in Debt Balance Sheet Data (Dec) US\$ Millions) Cash & Equivalents Trade Receivables Other Current Assets	0 (417) (551) 2021A 2,987 2,403 6,017 1,826 12,939	0 (509) (983) 2022A 3,520 2,833 3,526 2,241 13,966	0 (661) (846) 2023E 3,739 3,015 3,597 2,230 14,013	0 (717) (500) 2024E 4,790 3,293 3,788 2,246 13,923	8.5% ((854 (500) 2025 5,897 3,626 4,028 2,300 13,844
Cost of Dividends Paid Change in Debt Balance Sheet Data (Dec) US\$ Millions) Cash & Equivalents Trade Receivables Other Current Assets Property, Plant & Equipment Other Non-Current Assets	0 (417) (551) 2021A 2,987 2,403 6,017 1,826	0 (509) (983) 2022A 3,520 2,833 3,526 2,241	0 (661) (846) 2023E 3,739 3,015 3,597 2,230	0 (717) (500) 2024E 4,790 3,293 3,788 2,246	8.5% ((854 (500) 2025 5,897 3,626 4,028 2,300 13,844 29,695
Cost of Dividends Paid Change in Debt Balance Sheet Data (Dec) US\$ Millions) Cash & Equivalents Trade Receivables Other Current Assets Property, Plant & Equipment Other Non-Current Assets Total Assets	0 (417) (551) 2021A 2,987 2,403 6,017 1,826 12,939 26,172	0 (509) (983) 2022A 3,520 2,833 3,526 2,241 13,966 26,086	0 (661) (846) 2023E 3,739 3,015 3,597 2,230 14,013 26,594	0 (717) (500) 2024E 4,790 3,293 3,788 2,246 13,923 28,040	8.5% (854 (500) 2025 5,897 3,626 4,028 2,300 13,844 29,695
Cost of Dividends Paid Change in Debt Balance Sheet Data (Dec) US\$ Millions) Cash & Equivalents Trade Receivables Other Current Assets Property, Plant & Equipment Other Non-Current Assets Total Assets Short-Term Debt	0 (417) (551) 2021A 2,987 2,403 6,017 1,826 12,939 26,172 183	0 (509) (983) 2022A 3,520 2,833 3,526 2,241 13,966 26,086 140	0 (661) (846) 2023E 3,739 3,015 3,597 2,230 14,013 26,594 0	0 (717) (500) 2024E 4,790 3,293 3,788 2,246 13,923 28,040 0	8.5% ((854 (500) 2025 5,897 3,626 4,028 2,300 13,844 29,695 (6,704
Cost of Dividends Paid Change in Debt Balance Sheet Data (Dec) US\$ Millions) Cash & Equivalents Trade Receivables Other Current Assets Property, Plant & Equipment Other Non-Current Assets Total Assets Short-Term Debt Other Current Liabilities	0 (417) (551) 2021A 2,987 2,403 6,017 1,826 12,939 26,172 183 6,444	0 (509) (983) 2022A 3,520 2,833 3,526 2,241 13,966 26,086 140 5,892	0 (661) (846) 2023E 3,739 3,015 3,597 2,230 14,013 26,594 0 6,352	0 (717) (500) 2024E 4,790 3,293 3,788 2,246 13,923 28,040 0 6,496	8.5% (854 (500) 2025 5,897 3,626 4,028 2,300 13,844 29,695 (6,704 6,996
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Cost of Dividends Paid Change in Debt Balance Sheet Data (Dec) (US\$ Millions) Cash & Equivalents Trade Receivables Other Current Assets Property, Plant & Equipment Other Non-Current Assets Total Assets Short-Term Debt Other Current Liabilities Long-Term Debt Other Non-Current Liabilities	0 (417) (551) 2021A 2,987 2,403 6,017 1,826 12,939 26,172 183 6,444 9,513 2,938	0 (509) (983) 2022A 3,520 2,833 3,526 2,241 13,966 26,086 140 5,892 8,702 3,276	0 (661) (846) 2023E 3,739 3,015 3,597 2,230 14,013 26,594 0 6,352 7,996 3,433	0 (717) (500) 2024E 4,790 3,293 3,788 2,246 13,923 28,040 0 6,496 7,496 3,415	8.5% ((854) (500) 2025i 5,897 3,626 4,028 2,300 13,844 29,695 (6,704 6,996 3,410 17,110 12,585

Company Sector

Industrials/Multi-Industry

Company Description

Carrier is a global provider of HVAC, refrigeration, fire and security solutions. The company was previously part of UTC and was spun off as an independently-traded company in April 2020 with the goal of having a more operationally focused enterprise with more capital allocation flexibility. The company is headquartered in Palm Beach Gardens, Florida and employs approximately 53,000 employees globally.

Investment Rationale

Relative to peers, CARR has the highest exposure to North American residential HVAC. We see headwinds to residential HVAC including concerns around excess channel inventory. We also see potential headwinds for light commercial HVAC market into 1H24. We see increasingly negative datapoints on Europe's heat pump demand trends and are concerned about Europe's near-term heat pump demand within the context of Carrier's recent acquisition of Viessmann.

Stock Data

Average Daily Volume

4,275,157

Quarterly Earnings Estimates

	2022	2023
Q1	0.55A	0.52A
Q2	0.70A	0.79A
Q3	0.70A	0.89A
04	0.40A	0.50E

Multiples for announced divestitures vs. BofA estimates

Carrier has signed definitive sale agreements for Global Access Solutions (17.0x 2023E EBITDA) and Commercial Refrigeration (16.5x 2023E EBITDA). We estimate that the Refrigeration multiple was closer to 10x on '22 EBITDA.

We estimate the pending Industrial Fire sale to have a 12x multiple. Residential & Commercial Fire is expected to be spun-off at 8x. We assume an initial 3x net debt to EBITDA leverage. Carrier management is optimistic it can announce the divesture before 4Q23 results and initial 2024 guidance.

Exhibit 1: Multiples/ leverage for the announced divestitures

BofA estimates for EBITDA and multiple by business

(\$mn)	EBITDA	Multiple	Proceeds
Security	300	16.5x	4,950
Commercial Refrigeration	77	10.0x	770
Commercial & Residential Fire	200	8.0x	1,600
Industrial Fire	75	12.0x	900
Total	652	12.6x	8,220

Source: Company filings, BofA Global Research estimates

Note: We had previously assumed as 12x multiple on Commercial Refrigeration, Carrier has redassified assets within Commercial Refrigeration since the 4/25/23 announcement.

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Exhibit 2: Multiples/leverage for the announced divestitures

Actual announced multiples for security and commercial refrigeration

(\$mn)	EBITDA	Multiple	Valuation
Security	291	17.0x	4,950
Commercial Refrigeration	47	16.5x	775
Commercial & Residential Fire	200	8.0x	1,600
Industrial Fire	100	12.0x	1,200
Total	638	13.4x	8.525

Source: Company filings, BofA Global Research estimates

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Details on Commercial Refrigeration divestiture

On 12/13, Carrier reached a definitive agreement to sell its Commercial Refrigeration business to Haier at an enterprise value of \$775mn, including ~\$200mn of net pension liabilities. This represented a ~16.5x 2023E EBITDA, per management. This compares to the 2022 multiple of ~8.8x implied from Carrier's initial slide presentation (e.g., \$1.1bn of revenue and high-single digit EBITDA margin). We see limited read across for Dover's (DOV) Commercial Refrigeration, as the buyer (Haier) paid a premium for a non-US asset.

Exhibit 3: Carrier's announced multiple for Commercial Refrigeration

The multiple Carrier provided implies a ~\$50mn EBITDA

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Enterprise Value	\$775
2023E Multiple	16.5x
Implied EBITDA	\$47

Source: Company filings, BofA Global Research estimates

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Details on Global Access Solutions divestiture

On 12/8 Carrier reached a definitive agreement to sell its security business, Global Access Solutions, to Honeywell at an enterprise value of \$4.95bn. This represents a 17x 2023 EBITDA per management.

Exhibit 4: Carrier's announced multiple for Global Access Solutions

Carrier announced Global Access Solutions went for a 17x multiple

(\$mn)

Enterprise Value	\$4,950
Multiple	17.0x
Implied EBITDA	\$291

Source: Company filings, BofA Global Research estimates

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Debt schedule: better than expected rates

We estimate CARR's all-in debt financing for the Viessmann acquisition averages 5.2%, below our previous 5.75% estimate.



Exhibit 5: Debt issued by Carrier to fund acquisition of Viessmann

The debt's interest rate is 5.2%

	Principal	Coupon	Maturity	Interest Amount
5.800% notes due 2025	\$1,000,000,000	5.80%	2025	\$58,000,000
5.900% notes due 2034	\$1,000,000,000	5.90%	2034	\$59,000,000
6.200% notes due 2054	\$1,000,000,000	6.20%	2054	\$62,000,000
Euro 4.375% notes due 2025	\$820,883,250	4.38%	2025	\$35,913,642
Euro 4.125% notes due 2028	\$820,883,250	4.13%	2028	\$33,861,434
Euro 4.5% notes due 2032	\$930,334,350	4.5%	2032	\$41,865,046
Total	\$5,572,100,850	5.22%		\$290,640,122

Source: Company filings, BofA Global Research estimates Note: Euro dominated notes were converted to USD

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Sales on the back of permission from Courts

The sale announcements of Commercial Refrigeration and Global Access Solutions come soon after Kidde-Fenwal Inc. (a Carrier subsidiary) was given approval from the bankruptcy court to continue to market its fire suppression business and other assets. The permission was needed after opposing lawyers tried to delay the process ahead of planned mediation. While the permission was likely not needed for its non-fire business, the approval likely added a measure of security regarding any potential challenges to the sale of assets.

Viessmann accretion analysis

We present adjusted EPS accretion as if the Viessmann acquisition and the business divestitures had closed on January 1, 2023. We have translated Viessmann's numbers into USD at the current exchange rate of 1.091 EUR/USD.

Exhibit 6: Accretion analysis of Viessmann Climate Solutions

We expect the combined impact of the divestures and Viessmann to be \$0.20 dilutive in 2025E

					2024E				2025E
	BofA	BofA			pro	BofA			pro
(\$mn, except per share	2023E	2024E	Divestitures	Viessmann	forma	2025E	Divestitures	Viessmann	forma
Revenue	22,169	23,276	-696	4,359	26,939	24,674	-4,382	4,630	24,921
EBITDA	3,670	3,983	-124	831	4,690	4,325	-676	987	4,636
EBITDA margin	16.6%	17.1%	17.8%	19.1%	17.4%	17.5%	15.4%	19.5%	18.6%
D&A (note)	430	413	-9	77	481	397	56	74	528
Interest expense, net	<u>193</u>	<u>172</u>	<u>-59</u>	<u>536</u>	<u>650</u>	162	<u>-444</u>	<u>515</u>	<u>233</u>
Pre-tax income	3,047	3,397	-56	218	3,559	3,766	-288	398	3,876
Income taxes	666	764	-13	49	801	847	-65	90	872
Noncontrolling interest	<u>82</u>	<u>63</u>	<u>0</u>	<u>0</u>	<u>63</u>	<u>. 70</u>	<u>0</u>	<u>0</u>	<u>70</u>
Net Income (Adjusted)	2,299	2,570	-43	169	2,695	2,849	-223	308	2,934
Weighted Average Shares, Diluted	853	854	0	59	912	854	0	59	913
EPS, Adjusted	\$2.70	\$3.01			\$2.95	\$3.34			\$3.21

Source: BofA Global Research estimates

Note: D&A excluding acquisition-related intangible amortization.

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We assume the EUR 9.6bn in cash required for the transaction will be financed at a blended rate of 5.21% that is implied by the announced debt offering and current rate for its delayed draw. We assume depreciation & amortization (excluding acquisition-related intangible amortization) is similar at Viessmann to overall Carrier. We update the analysis to reflects Global Access Solutions' 17x multiple and Commercial Refrigeration's 16.5x multiple. We assume Industrial Fire to have a 12x multiple. For Viessmann's revenue in 2023, Carrier guided to €4B. The divestitures and Viessmann result in \$0.06 dilution in 2024, and \$0.12 dilution in 2025.

For our 2024 pro-forma it reflects the partial impact from announced divestures that are not anticipated to close until 2H24. The pro-forma also reflects Carrier paying down debt using the funds from the divestitures once it closes 2H24.

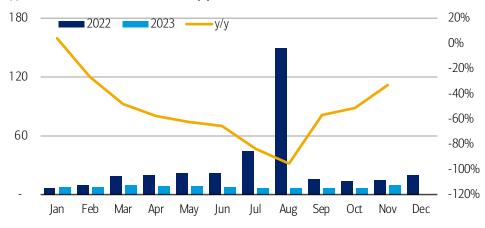


German heating law changes and application data

On September 8th, the German government voted to pass a less strict version of its original heating law. The law, likely to go into effect January 1, 2024, requires new heating systems to use 65% renewable energy. However, heating systems that have the ability to use renewable energy are still allowed to be installed (e.g., hydrogen-ready boilers). The legislation was further weakened because the regulation on renewable power sources will not be enforced in cities until municipal authorities submit their heating plans in 2026-2028.

German data from the Economic Affairs and Climate Action ministry shows heat pump applications fell 50% in 1H23 vs 1H22. While applications did accelerate from October to November, November's heat pump applications were still down (33)% y/y. Applications YTD are down (74)%.

Exhibit 7: Applications for heat pump subsidy in Germany Applications in November were (33)% lowery/y



Source: Federal Office for Economic Affairs & Export Control (BAFA)

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Heat pump units sold in Europe down in 3Q23

New data from the European Heat Pump Association (EHPA) show sales for heat pumps have shrunk over the course of 2023. On average in the ten countries analyzed, 3Q23 saw a sales decline of (14)% y/y. The EHPA notes that the drop is part of an alarming trend putting both European decarbonization goals at risk and jeopardizing the €7bn of investments announced by heat pump and component manufacturers for 2022 to 2025. The EHPA links the declining sales to ambiguous communication from policymakers, changing government policies and subsidies, and the drop in gas prices.

German heat pump sales are still up on a y/y basis. However, the y/y declines in applications for heat pumps suggest these sales are likely coming from backlog.

Exhibit 8: Heat pump units sold per country and quarter y/y

On average heat pump sales were down -14% in 3Q23

	1Q23	2Q23	3Q23
Austria	79%	25%	-33%
Switzerland	20%	-10%	-7%
Germany	124%	103%	60%
Denmark	34%	-43%	-56%
Finland	4%	-30%	-66%
France	12%	4%	-13%
Italy	-14%	-38%	-45%
Netherlands	62%	54%	25%
Norway	41%	15%	-8%
Sweden	-9%	2%	-6%
Average	22%	0%	-14%

Source: European Heat Pump Association

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Overcapacity may be coming as more investments announced

Over €7bn of investments have been announced by heat pump and component manufacturers. This capex seems likely to lead to overcapacity given 3Q23's decline in European heat pump applications. The German press (*Tagesspiegel*) on 9/19 reported that the CEO of Stiebel Eltron (German heat pump manufacturer) warned about a price war "whether we want it or not" in the face of higher capacity and slower demand. Daikin on its earnings call noted various companies entering the market and that competition is intensifying. It explained that companies without the ability to invest will eventually be weeded out.

Exhibit 9: Announced investments for heat pumps and components in Europe

€7bn of capacity being added in Europe

Company	Main product	Capacity	Investments (Euros)	Target production volumes (units)	Country	Date of completion
AIT Group	Heat pumps	Double capacity		300,000	Germany	2024-2025
BDR Thermea group	Heat pumps and hybrid solutions	Scale up capacity by 50%	300-400mn 225mn (Poland) & 700mn	800,000	France, Turkiye, Italy, Netherlands, Spain	2023
Bosch	Heat pumps		(Portugal)		Europe	End of decade
		100,000 external and 200,000	(·	100.000 external and		
Clivet SpA/ Midea Group	Heat pumps	internal units/ year	60mn	200,000 internal units/ year	Italy	Q2 - 2024
,	Heat pumps, R&D,	, and the second		Quadruple today's	Poland, Belgium,	_
Daikin Europe	service capacity	Quadruple Capacity	1.2bn	production capacity	Germany	2025
Group Atlantic	Heat pumps		150mn		Czech Republic	2025
Grundfos	Heat pumps		20mn		France	2021
Hoval	Heat pumps		60mn	30,000	Serbia	2023-2024
		R&D, distribution,	50 million GBP 2 million GBP			
Ideal heating	Heat pumps	manufacturing, training	in training center		Liechtenstein, Slovakia	2024
Kensa	Heat pumps	Expand geothermal production capacity, reduce cost	70mn	50,000	UK	2024
	Heat pumps & air	Expand annual capacity of A/W				
Mitsubishi	conditioning	heat pumps	109mn	300,000	UK	2024
		Increased capacity for A/W				
Midea	Heat pumps	units	60mn	300,000	Turkiye	2024
Nibe	Heat pumps	Triple Capacity	460mn	300,000	Italy	2025
Panasonic	Heat pumps		145mn		Sweden	2026
Stiebel Eltron	Heat pumps		600mn	500,000	Czech Republic	2025
Vargas Group	Heat pumps		26mn in 2022; 86mn in 2023	240,000	Poland, Belgium, Germany	2024
G	Heat pumps & energy			.,	, , ,	
Vaillant	efficiency	Double Production	130mn		Slovakia, France	2022-2023
	Heat pumps & other				Poland, Belgium,	
Viessmann	green solutions		1bn	150,000	Germany	2025
Wilo group	Pump factory and new company HQ		300mn		Germany	2021
ZIEHL-ABEGG	Fans		10mn		Germany	Completed
ZIEI IE ADEGO	i uiis		1011111		Germany	compicted

Source: European Heat Pump Association

BofA GLOBAL RESEARCH

Changes to European Union's EPDB

The European Union's Energy Performance for Building Directive (EPBD) was weakened recently. The EPBD now gives leeway on implementation and lacks large incentives to reach its 2050 target for phasing out fossil fuels in buildings. The revised EPBD has a diluted minimum energy performance standards for residential buildings. The revised EPBD allows countries to choose their renovation strategy, rather than focusing on lowest performance buildings. The agreement on the EU's EPBD mandates zero emissions from fossil fuels for all new buildings by 2030, and for all buildings by 2050. However, loopholes and the fact the law does not require the prioritization of renewable energy leaves no guarantee that all new homes will be fossil fuel free by 2030.

German budget challenge

Germany's budget crisis threatens planned government assistance for its domestic solar manufacturers. Originally, the program was anticipated to receive €2.5bn from the



German government through its climate transformation fund. However, the German Constitutional Court in November banned the transfer of €60bn unused pandemic emergency funds to the climate fund.



Price objective basis & risk

Carrier Global Corp. (CARR)

We base our \$55 price objective on 11x EV/EBITDA of our 2025 estimates. Our 11x target multiple is at a discount to peers, trading at 12x on 2024 estimates. We believe that the discount is warranted given the potential for destocking across res and non-res.

Upside risks to our price objective are: 1) continued solid execution in 2023, 2) non-residential markets take longer to crack than our thesis, and 3) price increases offset impact of destocking cycle.

Downside risks to our price objective are: 1) slower-than-expected macro recovery, 2) inability to execute on announced cost savings plan, and 3) lost market share to competitors.

Analyst Certification

I, Andrew Obin, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

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BofA Securities is currently acting as Financial Advisor to Carrier Global Corp in relation to the sale of its commercial refrigeration business to Haier Smart Home Co Ltd., which was announced on December 13, 2023.

US - Multi-Industrials/Engineering and Construction Coverage Cluster

Investment rating	Company	Bof A Ticker	Bloomberg symbol	Analyst
BUY				
	APi Group	APG	APG US	Andrew Obin
	AspenTech	AZPN	AZPN US	Andrew Obin
	Atmus Filtration	ATMU	ATMU US	Andrew Obin
	Dover Corp	DOV	DOV US	Andrew Obin
	Eaton Corp PLC	ETN	ETN US	Andrew Obin
	Emerson Electric Co	EMR	EMR US	Andrew Obin
	Flowserve	FLS	FLS US	Andrew Obin
	General Electric Company	GE	GE US	Andrew Obin
	Honeywell International Inc.	HON	HON US	Andrew Obin
	ITT Inc.	ITT	ITT US	Andrew Obin
	Montrose Environmental Group, Inc.	MEG	MEG US	Andrew Obin
	Parker Hannifin Corporation	PH	PH US	Andrew Obin
	PTC Inc.	PTC	PTC US	Andrew Obin
	Rush	RUSHA	RUSHA US	Andrew Obin
	Vertiv	VRT	VRT US	Andrew Obin
NEUTRAL				
NEO I IOLE	3M Company	MMM	MMM US	Andrew Obin
	AMETEK Inc	AME	AME US	Andrew Obin
	Fortive Corporation	FTV	FTV US	Andrew Obin
	Illinois Tool Works	ITW	ITW US	Andrew Obin
	Johnson Controls International PLC	JCI	JCI US	Andrew Obin
	Rockwell	ROK	ROK US	Andrew Obin
	Trane Technologies PLC	П	TT US	Andrew Obin
	Vontier	VNT	VNT US	Andrew Obin
				7.11.21.21.7.22.11
UNDERPERFORM				
	Allegion	ALLE	ALLE US	Andrew Obin
	Ansys, Inc.	ANSS	ANSS US	Andrew Obin
	Carrier Global Corp.	CARR	CARR US	Andrew Obin
	Core & Main	CNM	CNM US	Andrew Obin
	John Bean Technologies	JBT	JBT US	Andrew Obin

US - Multi-Industrials/Engineering and Construction Coverage Cluster

Investment rating	Company	Bof A Ticker	Bloomberg symbol	Analyst
	Keysight	KEYS	KEYS US	David Ridley-Lane, CFA
	Pentair plc	PNR	PNR US	Andrew Obin

Qmethod [™] Measures Definitions

Return On Capital Employed NOPAT = (EBIT + Interest Income) × (1 – Tax Rate) + Goodwill Amortization Total Assets – Current Liabilities + ST Debt + Accumulated Goodwill	
A	
Amortization	
Return On Equity Net Income Shareholders' Equity	
Operating Margin Operating Profit Sales	
Earnings Growth Expected 5 Year CAGR From Latest Actual N/A	
Free Cash Flow Cash Flow From Operations – Total Capex N/A	
Quality of Earnings Numerator Denominator	
Cash Realization Ratio Cash Flow From Operations Net Income	
Asset Replacement Ratio Capex Depreciation	
Tax Rate Tax Charge Pre-Tax Income	
Net Debt-To-Equity Ratio Net Debt = Total Debt - Cash & Equivalents Total Equity	
Interest Cover EBIT Interest Expense	
Valuation Toolkit Numerator Denominator	
Price / Earnings Ratio Current Share Price Diluted Earnings Per Share (Basis As Specified)	
Price / Book Value Current Share Price Shareholders' Equity / Current Basic Shares	
Dividend Yield Annualised Declared Cash Dividend Current Share Price	
Free Cash Flow Yield Cash Flow From Operations — Total Capex Market Cap = Current Share Price × Current Basic Shares	
Enterprise Value / Sales EV = Current Share Price × Current Shares + Minority Equity + Net Debt + Sales	
Other LT Liabilities	
EV / EBITDA Enterprise Value Basic EBIT + Depreciation + Amortization	

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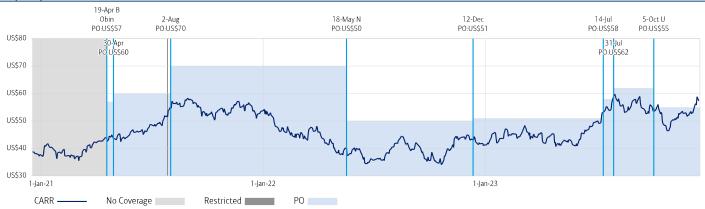
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Disclosures

Important Disclosures

Carrier (CARR) Price Chart



B: Buy, N: Neutral, U: Underperform, PO: Price Objective, NA: No longer valid, NR: No Rating

The Investment Opinion System is contained at the end of the report under the heading "Fundamental Equity Opinion Key". Dark grey shading indicates the security is restricted with the opinion suspended. Medium grey shading indicates the security is under review with the opinion withdrawn. Light grey shading indicates the security is not covered. Chart is current as of a date no more than one trading day prior to the date of the report.

Equity Investment Rating Distribution: Industrials/Multi-Industry Group (as of 30 Sep 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships R1	Count	Percent
Buy	43	48.86%	Buy	22	51.16%
Hold	26	29.55%	Hold	17	65.38%
Sell	19	21.59%	Sell	10	52.63%

Equity Investment Rating Distribution: Global Group (as of 30 Sep 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	1869	53.48%	Buy	1046	55.97%
Hold	828	23.69%	Hold	461	55.68%
Sell	798	22.83%	Sell	370	46.37%

Issuers that were investment banking dients of BofA Securities or one of its affiliates within the past 12 months. For purposes of this Investment Rating Distribution, the coverage universe includes only stocks. A stock rated Neutral is included as a Hold, and a stock rated Underperform is included as a Sell.

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Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster ^{R2}
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/Δ	> 20%

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