

Retailing Industry

Retail weekly/JMA weather outlook: 22 Feb 2024

Industry Overview

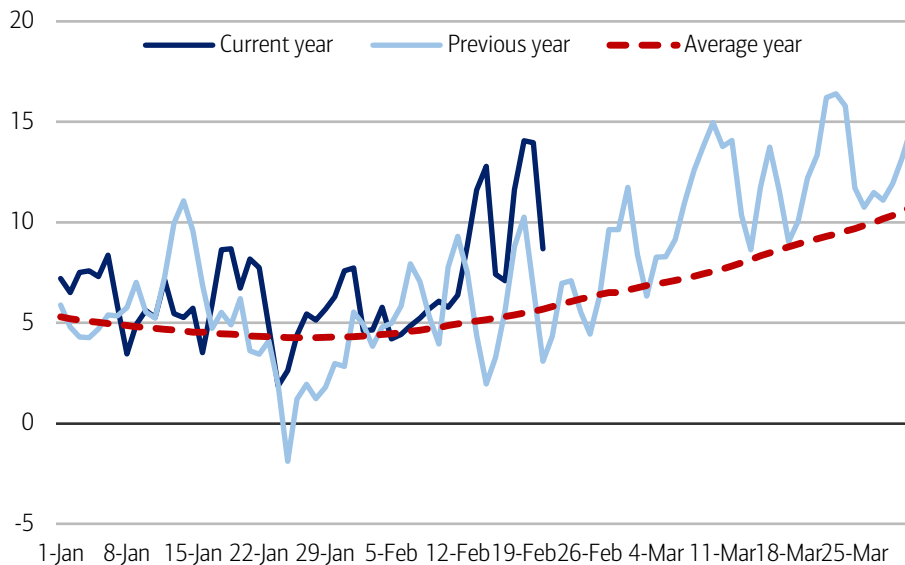
Attention on whether this summer will be brutally hot, given high temperatures last spring/summer

On February 22, the Japan Meteorological Agency (JMA) updated its weather forecast for the next month (Feb 24 to Mar 23), forecasting temperatures will be on a par with the average for this time of year. JMA forecasts that late February will see cold fronts move in, but from early to middle March, the influence of these cold fronts will fade.

On February 20, JMA released forecasts for the next three months (March to May) and this summer (June to August). For March to May, JMA expects temperatures to be in line with the average in northern Japan, and temperatures to be in line with or higher than the average for eastern and western Japan. Considering the formidable hurdles set by record-high temperatures in northern and eastern Japan the same time last year, it should be interesting to see how spring clothes will sell compared with last year. JMA expects temperatures across the nation to be higher this summer. While it is necessary to monitor whether the heat is just as brutally hot as last year (with record highs posted in northern, eastern and western Japan), the weather this summer might become a tailwind for seasonal merchandise.

Exhibit 2: Current-/previous-year and average temperatures (average for 10 largest cities)

Temperatures were up YoY and above historical average over the past week



Source: Japan Meteorological Agency, BofA Global Research

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22 February 2024

Equity
Japan
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Exhibit 1: Next week's events

Please confirm official times with companies

26 Feb (Mon)

Monthly data (Shimamura)

1 Mar (Fri)

Monthly data (Workman, department stores, K's, etc.)

Source: BofA Global Research

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Timestamp: 22 February 2024 04:44AM EST

Retail share-price performance

Exhibit 3: Retail share price performance (1W, 1M, 3M, 6M, 2023)

Retail Index was -0.2 points vs. TOPIX over the last week, -1.4% over the last month, and -3.9%, over the last three months

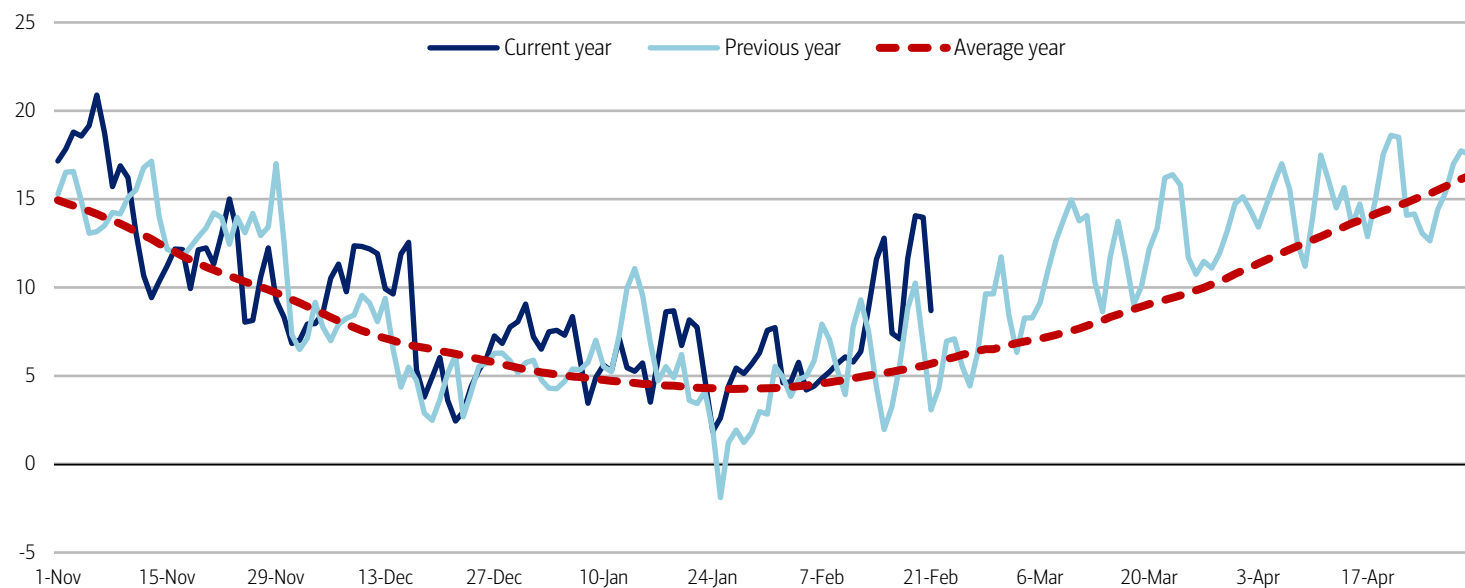
	1 Week	1 Month	3 Month	6 Month	YTD	2023			
Snow Peak	48.9	Snow Peak	37.0	Lawson	40.6	Lawson	42.1	Pal	96.4
Mizuno	7.4	Asics	33.4	Daikokuten Bussan	37.3	Daikokuten Bussan	38.4	Lawson	55.2
Asics	6.3	Mizuno	26.1	Mizuno	36.2	Nitori	37.2	Mizuno	51.6
MatsukiyoCocokara	6.1	Lawson	23.1	Seria	32.7	Kura Sushi	32.1	Isetan Mitsukoshi	50.7
Seria	6.1	Isetan Mitsukoshi	20.6	Nitori	29.8	Fast Retailing	31.2	Snow Peak	48.2
Workman	4.3	Nitori	18.8	Isetan Mitsukoshi	24.4	Seria	29.7	Fast Retailing	44.8
Komeri	4.0	World	14.2	World	24.2	Nishimatsuya	28.4	Kura Sushi	40.2
Yaoko	3.9	Seria	12.8	Fast Retailing	16.9	Isetan Mitsukoshi	25.4	JFront	39.7
Arcs	3.4	H2O	10.1	Aeon	16.7	World	24.4	Takashimaya	37.1
World	3.2	7&i	9.6	Snow Peak	15.6	PPIH	23.5	World	35.2
JINS	3.0	JFront	9.4	Asics	15.2	Asics	23.2	H2O	33.6
Fast Retailing	2.8	Fast Retailing	9.2	DCM	14.8	ZOZO	22.5	Nitori	32.1
7&i	2.8	Takashimaya	9.2	Sugi	13.0	Ryohin Keikaku	21.6	Daikokuten Bussan	30.3
Kura Sushi	2.5	Welcia	7.6	TOPIX	11.9	Mizuno	21.1	Seria	27.6
DCM	2.5	Sugi	7.3	Takashimaya	11.8	FOOD & LIFE	20.0	Aeon	26.7
Takashimaya	2.5	PPIH	5.7	7&i	11.6	Adastria	18.9	7&i	26.7
Sugi	2.4	Adastria	5.4	Kojima	11.4	Arcs	18.9	Life	25.3
Izumi	2.2	TOPIX	4.5	Kura Sushi	11.2	TOPIX	17.4	TOPIX	25.1
Onward	1.9	Kura Sushi	4.5	Arcs	10.6	Aeon	17.3	Sugi	25.0
Tsuruha	1.9	Arcs	4.2	Marui	10.0	Bic Camera	16.3	Onward	22.2
Isetan Mitsukoshi	1.8	DCM	4.1	H2O	8.9	DCM	14.1	Komeri	22.1
H2O	1.8	Komeri	3.7	JFront	8.9	JINS	14.1	Arcs	21.1
Life	1.8	Nishimatsuya	3.2	Life	8.1	Kojima	14.0	DCM	20.3
United Arrows	1.7	TOPIX Retail	3.1	TOPIX Retail	8.0	Komeri	13.0	TOPIX Retail	8.6
Skyark	1.5	ZOZO	2.6	Nishimatsuya	7.7	TOPIX Retail	11.2	MatsukiyoCocokara	7.4
Nishimatsuya	1.5	Daikokuten Bussan	2.4	Onward	7.3	Yaoko	11.1	ZOZO	18.4
U.S.M.H.	1.4	ABC-Mart	1.8	Komeri	6.6	Kohnan Shoji	10.7	Yaoko	17.1
TOPIX	1.4	Aeon	1.5	Bic Camera	6.5	Sugi	9.1	Marui	4.8
Kobe Bussan	1.3	Kohnan Shoji	0.5	FOOD & LIFE	6.3	Skyark	8.8	Nishimatsuya	TOPIX Retail
Kohnan Shoji	1.3	Izumi	0.5	MatsukiyoCocokara	6.3	Shimamura	6.8	Skyark	15.8
FOOD & LIFE	1.2	Kojima	0.4	Kohnan Shoji	5.9	Pal	6.0	PPIH	15.2
TOPIX Retail	1.2	Alpen	-0.5	Yaoko	5.7	Alpen	5.9	Shimamura	14.8
Ryohin Keikaku	1.0	Shimamura	-1.1	PPIH	5.5	7&i	5.7	FOOD & LIFE	13.7
Daikokuten Bussan	0.9	Pal	-1.5	ZOZO	5.3	Onward	4.8	Welcia	13.5
Pal	0.8	Onward	-1.7	ABC-Mart	4.9	H2O	4.5	ABC-Mart	13.2
Marui	0.7	Marui	-1.7	Ryohin Keikaku	3.5	Edion	3.6	Alpen	13.1
Lawson	0.7	Ryohin Keikaku	-1.8	Alpen	3.5	Sundrug	3.4	Adastria	12.4
Kojima	0.7	Yaoko	-1.9	Shimamura	3.2	Kobe Bussan	2.7	Izumi	11.5
PPIH	0.4	U.S.M.H.	-2.1	Edion	2.9	Tsuruha	2.3	Kohnan Shoji	10.7
Nitori	0.4	Sundrug	-2.2	Welcia	1.6	Tokyo Base	2.1	U.S.M.H.	10.4
Alpen	0.4	MatsukiyoCocokara	-2.3	Sundrug	0.8	Life	2.1	Yamada	9.9
K's	0.2	Life	-2.7	Yamada	0.5	Takashimaya	2.0	Sundrug	8.4
Yamada	0.1	Kobe Bussan	-3.3	Tokyo Base	0.3	Marui	1.7	Ryohin Keikaku	7.6
Aeon	-0.1	Workman	-3.5	Izumi	0.1	Izumi	1.6	Tokyo Base	7.1
Edion	-0.3	Yamada	-3.8	U.S.M.H.	-2.3	JFront	-2.2	Workman	6.8
Tokyo Base	-0.3	FOOD & LIFE	-4.6	Pal	-2.7	Kusuri no Aoki	-3.0	Edion	6.8
Descente	-0.5	Cosmos	-5.3	Kobe Bussan	-2.9	Welcia	-3.5	Kojima	6.1
JFront	-0.5	Bic Camera	-5.4	Skyark	-4.1	Yamada	-5.8	Bic Camera	4.8
ABC-Mart	-0.6	K's	-6.6	Adastria	-4.4	ABC-Mart	-5.9	United Arrows	4.3
Sundrug	-0.6	Edion	-6.7	K's	-4.5	K's	-5.9	K's	2.0
Welcia	-1.1	United Arrows	-8.1	Cosmos	-4.7	MatsukiyoCocokara	-8.7	Kusuri no Aoki	1.9
Goldwin	-1.5	JINS	-8.8	United Arrows	-5.7	Descente	-8.9	Pal	-0.6
Yonex	-1.7	Kusuri no Aoki	-8.9	Workman	-7.1	U.S.M.H.	-10.6	Kobe Bussan	-1.0
Adastria	-1.7	Yonex	-9.3	Tsuruha	-8.0	Goldwin	-12.3	Cosmos	-1.1
Kusuri no Aoki	-1.9	Skyark	-10.4	Kusuri no Aoki	-10.8	Yonex	-13.0	Goldwin	-2.6
Cosmos	-2.5	Goldwin	-11.9	JINS	-14.0	Cosmos	-14.0	Descente	6.1
ZOZO	-2.6	Descente	-12.5	Yonex	-21.5	United Arrows	-16.1	Tsuruha	-8.4
Bic Camera	-2.8	Tokyo Base	-13.3	Goldwin	-22.4	Snow Peak	-18.7	Yonex	-19.8
Shimamura	-2.8	Tsuruha	-14.3	Descente	-28.3	Workman	-20.8	JINS	-23.0
								Snow Peak	-60.7

Note: Includes companies outside of our coverage

Source: Bloomberg, BofA Global Research

Exhibit 4: Current-/previous-year and average temperatures (average for 10 largest cities)

Temperatures were up YoY and above historical average over the past week



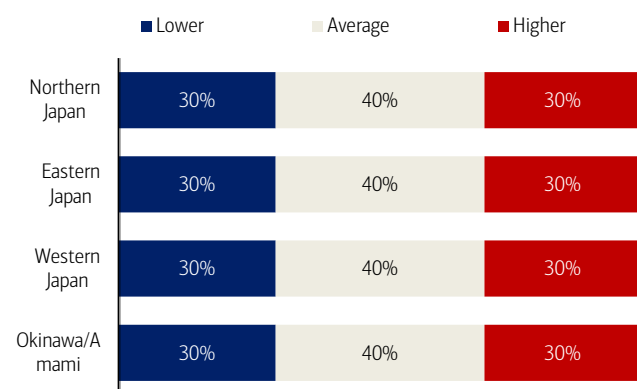
Note: Simple average for 10 cities (Tokyo, Yokohama, Osaka, Nagoya, Sapporo, Fukuoka, Kobe, Hiroshima, Sendai, Matsuyama). Average data based on 1991-2020.

Source: Japan Meteorological Agency, BofA Global Research

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Exhibit 5: Temperature forecasts by region (24 Feb - 23 Mar)

Forecast for at average temperatures in all regions

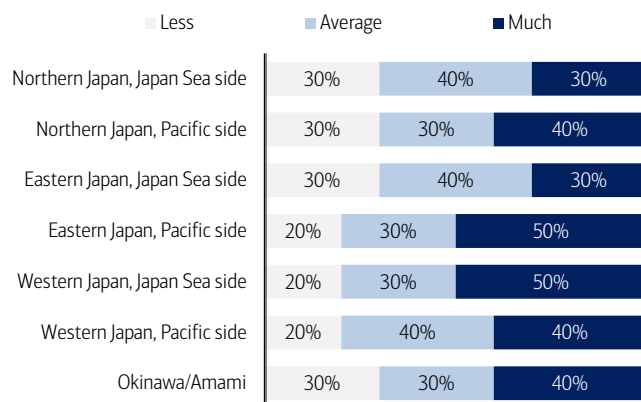


Source: Japan Meteorological Agency, BofA Global Research

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Exhibit 6: Precipitation forecasts by region (24 Feb - 23 Mar)

Forecast for at average precipitation in Northern Japan, Japan Sea side and Eastern Japan, Japan Sea side, and at or above average in Western Japan, Pacific side, and above average in other regions



Source: Japan Meteorological Agency, BofA Global Research

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Exhibit 7: Monthly temperature trends

Tokyo, Yokohama, Osaka, Nagoya, Sapporo

	Tokyo				Yokohama				Osaka				Nagoya				Sapporo			
	Average	vs. last year	vs. average	vs. 5 yrs	Average	vs. last year	vs. average	vs. 5 yrs	Average	vs. last year	vs. average	vs. 5 yrs	Average	vs. last year	vs. average	vs. 5 yrs	Average	vs. last year	vs. average	vs. 5 yrs
2021/1	5.4	-1.7	0.0	-0.5	6.2	-1.6	0.1	-0.5	6.2	-2.4	0.0	-0.4	5.0	-2.6	0.2	-0.4	-4.4	-2.1	-1.2	-1.3
2021/2	8.5	0.2	2.4	1.5	9.1	0.2	2.4	1.5	8.7	0.7	2.1	1.7	7.5	0.4	2.0	1.4	-2.2	-0.1	0.5	0.4
2021/3	12.8	2.1	3.4	2.5	13.2	2.0	3.5	2.5	12.2	0.8	2.3	1.5	12.0	1.3	2.8	1.8	3.8	0.5	2.7	1.5
2021/4	15.1	2.3	0.8	0.4	15.2	1.8	0.7	0.2	15.5	1.8	0.3	0.0	15.2	1.8	0.6	0.3	7.9	1.1	0.6	0.2
2021/5	19.6	0.1	0.8	-0.3	19.6	-0.1	0.8	-0.3	20.0	-0.8	-0.1	-0.8	19.5	-1.1	0.1	-0.9	13.1	-0.6	0.1	-1.3
2021/6	22.7	-0.5	0.8	0.3	22.7	-0.7	0.9	0.3	23.9	-1.0	0.3	0.3	23.4	-1.2	0.4	0.1	18.9	0.6	1.9	2.0
2021/7	25.9	1.6	0.2	0.0	26.0	1.6	0.4	0.2	27.9	1.9	0.2	0.1	27.4	2.0	0.5	0.3	23.9	2.7	2.8	2.3
2021/8	27.4	-1.7	0.5	-0.4	27.5	-1.6	0.5	-0.4	28.1	-2.6	-0.9	-1.5	27.8	-2.5	-0.4	-1.3	22.9	-0.4	0.6	0.4
2021/9	22.3	-1.9	-1.0	-1.6	22.6	-2.0	-1.1	-1.6	24.8	-1.0	-0.4	-0.5	24.1	-1.3	-0.4	-0.8	18.8	-1.3	0.2	-0.3
2021/10	18.2	0.7	0.2	-0.1	18.7	0.8	0.2	-0.1	20.3	1.6	0.8	0.7	19.9	1.9	1.3	0.9	12.5	-0.6	0.4	0.2
2021/11	13.7	-0.3	1.2	0.8	14.3	-0.4	0.9	0.6	14.1	-0.6	0.3	0.2	13.0	-1.0	0.4	-0.1	7.3	1.0	2.1	2.7
2021/12	7.9	0.2	0.2	-0.1	8.8	0.0	0.1	-0.2	8.8	0.1	0.1	0.0	7.3	-0.1	0.1	-0.3	-0.5	1.1	0.4	0.8
2022/1	4.9	-0.5	-0.5	-0.8	5.5	-0.7	-0.6	-1.1	5.6	-0.6	-0.6	-0.9	4.1	-0.9	-0.7	-1.2	-3.2	1.2	0.0	0.0
2022/2	5.2	-3.3	-0.9	-2.1	5.8	-3.3	-0.9	-2.1	5.5	-3.2	-1.1	-1.7	4.5	-3.0	-1.0	-1.8	-2.2	0.0	0.5	0.4
2022/3	10.9	-1.9	1.5	0.1	11.3	-1.9	1.6	0.1	11.4	-0.8	1.5	0.4	11.0	-1.0	1.8	0.5	2.6	-1.2	1.5	-0.1
2022/4	15.3	0.2	1.0	0.7	15.4	0.2	0.9	0.5	16.8	1.3	1.6	1.5	16.8	1.6	2.2	2.0	9.1	1.2	1.8	1.4
2022/5	18.8	-0.8	0.0	-1.0	19.0	-0.6	0.2	-0.8	20.0	0.0	-0.1	-0.6	19.5	0.0	0.1	-0.7	14.9	1.8	1.9	0.8
2022/6	23.0	0.3	1.1	0.6	22.9	0.2	1.1	0.4	24.4	0.5	0.8	0.7	24.3	0.9	1.3	0.9	16.8	-2.1	-0.2	-0.6
2022/7	27.4	1.5	1.7	1.4	27.1	1.1	1.5	1.1	28.4	0.5	0.7	0.7	27.5	0.1	0.6	0.3	23.1	-0.8	2.0	0.9
2022/8	27.5	0.1	0.6	-0.4	27.6	0.1	0.6	-0.3	29.5	1.4	0.5	0.1	28.5	0.7	0.3	-0.5	22.7	-0.2	0.4	0.4
2022/9	24.4	2.1	1.1	0.9	24.7	2.1	1.0	0.9	26.2	1.4	1.0	1.1	26.1	2.0	1.6	1.4	19.8	1.0	1.2	0.8
2022/10	17.2	-1.0	-0.8	-1.0	17.9	-0.8	-0.6	-0.8	19.0	-1.3	-0.5	-0.6	18.7	-1.2	0.1	-0.3	12.6	0.1	0.5	0.0
2022/11	14.5	0.8	2.0	1.2	15.2	0.9	1.8	1.1	15.2	1.1	1.4	1.2	14.6	1.6	2.0	1.5	7.1	-0.2	1.9	1.5
2022/12	7.5	-0.4	-0.2	-0.3	8.4	-0.4	-0.3	-0.4	7.9	-0.9	-0.8	-0.8	6.6	-0.7	-0.6	-0.9	-1.4	-0.9	-0.5	-0.2
2023/1	5.7	0.8	0.3	0.2	6.4	0.9	0.3	0.1	6.5	0.9	0.3	0.1	5.2	1.1	0.4	0.1	-4.4	-1.2	-1.2	-1.3
2023/2	7.3	2.1	1.2	0.4	7.9	2.1	1.2	0.4	7.0	1.5	0.4	-0.1	6.5	2.0	1.0	0.3	-2.7	-0.5	0.0	0.0
2023/3	12.9	2.0	3.5	1.6	13.2	1.9	3.5	1.5	13.0	1.6	3.1	1.6	12.7	1.7	3.5	1.7	4.9	2.3	3.8	2.0
2023/4	16.3	1.0	2.0	1.5	16.6	1.2	2.1	1.6	15.9	-0.9	0.7	0.4	15.9	-0.9	1.3	0.7	9.2	0.1	1.9	1.2
2023/5	19.0	0.2	0.2	-0.5	19.0	0.0	0.2	-0.6	20.0	0.0	-0.1	-0.4	20.2	0.7	0.8	0.2	13.8	-1.1	0.8	-0.4
2023/6	23.2	0.2	1.3	0.6	23.2	0.3	1.4	0.6	23.8	-0.6	0.2	-0.3	23.8	-0.5	0.8	0.0	19.3	2.5	2.3	1.7
2023/7	28.7	1.3	3.0	2.7	28.2	1.1	2.6	2.2	28.9	0.5	1.2	1.2	28.9	1.4	2.0	1.8	23.8	0.7	2.7	1.5
2023/8	29.2	1.7	2.3	1.1	29.1	1.5	2.1	1.0	29.9	0.4	0.9	0.5	29.4	0.9	1.2	0.4	26.7	4.0	4.4	4.2
2023/9	26.7	2.3	3.4	2.9	26.9	2.2	3.2	2.8	27.9	1.7	2.7	2.4	27.3	1.2	2.8	2.1	21.5	1.7	2.9	2.1
2023/10	18.9	1.7	0.9	0.6	19.5	1.6	1.0	0.7	19.3	0.3	-0.2	-0.4	18.3	-0.4	-0.3	-0.9	13.3	0.7	1.2	0.4
2023/11	14.4	-0.1	1.9	0.5	15.2	0.0	1.8	0.6	14.4	-0.8	0.6	-0.2	13.6	-1.0	1.0	-0.2	6.7	-0.4	1.5	0.5
2023/12	9.4	1.9	1.7	1.4	10.2	1.8	1.5	1.3	9.3	1.4	0.6	0.4	8.4	1.8	1.2	0.8	-0.7	0.7	0.2	0.4
2024/1	7.1	1.4	1.7	1.4	8.0	1.6	1.9	1.5	7.1	0.6	0.9	0.4	6.0	0.8	1.2	0.6	-1.8	2.6	1.4	1.7
2024/2	8.7	1.4			9.2	1.3			8.9	1.9			8.5	2.0			-1.2	1.5		

Source: Japan Meteorological Agency, BofA Global Research

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Exhibit 8: Monthly temperature trends

Fukuoka, Kobe, Hiroshima, Sendai, Matsuyama

	Fukuoka				Kobe				Hiroshima				Sendai				Matsuyama			
	Average	vs. last year	vs. average	vs. 5 yrs	Average	vs. last year	vs. average	vs. 5 yrs	Average	vs. last year	vs. average	vs. 5 yrs	Average	vs. last year	vs. average	vs. 5 yrs	Average	vs. last year	vs. average	vs. 5 yrs
2021/1	7.0	-2.5	0.1	-0.5	6.1	-2.7	-0.1	-0.7	5.2	-2.9	-0.2	-0.8	1.2	-2.8	-0.8	-1.3	6.2	-2.5	0.0	-0.6
2021/2	10.2	0.5	2.4	1.9	8.8	0.6	2.3	1.7	8.2	0.4	2.0	1.7	3.7	-0.7	1.3	0.5	8.9	0.5	2.1	1.6
2021/3	13.5	1.1	2.7	1.9	12.3	0.9	2.5	1.6	12.1	1.1	2.6	1.8	8.6	1.1	3.1	1.7	12.7	1.3	2.8	2.0
2021/4	16.7	2.6	1.3	0.7	15.3	1.7	0.3	-0.1	15.4	2.2	0.6	0.2	11.6	1.5	0.9	0.4	15.5	2.2	0.7	0.2
2021/5	20.4	0.0	0.5	-0.4	19.7	-0.9	-0.1	-0.8	19.5	-0.8	-0.1	-0.8	17.0	0.2	1.4	0.0	19.5	-0.6	0.1	-0.6
2021/6	24.2	-0.7	0.9	0.5	23.7	-0.6	0.3	0.4	23.8	-0.4	0.6	0.5	20.6	-0.6	1.4	0.8	23.4	-0.8	0.5	0.2
2021/7	28.9	3.4	1.5	1.2	27.5	1.8	0.4	0.2	27.6	2.4	0.4	0.2	24.1	2.8	1.2	0.6	27.2	1.6	0.1	-0.1
2021/8	27.5	-2.7	-0.9	-1.9	27.8	-2.2	-0.8	-1.5	27.4	-2.5	-1.1	-1.9	24.9	-1.7	0.5	-0.4	27.5	-2.2	-0.6	-1.5
2021/9	25.9	1.4	1.2	1.0	25.1	-0.8	-0.3	-0.4	25.0	0.0	0.3	0.3	20.8	-1.7	-0.4	-1.0	25.0	-0.2	0.4	0.1
2021/10	21.0	1.6	1.4	1.0	20.6	1.5	0.8	0.6	19.9	1.2	1.1	0.7	15.8	0.2	0.1	-0.1	20.1	1.3	1.0	0.4
2021/11	13.9	-1.4	-0.3	-0.6	14.5	-0.6	0.3	0.2	13.1	-1.1	0.2	-0.1	11.1	0.3	1.3	1.3	13.7	-1.0	0.1	-0.1
2021/12	9.1	0.6	0.0	-0.3	8.9	0.1	0.1	-0.2	7.8	0.6	0.3	0.0	4.7	0.8	0.2	0.1	8.8	0.9	0.3	0.1
2022/1	6.9	-0.1	0.0	-0.6	5.7	-0.4	-0.5	-0.9	5.3	0.1	-0.1	-0.6	1.7	0.5	-0.3	-0.6	5.9	-0.3	-0.3	-0.8
2022/2	6.3	-3.9	-1.5	-2.5	5.6	-3.2	-0.9	-1.7	4.8	-3.4	-1.4	-2.1	1.9	-1.8	-0.5	-1.4	5.2	-3.7	-1.6	-2.4
2022/3	12.7	-0.8	1.9	0.7	11.5	-0.8	1.7	0.5	11.5	-0.6	2.0	0.8	6.4	-2.2	0.9	-0.8	11.9	-0.8	2.0	0.8
2022/4	16.4	-0.3	1.0	0.4	16.6	1.3	1.6	1.5	16.4	1.0	1.6	1.4	11.8	0.2	1.1	0.6	15.9	0.4	1.1	0.7
2022/5	20.6	0.2	0.7	-0.1	19.8	0.1	0.0	-0.5	20.0	0.5	0.4	-0.1	16.5	-0.5	0.9	-0.5	19.3	-0.2	-0.1	-0.7
2022/6	24.8	0.6	1.5	0.9	23.9	0.2	0.5	0.5	24.2	0.4	1.0	0.8	20.2	-0.4	1.0	0.3	24.1	0.7	1.2	0.9
2022/7	28.9	0.0	1.5	1.1	28.0	0.5	0.9	0.7	28.1	0.5	0.9	0.8	24.9	0.8	2.0	1.2	27.8	0.6	0.7	0.7
2022/8	29.8	2.3	1.4	0.8	29.2	1.4	0.6	0.2	29.2	1.8	0.7	0.3	25.1	0.2	0.7	0.0	29.1	1.6	1.0	0.5
2022/9	25.7	-0.2	1.0	0.6	26.7	1.6	1.3	1.4	26.0	1.0	1.3	1.3	22.2	1.4	1.0	0.7	26.2	1.2	1.6	1.3
2022/10	19.6	-1.4	0.0	-0.4	19.5	-1.1	-0.3	-0.4	18.9	-1.0	0.1	-0.3	15.5	-0.3	-0.2	-0.4	19.2	-0.9	0.1	-0.3
2022/11	16.2	2.3	2.0	1.8	15.8	1.3	1.6	1.4	14.9	1.8	2.0	1.7	11.9	0.8	2.1	1.6	15.5	1.8	1.9	1.7
2022/12	7.7	-1.4	-1.4	-1.4	7.9	-1.0	-0.9	-1.0	6.4	-1.4	-1.1	-1.2	4.2	-0.5	-0.3	-0.2	7.4	-1.4	-1.1	-1.1
2023/1	7.2	0.3	0.3	-0.2	6.6	0.9	0.4	0.1	5.7	0.4	0.3	-0.2	2.1	0.4	0.1	0.0	6.5	0.6	0.3	-0.1
2023/2	9.0	2.7	1.2	0.6	7.2	1.6	0.7	0.0	6.9	2.1	0.7	0.3	3.0	1.1	0.6	0.0	7.6	2.4	0.8	0.4
2023/3	13.6	0.9	2.8	1.1	13.0	1.5	3.2	1.5	12.6	1.1	3.1	1.4	9.3	2.9	3.8	1.9	12.7	0.8	2.8	1.0
2023/4	16.7	0.3	1.3	0.8	15.9	-0.7	0.9	0.6	15.7	-0.7	0.9	0.5	13.3	1.5	2.6	2.1	15.9	0.0	1.1	0.7
2023/5	20.2	-0.4	0.3	-0.5	19.8	0.0	0.0	-0.3	19.9	-0.1	0.3	-0.1	16.6	0.1	1.0	-0.3	19.8	0.5	0.4	0.0
2023/6	24.4	-0.4	1.1	0.2	23.4	-0.5	0.0	-0.3	23.3	-0.9	0.1	-0.4	21.6	1.4	2.4	1.3	23.1	-1.0	0.2	-0.4
2023/7	28.9	0.0	1.5	1.2	28.0	0.0	0.9	0.7	27.9	-0.2	0.7	0.6	26.6	1.7	3.7	3.0	28.0	0.2	0.9	1.0
2023/8	29.7	-0.1	1.3	0.6	29.7	0.5	1.1	0.7	30.0	0.8	1.5	1.0	28.6	3.5	4.2	3.1	28.9	-0.2	0.8	0.2
2023/9	26.9	1.2	2.2	1.5	27.9	1.2	2.5	2.1	27.2	1.2	2.5	2.0	25.1	2.9	3.9	3.4	27.3	1.1	2.7	1.9
2023/10	19.8	0.2	0.2	-0.1	19.6	0.1	-0.2	-0.5	18.9	0.0	0.1	-0.4	16.7	1.2	1.0	0.6	19.4	0.2	0.3	-0.2
2023/11	15.1	-1.1	0.9	0.2	14.7	-1.1	0.5	-0.3	14.0	-0.9	1.1	0.2	11.4	-0.5	1.6	0.5	14.8	-0.7	1.2	0.5
2023/12	9.9	2.2	0.8	0.7	9.7	1.8	0.9	0.7	8.2	1.8	0.7	0.5	5.7	1.5	1.2	1.2	9.3	1.9	0.8	0.7
2024/1	8.3	1.1	1.4	0.6	7.3	0.7	1.1	0.5	6.5	0.8	1.1	0.4	4.2	2.1	2.2	1.9	7.4	0.9	1.2	0.5
2024/2	10.4	1.4			9.2	2.0			8.6	1.7			5.3	2.3			9.4	1.8		

Source: Japan Meteorological Agency, BofA Global Research

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Exhibit 9: Monthly precipitation trends

Tokyo, Yokohama, Osaka, Nagoya, Sapporo

	Tokyo			Yokohama			Osaka			Nagoya			Sapporo		
	vs. last year	vs. average	vs. 5 yrs ave	vs. last year	vs. average	vs. 5 yrs ave	vs. last year	vs. average	vs. 5 yrs ave	vs. last year	vs. average	vs. 5 yrs ave	vs. last year	vs. average	vs. 5 yrs ave
2021/1	-68%	-27%	-30%	-63%	-28%	-27%	6%	37%	37%	2%	11%	48%	76%	-17%	18%
2021/2	490%	57%	196%	200%	51%	125%	-30%	-26%	-14%	-13%	-28%	-3%	-50%	-15%	-2%
2021/3	32%	49%	32%	32%	57%	38%	44%	41%	61%	36%	75%	65%	-26%	2%	0%
2021/4	-47%	17%	6%	-36%	9%	6%	92%	120%	98%	73%	51%	20%	113%	105%	130%
2021/5	-16%	-29%	-16%	16%	-26%	-10%	251%	149%	162%	88%	69%	71%	68%	38%	60%
2021/6	-21%	0%	-4%	-53%	-40%	-44%	-8%	-7%	-13%	-40%	-27%	-28%	-2%	-16%	-54%
2021/7	15%	98%	111%	-3%	102%	79%	-35%	54%	27%	-23%	48%	22%	-87%	-92%	-91%
2021/8	522%	147%	135%	471%	97%	136%	175%	178%	140%	2569%	149%	153%	-13%	-14%	-37%
2021/9	89%	-1%	-5%	85%	-18%	-29%	96%	26%	11%	-3%	-3%	8%	36%	-49%	-28%
2021/10	-3%	-15%	-30%	-5%	-13%	-23%	-67%	-50%	-63%	-76%	-61%	-75%	128%	37%	39%
2021/11	541%	-3%	11%	1317%	18%	63%	110%	36%	138%	96%	-10%	60%	36%	35%	50%
2021/12	792%	100%	149%	669%	103%	104%	341%	47%	46%	305%	57%	64%	309%	-5%	18%
2022/1	-48%	-62%	-58%	-55%	-68%	-64%	-69%	-57%	-57%	-54%	-49%	-32%	88%	57%	113%
2022/2	-20%	26%	96%	-39%	-8%	40%	-63%	-73%	-63%	-27%	-47%	-23%	43%	22%	52%
2022/3	-36%	-5%	-24%	-53%	-26%	-36%	-28%	1%	3%	-58%	-27%	-40%	-31%	-30%	-35%
2022/4	44%	68%	45%	64%	79%	74%	-48%	14%	-12%	-30%	5%	-15%	-87%	-73%	-75%
2022/5	99%	42%	79%	56%	16%	44%	-76%	-41%	-53%	-35%	9%	-4%	-13%	20%	21%
2022/6	-62%	-62%	-63%	-23%	-54%	-54%	-41%	-45%	-39%	-14%	-37%	-32%	41%	18%	-27%
2022/7	-25%	49%	21%	-43%	15%	-5%	-35%	0%	-31%	17%	73%	29%	740%	-31%	-4%
2022/8	-73%	-32%	-33%	-47%	5%	15%	-77%	-35%	-55%	-44%	41%	7%	115%	84%	70%
2022/9	39%	38%	39%	55%	27%	19%	-6%	18%	4%	16%	12%	35%	20%	-38%	-7%
2022/10	-41%	-50%	-61%	-41%	-49%	-59%	35%	-32%	-51%	-14%	-66%	-77%	-47%	-27%	-35%
2022/11	10%	6%	37%	-18%	-3%	41%	-17%	12%	73%	59%	44%	162%	-46%	-28%	-25%
2022/12	-51%	-2%	7%	-52%	-4%	-14%	-78%	-68%	-65%	-72%	-56%	-53%	10%	4%	65%
2023/1	-31%	-74%	-71%	-21%	-74%	-71%	130%	-2%	5%	-4%	-51%	-35%	-58%	-34%	-28%
2023/2	-43%	-28%	-14%	-31%	-37%	-20%	103%	-45%	-15%	29%	-32%	6%	-7%	13%	23%
2023/3	31%	25%	-4%	35%	0%	-15%	-27%	-26%	-33%	12%	-18%	-34%	-35%	-54%	-55%
2023/4	-60%	-33%	-49%	-63%	-34%	-45%	69%	93%	44%	7%	13%	-6%	307%	12%	24%
2023/5	-20%	14%	13%	25%	44%	51%	190%	70%	39%	5%	15%	-9%	-68%	-61%	-62%
2023/6	442%	107%	110%	281%	76%	84%	159%	42%	71%	221%	102%	122%	88%	121%	73%
2023/7	-87%	-81%	-87%	-78%	-74%	-81%	-42%	-42%	-64%	-61%	-32%	-53%	-2%	-32%	-2%
2023/8	26%	-14%	-11%	-25%	-21%	-13%	122%	45%	5%	-20%	12%	-12%	-70%	-45%	-59%
2023/9	-26%	2%	-6%	-51%	-39%	-41%	-76%	-71%	-76%	-62%	-57%	-56%	67%	3%	96%
2023/10	25%	-37%	-34%	9%	-44%	-38%	-16%	-43%	-36%	108%	-29%	-24%	11%	-19%	-24%
2023/11	-60%	-57%	-52%	-45%	-47%	-30%	13%	28%	78%	-38%	-11%	24%	53%	11%	25%
2023/12	-65%	-66%	-68%	-48%	-50%	-60%	8%	-65%	-61%	140%	6%	13%	-61%	-59%	-42%
2024/1	132%	-40%	-23%	97%	-50%	-27%	-49%	-50%	-45%	18%	-42%	-17%	115%	42%	63%
2024/2	30%			35%			46%			115%			-37%		

Source: Japan Meteorological Agency, BofA Global Research

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Exhibit 10: Monthly precipitation trends

Fukuoka, Kobe, Hiroshima, Sendai, Matsuyama

	Fukuoka			Kobe			Hiroshima			Sendai			Matsuyama		
	vs.	vs.	vs.	vs.	vs.	vs.	vs.	vs.	vs.	vs.	vs.	vs.	vs.	vs.	vs.
	last year	average	5 yrs ave	last year	average	5 yrs ave	last year	average	5 yrs ave	last year	average	5 yrs ave	last year	average	5 yrs ave
2021/1	-70%	-39%	-50%	-13%	42%	36%	-42%	9%	-12%	-92%	-78%	-82%	-61%	-28%	-37%
2021/2	23%	14%	28%	-38%	-39%	-39%	-7%	-12%	-14%	282%	120%	312%	25%	5%	7%
2021/3	-26%	12%	10%	-3%	3%	14%	-16%	20%	20%	136%	44%	58%	-8%	-12%	-13%
2021/4	-20%	-44%	-48%	70%	67%	52%	-8%	0%	-17%	-40%	3%	-18%	-36%	-4%	-21%
2021/5	-9%	0%	12%	172%	83%	89%	92%	48%	96%	-29%	-32%	-27%	153%	111%	166%
2021/6	-67%	-51%	-53%	-58%	-42%	-53%	-48%	-18%	-37%	43%	-57%	-44%	-50%	-48%	-49%
2021/7	-94%	-85%	-88%	-69%	-2%	-39%	-51%	36%	0%	-52%	6%	17%	-73%	-34%	-50%
2021/8	1699%	320%	437%	1947%	256%	256%	34700%	430%	527%	152%	16%	4%	3414%	273%	423%
2021/9	-21%	41%	-9%	32%	19%	-8%	52%	36%	-4%	-34%	-35%	-30%	1%	-9%	-44%
2021/10	-32%	-53%	-70%	-72%	-64%	-71%	-87%	-89%	-93%	127%	-5%	-37%	-75%	-74%	-78%
2021/11	510%	67%	206%	120%	71%	197%	316%	50%	204%	829%	11%	309%	150%	98%	232%
2021/12	6%	-33%	-37%	237%	-7%	3%	-26%	-47%	-55%	167%	30%	148%	-22%	-51%	-54%
2022/1	5%	-35%	-42%	-70%	-57%	-60%	-76%	-74%	-78%	68%	-62%	-62%	4%	-25%	-29%
2022/2	-72%	-68%	-61%	-47%	-68%	-56%	-70%	-73%	-70%	-65%	-23%	-12%	-62%	-60%	-57%
2022/3	-6%	5%	-4%	-9%	-7%	1%	-13%	5%	-8%	-33%	-4%	-19%	2%	-11%	-13%
2022/4	114%	20%	40%	-38%	3%	-16%	6%	6%	4%	2%	4%	-1%	42%	37%	23%
2022/5	-66%	-66%	-58%	-62%	-31%	-37%	-88%	-82%	-78%	23%	-17%	-9%	-79%	-55%	-57%
2022/6	13%	-45%	-33%	-14%	-50%	-50%	-46%	-56%	-57%	183%	22%	93%	-15%	-56%	-43%
2022/7	132%	-65%	-69%	33%	30%	-23%	-16%	14%	-23%	88%	100%	90%	74%	14%	-15%
2022/8	-70%	27%	-15%	-56%	58%	0%	-79%	13%	-36%	-21%	-9%	-14%	-86%	-49%	-64%
2022/9	-12%	24%	9%	-30%	-17%	-36%	1%	37%	4%	-9%	-41%	-20%	-15%	-23%	-45%
2022/10	57%	-27%	-42%	108%	-24%	-40%	91%	-80%	-83%	-72%	-73%	-84%	59%	-59%	-63%
2022/11	-78%	-63%	-37%	1%	73%	152%	-60%	-39%	9%	5%	17%	216%	-50%	-1%	19%
2022/12	-20%	-47%	-30%	-62%	-64%	-55%	-9%	-52%	-48%	-54%	-40%	-7%	-5%	-53%	-45%
2023/1	102%	30%	24%	230%	42%	42%	279%	-2%	-2%	-38%	-76%	-76%	64%	23%	23%
2023/2	167%	-14%	13%	53%	-51%	-23%	262%	-4%	30%	21%	-7%	-1%	88%	-25%	-5%
2023/3	-18%	-14%	-29%	-3%	-9%	-13%	-48%	-45%	-56%	-15%	-18%	-30%	-19%	-28%	-34%
2023/4	29%	54%	100%	55%	61%	35%	64%	75%	81%	-49%	-47%	-49%	55%	112%	82%
2023/5	447%	84%	145%	169%	85%	63%	723%	50%	86%	36%	13%	37%	349%	101%	106%
2023/6	22%	-32%	-15%	154%	26%	38%	121%	-3%	12%	-1%	20%	57%	172%	20%	70%
2023/7	409%	79%	62%	-62%	-50%	-74%	-4%	10%	-31%	-56%	-13%	-30%	7%	22%	-17%
2023/8	-38%	-22%	-53%	23%	93%	10%	-67%	-63%	-80%	-79%	-81%	-80%	53%	-23%	-41%
2023/9	-52%	-40%	-52%	-75%	-80%	-83%	-48%	-29%	-45%	138%	41%	96%	-93%	-95%	-96%
2023/10	-67%	-76%	-69%	-45%	-58%	-50%	-61%	-92%	-84%	15%	-69%	-76%	-84%	-93%	-87%
2023/11	53%	-43%	-7%	-22%	35%	51%	-21%	-52%	-23%	-34%	-23%	33%	-33%	-34%	-25%
2023/12	24%	-34%	-18%	9%	-61%	-49%	115%	4%	5%	89%	13%	55%	28%	-40%	-29%
2024/1	-17%	8%	1%	-71%	-58%	-61%	-7%	-8%	-4%	725%	95%	148%	-46%	-33%	-33%
2024/2	116%			93%			72%			-30%			76%		

Source: Japan Meteorological Agency, BofA Global Research

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Exhibit 11: Monthly sunshine hours

Tokyo, Yokohama, Osaka, Nagoya, Sapporo

	Tokyo			Yokohama			Osaka			Nagoya			Sapporo		
	vs. last year	vs. average	vs. 5 yrs ave	vs. last year	vs. average	vs. 5 yrs ave	vs. last year	vs. average	vs. 5 yrs ave	vs. last year	vs. average	vs. 5 yrs ave	vs. last year	vs. average	vs. 5 yrs ave
2021/1	23%	-10%	-13%	17%	-4%	-8%	40%	20%	14%	10%	-7%	-11%	17%	21%	22%
2021/2	10%	26%	26%	12%	36%	32%	37%	35%	24%	-11%	-6%	-9%	15%	10%	11%
2021/3	6%	10%	6%	11%	13%	7%	2%	13%	0%	-4%	-3%	-11%	-7%	12%	-4%
2021/4	2%	22%	14%	0%	21%	14%	-3%	15%	8%	-14%	10%	3%	11%	18%	8%
2021/5	-14%	-16%	-27%	-12%	-13%	-24%	-23%	-17%	-27%	-29%	-26%	-33%	-28%	-26%	-34%
2021/6	-3%	6%	-9%	7%	9%	-5%	-1%	13%	-4%	-6%	1%	-16%	83%	45%	59%
2021/7	236%	6%	16%	210%	11%	17%	101%	4%	10%	124%	6%	13%	43%	70%	46%
2021/8	-31%	1%	-2%	-36%	-7%	-10%	-44%	-26%	-34%	-37%	-17%	-26%	-1%	11%	6%
2021/9	-5%	-21%	-7%	-7%	-18%	-9%	-7%	-23%	-9%	-15%	-21%	-11%	44%	26%	15%
2021/10	43%	26%	41%	41%	25%	40%	11%	22%	32%	11%	17%	30%	3%	8%	3%
2021/11	32%	38%	34%	34%	38%	34%	10%	25%	10%	-1%	20%	7%	25%	6%	6%
2021/12	21%	16%	20%	22%	16%	21%	-4%	19%	14%	-6%	-1%	0%	16%	33%	30%
2022/1	20%	7%	7%	4%	0%	-4%	-8%	11%	3%	22%	13%	12%	-22%	-6%	-10%
2022/2	-11%	12%	5%	-13%	18%	7%	-10%	22%	10%	4%	-3%	-3%	6%	17%	14%
2022/3	1%	12%	4%	2%	15%	5%	-1%	12%	0%	6%	3%	-1%	-18%	-9%	-21%
2022/4	-22%	-5%	-17%	-21%	-4%	-16%	-2%	13%	1%	-9%	0%	-10%	17%	38%	22%
2022/5	20%	1%	-7%	11%	-4%	-11%	26%	5%	-3%	39%	2%	-2%	51%	12%	7%
2022/6	27%	35%	16%	16%	27%	10%	23%	38%	15%	33%	34%	12%	-34%	-4%	-6%
2022/7	10%	17%	25%	-1%	10%	13%	-1%	3%	12%	10%	16%	25%	-37%	7%	-14%
2022/8	-14%	-14%	-18%	-10%	-16%	-19%	30%	-3%	-6%	-7%	-23%	-27%	-19%	-9%	-10%
2022/9	34%	6%	19%	37%	12%	24%	43%	10%	26%	30%	3%	12%	-3%	23%	7%
2022/10	-27%	-8%	-4%	-22%	-3%	0%	-1%	21%	22%	-4%	12%	17%	4%	12%	5%
2022/11	-22%	7%	-5%	-21%	9%	-4%	-3%	21%	3%	-4%	15%	-1%	-8%	-2%	-5%
2022/12	-13%	1%	3%	-11%	3%	6%	0%	18%	10%	4%	3%	7%	-26%	-2%	-11%
2023/1	-6%	1%	3%	0%	-1%	0%	0%	10%	3%	-5%	7%	5%	46%	37%	29%
2023/2	-6%	5%	-2%	-13%	3%	-7%	-22%	-4%	-17%	12%	9%	11%	-15%	-1%	-9%
2023/3	-16%	-6%	-13%	-13%	0%	-10%	17%	31%	17%	4%	7%	4%	36%	24%	15%
2023/4	16%	10%	-1%	18%	13%	1%	-11%	0%	-12%	1%	1%	-9%	-33%	-8%	-23%
2023/5	8%	9%	5%	15%	11%	8%	6%	11%	5%	7%	10%	7%	0%	12%	6%
2023/6	-18%	11%	-6%	-14%	10%	-6%	-39%	-15%	-29%	-37%	-15%	-28%	24%	20%	16%
2023/7	42%	65%	81%	48%	63%	75%	28%	32%	44%	25%	45%	53%	-4%	2%	-16%
2023/8	48%	28%	13%	52%	27%	17%	2%	-1%	-5%	39%	7%	3%	15%	4%	7%
2023/9	7%	13%	25%	17%	31%	40%	5%	16%	29%	11%	14%	26%	-27%	-10%	-23%
2023/10	68%	55%	55%	58%	53%	52%	6%	29%	16%	15%	29%	22%	8%	22%	12%
2023/11	9%	17%	3%	6%	15%	2%	4%	25%	6%	-5%	9%	-7%	9%	7%	3%
2023/12	13%	14%	21%	11%	15%	23%	10%	30%	21%	9%	12%	18%	33%	31%	20%
2024/1	2%	3%	6%	11%	10%	13%	-6%	4%	-2%	-6%	1%	0%	-35%	-10%	-21%
2024/2	-38%			-39%			-34%			-37%			-3%		

Source: Japan Meteorological Agency, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 12: Monthly sunshine hours

Fukuoka, Kobe, Hiroshima, Sendai, Matsuyama

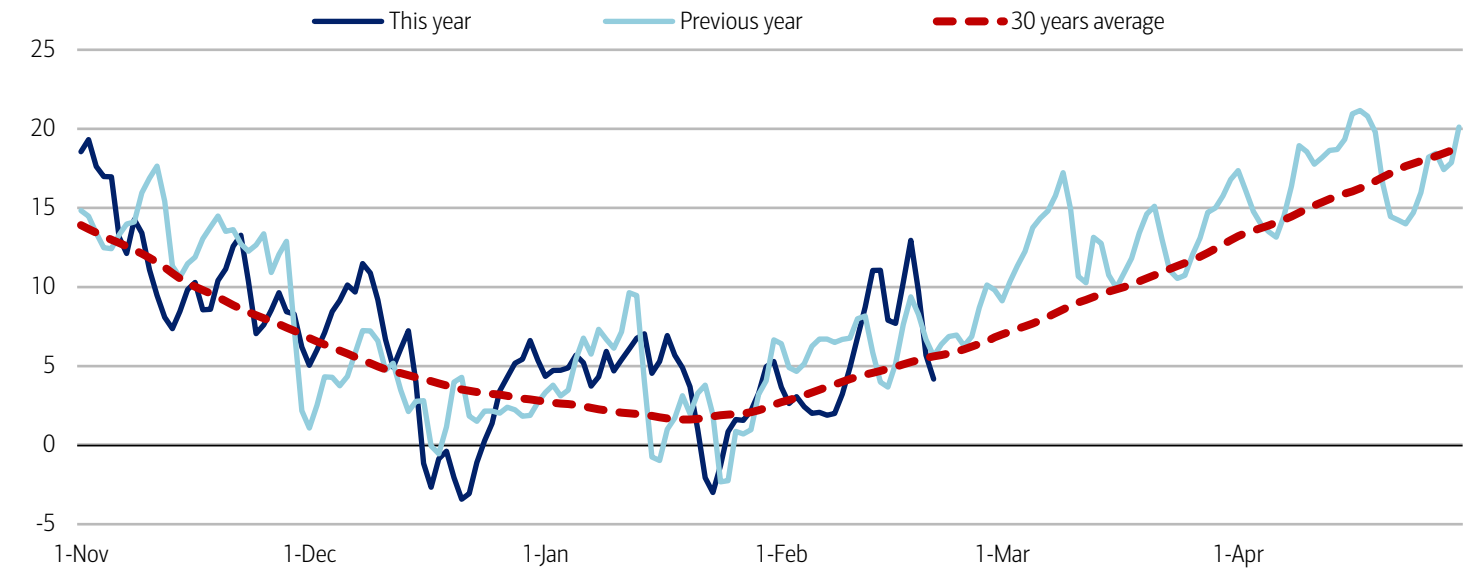
	Fukuoka			Kobe			Hiroshima			Sendai			Matsuyama		
	vs.	vs.	vs.	vs.	vs.	vs.	vs.	vs.	vs.	vs.	vs.	vs.	vs.	vs.	vs.
	last year	average	5 yrs ave	last year	average	5 yrs ave	last year	average	5 yrs ave	last year	average	5 yrs ave	last year	average	5 yrs ave
2021/1	27%	14%	12%	31%	15%	11%	21%	21%	15%	7%	-4%	-4%	25%	21%	23%
2021/2	28%	41%	34%	30%	36%	28%	26%	41%	33%	25%	14%	8%	14%	26%	25%
2021/3	5%	16%	4%	-3%	12%	2%	6%	13%	3%	6%	9%	0%	14%	11%	4%
2021/4	-7%	14%	7%	-2%	16%	10%	-7%	13%	4%	10%	18%	15%	-7%	16%	7%
2021/5	-17%	-12%	-22%	-23%	-17%	-27%	-25%	-25%	-31%	2%	1%	-10%	-30%	-23%	-31%
2021/6	1%	29%	5%	6%	10%	-1%	-8%	6%	-5%	-8%	14%	-2%	-7%	9%	-2%
2021/7	132%	17%	11%	112%	4%	10%	105%	-100%	-100%	177%	9%	9%	85%	6%	9%
2021/8	-43%	-28%	-41%	-46%	-28%	-36%	-44%	-29%	-38%	-33%	-4%	-8%	-46%	-29%	-37%
2021/9	-11%	-9%	9%	-6%	-22%	-9%	-27%	-31%	-17%	52%	9%	12%	-22%	-29%	-13%
2021/10	4%	25%	40%	14%	22%	37%	9%	29%	44%	9%	-6%	-1%	17%	28%	43%
2021/11	-1%	8%	-2%	6%	22%	7%	-8%	14%	2%	11%	29%	19%	-8%	17%	3%
2021/12	-9%	6%	12%	-16%	6%	3%	-7%	4%	14%	11%	-1%	-7%	0%	16%	19%
2022/1	28%	46%	30%	-4%	10%	4%	-3%	17%	5%	25%	21%	17%	-2%	18%	7%
2022/2	-18%	16%	0%	-9%	25%	13%	-12%	24%	8%	-13%	-2%	-8%	-11%	12%	5%
2022/3	-8%	6%	-7%	-5%	6%	-3%	-15%	-4%	-13%	3%	11%	3%	-10%	1%	-6%
2022/4	5%	20%	7%	-5%	10%	-1%	2%	15%	3%	-3%	15%	8%	-6%	9%	-5%
2022/5	25%	10%	2%	31%	8%	-1%	55%	16%	12%	13%	14%	2%	35%	4%	-1%
2022/6	1%	30%	0%	11%	23%	6%	14%	20%	3%	-1%	13%	-5%	23%	34%	15%
2022/7	-6%	9%	7%	5%	9%	19%	-11%	-11%	-2%	4%	12%	12%	-11%	-6%	2%
2022/8	40%	1%	-7%	27%	-9%	-12%	30%	-8%	-11%	-18%	-22%	-20%	35%	-3%	-6%
2022/9	5%	-4%	7%	39%	9%	24%	15%	-21%	-8%	-11%	-3%	-8%	3%	-27%	-14%
2022/10	-3%	21%	20%	-9%	11%	13%	-8%	18%	15%	10%	3%	16%	-7%	19%	18%
2022/11	26%	36%	20%	1%	23%	5%	8%	23%	7%	-12%	14%	-1%	13%	32%	11%
2022/12	-11%	-6%	1%	9%	16%	12%	3%	7%	13%	-8%	-9%	-14%	-11%	3%	3%
2023/1	-20%	16%	1%	-1%	9%	5%	1%	18%	7%	-28%	-13%	-18%	-4%	13%	3%
2023/2	-9%	6%	-8%	-25%	-7%	-19%	-20%	0%	-15%	5%	3%	-3%	-8%	3%	-5%
2023/3	16%	23%	7%	21%	28%	17%	26%	21%	11%	0%	11%	0%	20%	20%	12%
2023/4	-9%	9%	-5%	-8%	1%	-10%	-9%	5%	-8%	-2%	13%	4%	-4%	5%	-10%
2023/5	-11%	-2%	-7%	2%	11%	4%	-14%	0%	-3%	-4%	10%	-2%	-2%	2%	0%
2023/6	-23%	0%	-23%	-35%	-20%	-29%	-29%	-15%	-26%	0%	13%	-3%	-42%	-22%	-34%
2023/7	-9%	-1%	-1%	13%	23%	32%	28%	14%	26%	45%	63%	73%	15%	8%	21%
2023/8	10%	12%	8%	15%	5%	3%	11%	2%	1%	114%	67%	58%	-7%	-10%	-11%
2023/9	10%	5%	14%	7%	17%	30%	19%	-6%	11%	7%	4%	9%	45%	6%	27%
2023/10	-1%	20%	7%	15%	28%	18%	5%	24%	10%	34%	38%	44%	4%	24%	11%
2023/11	-21%	8%	-10%	-4%	19%	0%	-3%	19%	0%	4%	19%	2%	-8%	21%	-2%
2023/12	0%	-6%	-2%	4%	21%	15%	-1%	6%	10%	19%	8%	7%	7%	10%	9%
2024/1	-5%	10%	-8%	-5%	3%	-1%	-14%	2%	-12%	35%	17%	15%	-1%	12%	-1%
2024/2	-38%			-34%			-29%			-28%			-32%		

Source: Japan Meteorological Agency, BofA Global Research

BofA GLOBAL RESEARCH

China temperature trends

Exhibit 13: China temperature trends (current-year, previous-year, and 30-year averages)
Temperatures recently down YoY and below historical average



Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 14: China monthly temperatures (simple average)
Above historical average but down YoY for Feb

	2022												2023												2024											
	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2
vs. last year	0.3	0.9	-1.2	0.5	0.7	1.5	-0.9	-0.2	2.0	-2.6	-0.3	2.9	0.2	-0.3	1.0	0.2	-0.1	-0.6	0.6	1.5	-1.6	1.1	0.3	-0.4												
vs. average year	2.8	1.5	0.1	1.5	1.7	2.1	1.6	0.2	2.5	-1.2	1.4	1.9	3.0	1.2	1.0	1.6	1.6	1.5	2.2	1.8	0.9	-0.1	1.7	1.7												

Note: Feb 2024 temperature is the average as of 21 Feb

Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH



Korea temperature trends

Exhibit 15: Korea temperature trends (current-year, previous-year, and 30-year averages)
Temperatures up YoY and above historical average over the past week

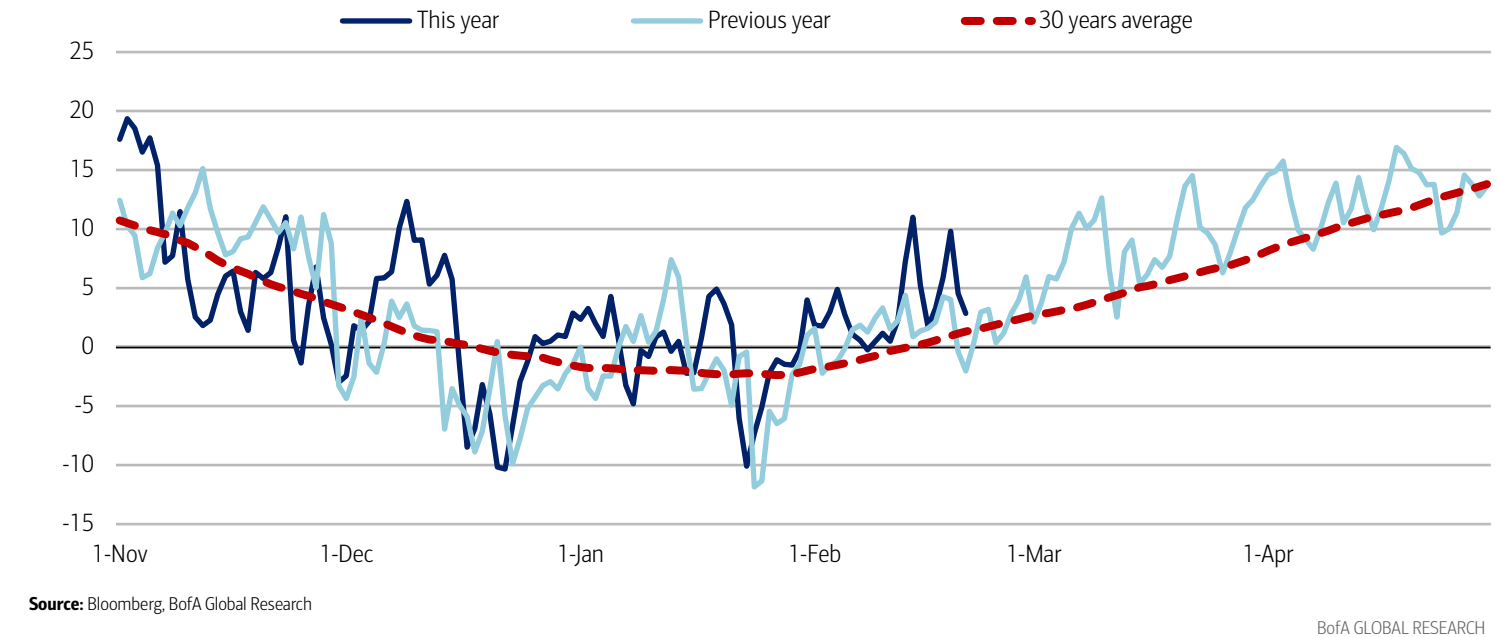


Exhibit 16: Korea monthly temperatures (simple average)
Monthly average remains above historical average and up YoY for Feb

	2022												2023												2024	
	3	4	5	6	7	8	9	10	11	12			1	2	3	4	5	6	7	8	9	10	11	12	1	2
vs. last year	-0.9	0.5	1.4	0.6	-0.3	0.2	-0.6	-1.3	1.6	-3.3			0.4	2.8	1.5	-0.6	0.1	0.1	-0.2	1.3	1.6	1.2	-2.3	3.7	1.2	2.1
vs. average year	1.9	2.5	1.9	2.0	2.6	1.0	1.2	-0.3	2.4	-3.0			0.4	1.3	3.5	1.9	2.0	2.0	2.4	2.2	2.8	0.9	0.0	0.7	1.6	3.8

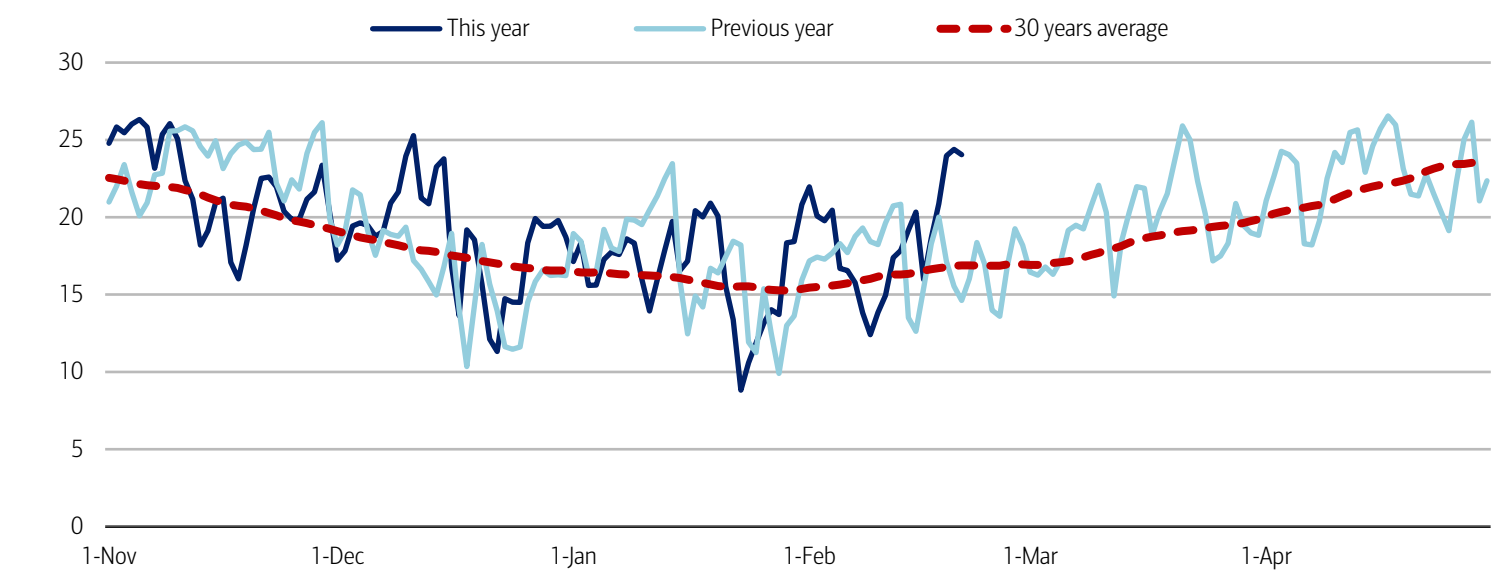
Note: Feb 2024 temperature is the average as of 21 Feb

Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH

Taiwan temperature trends

Exhibit 17: Taiwan temperature trends (current-year, previous-year, and 30-year averages)
Temperatures up YoY and above historical average over the past few days



Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 18: Taiwan monthly temperatures (simple average)
Above historical average and up YoY for Feb

	2022												2023												2024											
	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2
vs. last year	0.4	-0.2	-4.8	-1.3	0.1	1.3	-2.1	-1.2	2.3	-1.7	-0.4	1.1	-1.2	0.4	2.4	0.7	-0.3	-1.0	1.6	1.0	-1.4	2.2	-0.2	1.0												
vs. average year	2.5	0.4	-1.6	0.4	1.2	1.6	0.2	0.3	2.5	-1.1	0.9	0.9	1.4	0.9	0.8	1.1	0.9	0.7	1.8	1.3	1.1	1.1	0.7	2.4												

Note: Feb 2024 temperature is the average as of 21 Feb

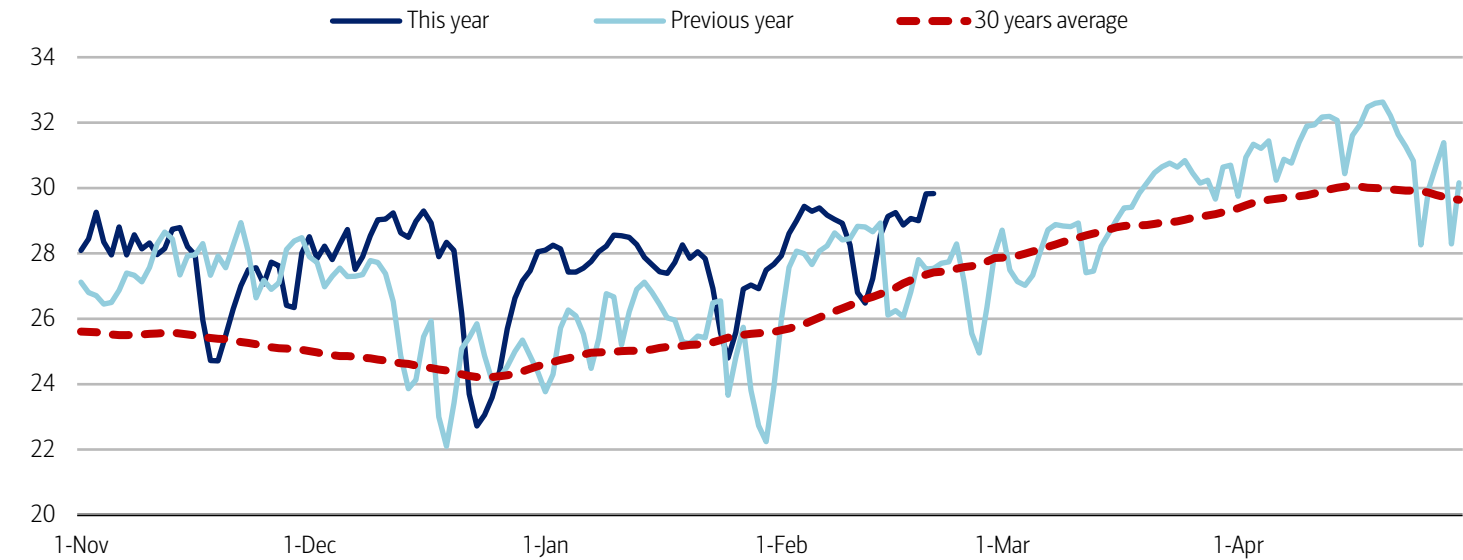
Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH



Thailand temperature trends

Exhibit 19: Thailand temperature trends (current-year, previous-year, and 30-year averages)
Temperatures up YoY and above historical average over the past few days



Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 20: Thailand monthly temperatures (simple average)
Monthly average remains up YoY and above historical average in Feb

	2022												2023												2024											
	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2
vs. last year	-0.3	0.5	-1.2	-0.6	-0.1	-0.5	0.0	-0.3	0.1	0.0	-1.5	0.5	-0.2	1.9	2.5	0.8	0.7	1.1	0.9	1.0	-0.1	1.7	2.2	1.0												
vs. average year	0.7	-0.5	-0.4	1.2	1.3	1.2	0.9	1.2	2.2	1.1	0.3	0.7	0.5	1.4	2.2	2.0	2.0	2.2	1.8	2.2	2.1	2.8	2.4	2.2												

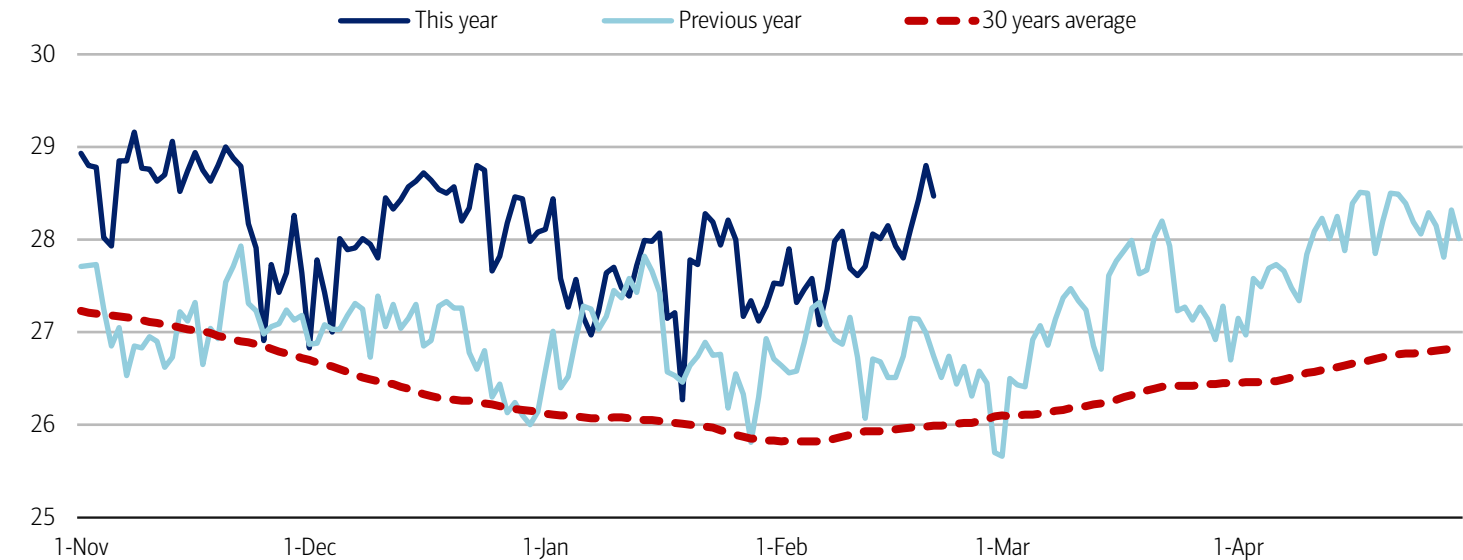
Note: Feb 2024 temperature is the average as of 21 Feb

Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH

Indonesia temperature trends

Exhibit 21: Indonesia temperature trends (current-year, previous-year, and 30-year averages)
Temperatures up YoY and above historical average over the past month



Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 22: Indonesia monthly temperatures (simple average)
Monthly average remains up YoY and above historical average in Feb

	2022												2023												2024											
	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2												
vs. last year	0.2	0.1	-0.2	-0.5	-0.1	0.0	-0.3	-0.9	-0.2	-0.4	-0.3	-0.2	-0.4	0.2	0.5	0.9	0.2	0.3	0.8	1.8	1.3	1.3	0.7	1.0												
vs. average year	1.3	1.1	1.0	0.5	1.2	1.0	0.5	-0.1	0.1	0.5	0.9	0.8	0.9	1.3	1.5	1.4	1.3	1.3	1.3	1.7	1.5	1.8	1.6	2.0												

Note: Feb 2024 temperature is the average as of 21 Feb

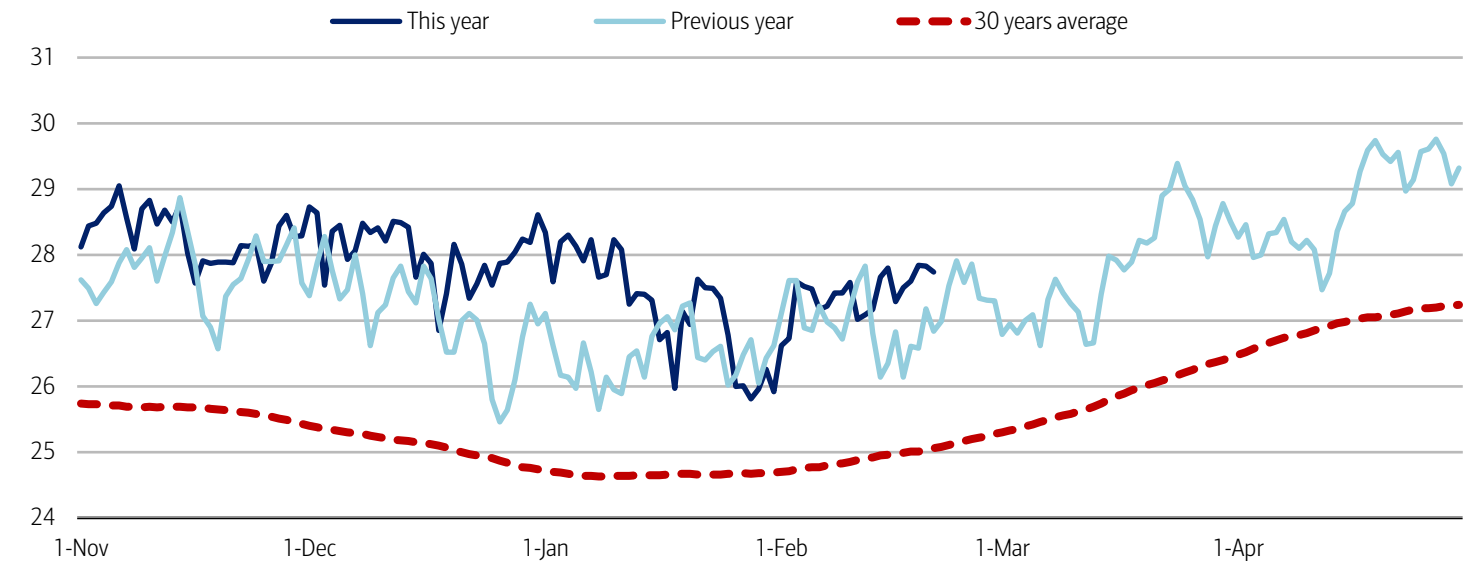
Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH



Philippines temperature trends

Exhibit 23: Philippines temperature trends (current-year, previous-year, and 30-year averages)
Temperatures recently up YoY and above historical average over the week



Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 24: Philippines monthly temperatures (simple average)
Monthly average remains up YoY and above historical average in Feb

	2022												2023												2024											
	3	4	5	6	7	8	9	10	11	12		1	2	3	4	5	6	7	8	9	10	11	12		1	2										
vs. last year	0.0	-0.4	-0.6	0.2	0.0	-0.4	0.2	0.1	-0.1	0.1		-0.4	0.0	-0.3	0.7	0.6	-0.1	0.1	0.7	0.1	0.1	0.5	1.0		0.8	0.4										
vs. average year	2.2	1.1	1.5	1.9	2.0	1.6	1.9	2.0	2.1	2.0		1.8	2.1	2.0	1.8	2.0	1.8	2.1	2.3	2.0	2.1	2.6	3.0		2.6	2.5										

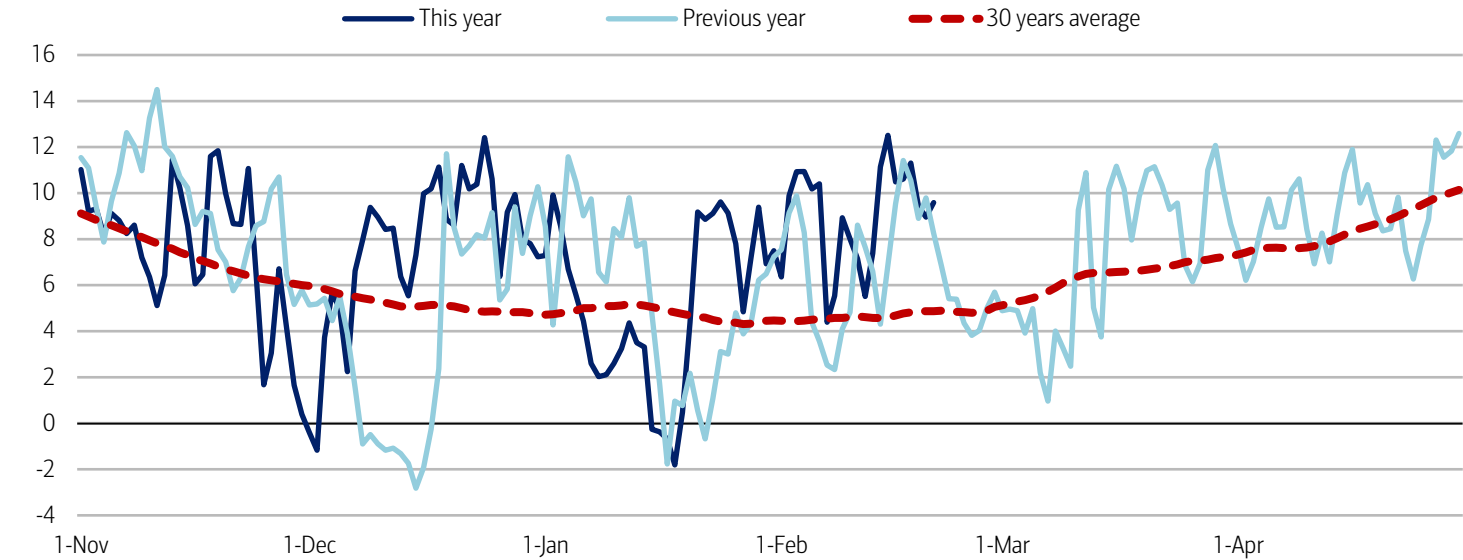
Note: Feb 2024 temperature is the average as of 21 Feb

Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH

UK temperature trends

Exhibit 25: UK temperature trends (current-year, previous-year, and 30-year averages)
Temperatures on par with last year over the past few days



Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 26: UK monthly temperatures (simple average)
Above historical average and up YoY for Feb

	2022												2023												2024	
	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2		
vs. last year	0.6	2.5	2.8	-0.6	1.0	3.1	-1.5	0.7	1.7	-2.9	0.1	-0.8	-0.9	-0.7	-0.5	1.7	-2.6	-2.6	2.6	-0.6	-2.0	3.5	-0.2	1.9		
vs. average year	1.8	1.4	1.9	1.5	2.7	2.9	0.9	2.2	2.2	-1.0	0.5	1.9	0.9	0.6	1.3	3.3	0.1	0.3	3.5	1.6	0.2	2.4	0.3	4.4		

Note: Feb 2024 temperature is the average as of 21 Feb

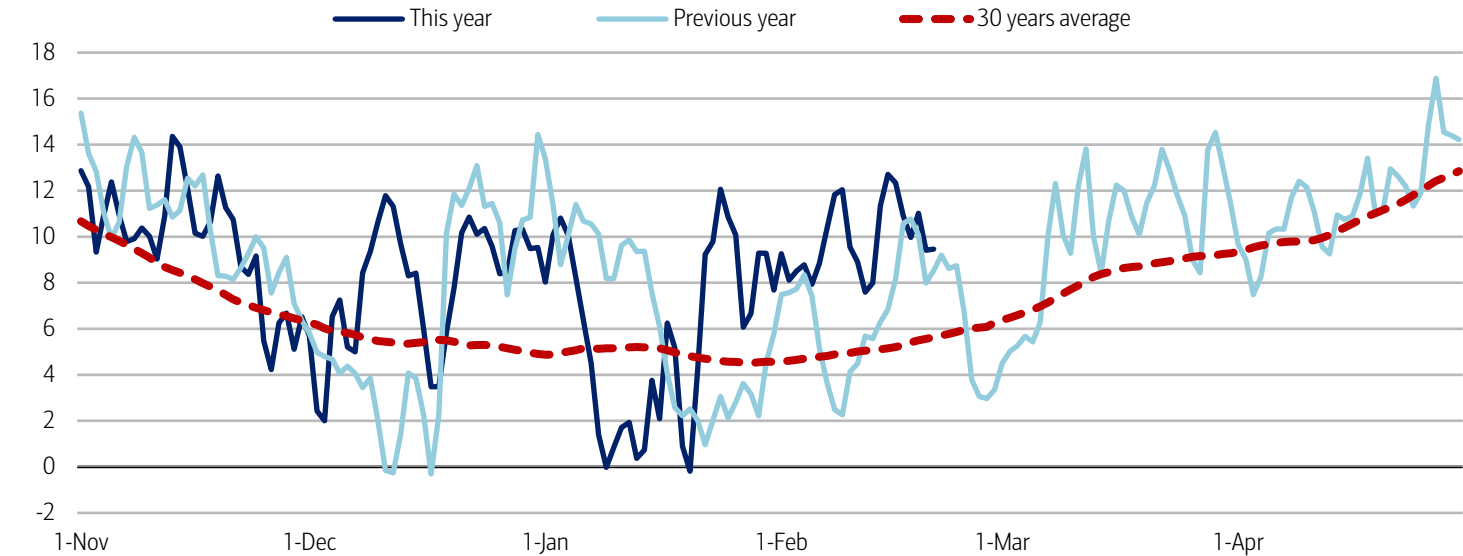
Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH



France temperature trends

Exhibit 27: France temperature trends (current-year, previous-year, and 30-year averages)
Temperatures on par with last year



Source: Bloomberg, BofA Global Research

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Exhibit 28: France monthly temperatures (simple average)
Above historical average and up YoY for Feb

	2022												2023												2024											
	3	4	5	6	7	8	9	10	11	12		1	2	3	4	5	6	7	8	9	10	11	12		1	2										
vs. last year	1.1	1.6	3.9	0.7	2.8	3.7	-1.1	3.5	2.9	-0.5		1.5	-1.6	0.0	-0.4	-1.8	0.5	-1.6	-2.1	2.8	-0.7	-0.8	1.5		-0.6	3.1										
vs. average year	1.8	1.3	3.0	2.9	2.9	3.1	1.5	3.8	2.3	1.0		1.5	1.3	1.9	0.9	1.2	3.5	1.3	1.1	4.3	3.1	1.5	2.5		0.8	4.8										

Note: Feb 2024 temperature is the average as of 21 Feb
Source: Bloomberg, BofA Global Research

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Germany temperature trends

Exhibit 29: Germany temperature trends (current-year, previous-year, and 30-year averages)
Temperatures on par with last year

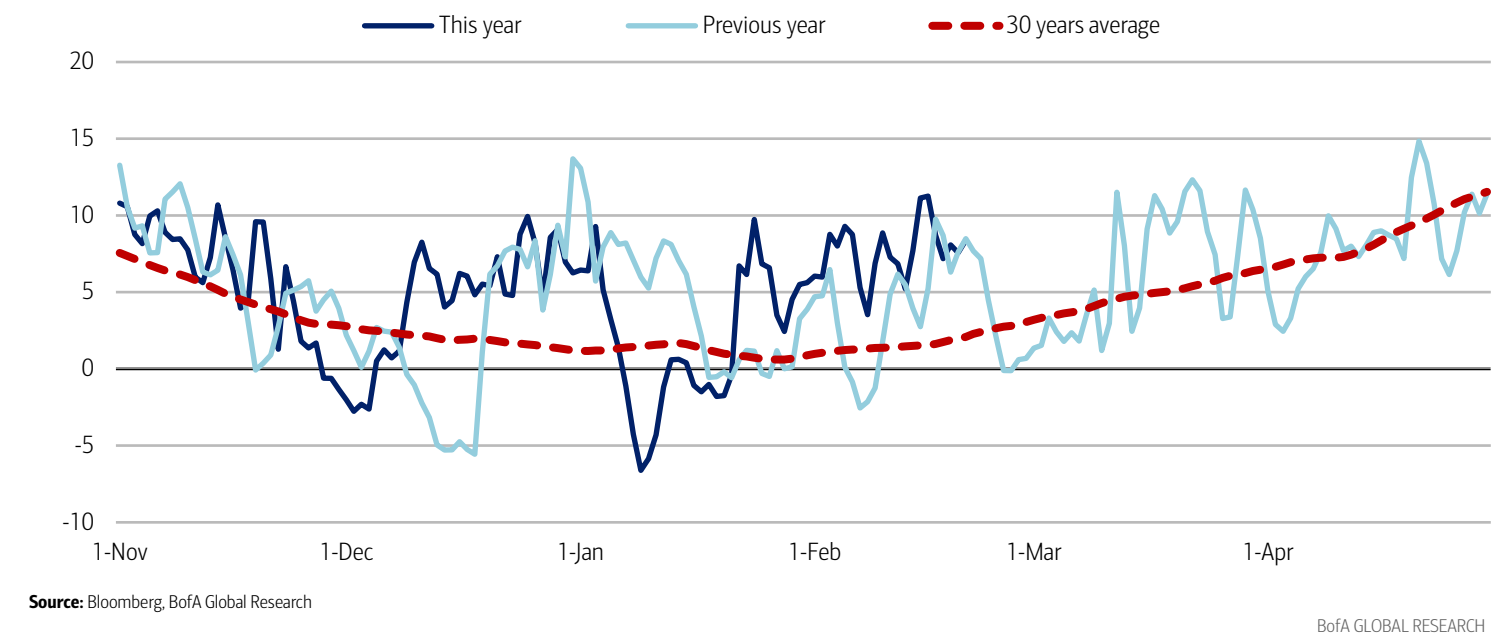


Exhibit 30: Germany monthly temperatures (simple average)
Above historical average and up YoY for Feb

	2022												2023												2024											
	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2												
vs. last year	0.2	1.7	3.6	-0.9	0.4	3.8	-1.8	2.5	1.1	-0.8	0.8	-1.4	0.6	-0.2	-1.4	0.4	-0.4	-2.1	4.0	-0.5	-0.4	2.4	-2.3	3.7												
vs. average year	0.9	-0.1	1.8	2.7	1.2	2.8	0.0	3.2	1.7	0.2	3.1	2.0	1.4	-0.3	0.4	3.0	0.8	0.7	4.0	2.7	1.2	2.6	0.8	6.2												

Note: Feb 2024 temperature is the average as of 21 Feb

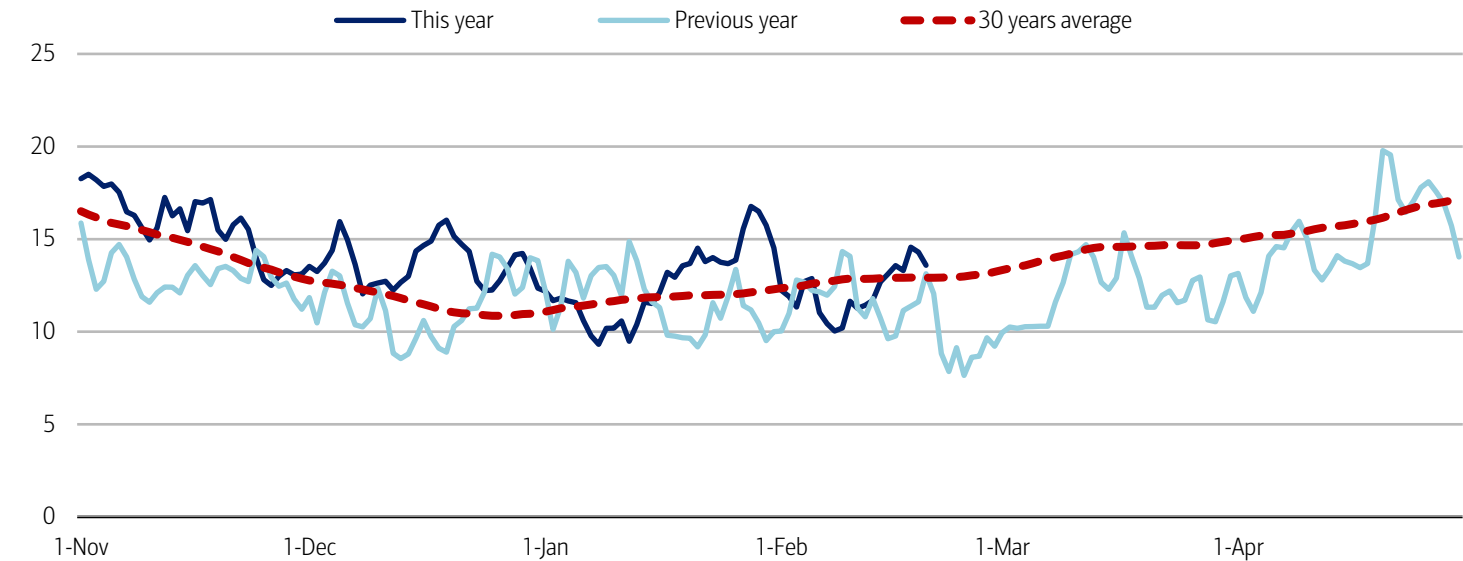
Source: Bloomberg, BofA Global Research



US temperature trends

Average temperature trends for the US’s five states (California, Texas, Florida, New York, Washington) are shown below.

Exhibit 31: California temperature trends (current-year, previous-year, and 30-year averages)
Temperatures recently rising to on par with historical average



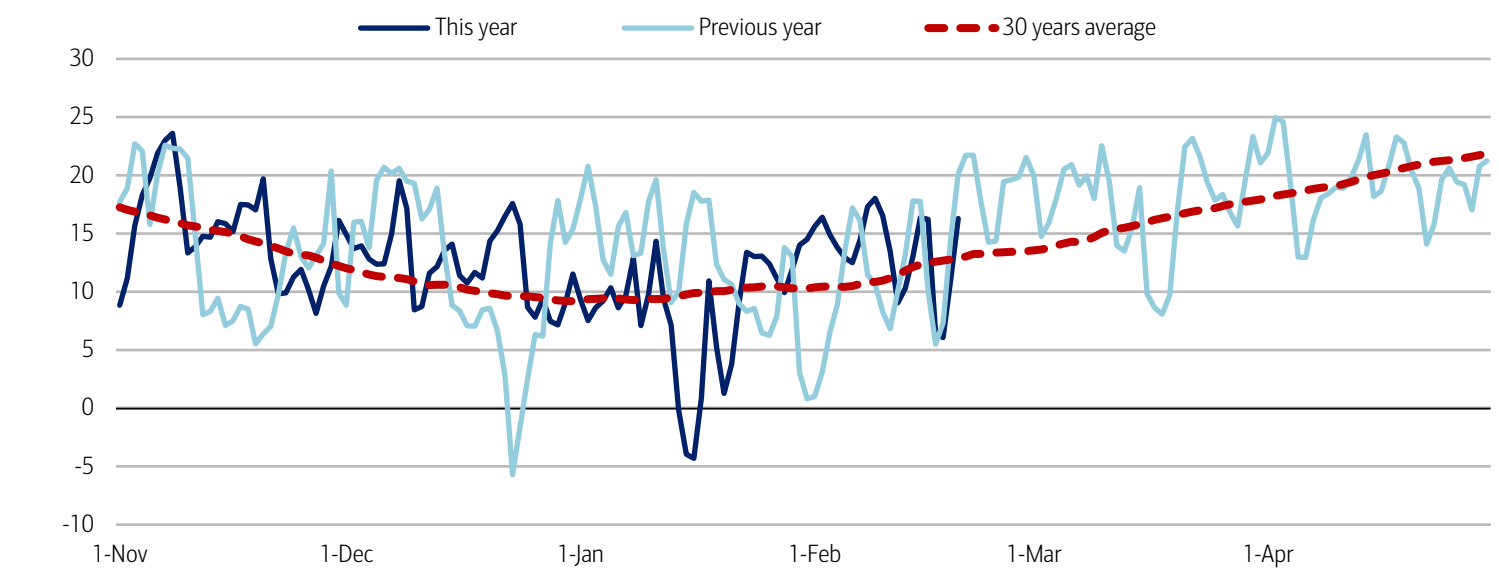
Source: Bloomberg, BofA Global Research. BofA GLOBAL RESEARCH

Exhibit 32: California monthly temperatures (simple average)
Below historical average but up YoY for Feb

	2022												2023												2024												
	3	4	5	6	7	8	9	10	11	12		1	2	3	4	5	6	7	8	9	10	11	12		1	2											
vs. last year	1.7	0.3	-0.1	0.4	-0.7	1.0	2.5	1.2	-2.4	0.4		-0.7	-2.3	-2.9	-1.3	-1.1	-2.7	0.7	-0.4	-2.8	0.4	2.8	2.4		1.0	0.4											
vs. average year	0.6	0.5	0.0	1.3	-0.1	1.2	2.4	0.2	-1.7	-0.3		-0.2	-1.8	-2.3	-0.8	-1.1	-1.3	0.6	0.9	-0.4	0.6	1.1	2.1		0.8	-0.6											

Note: Feb 2024 temperature is the average as of 20 Feb
Source: Bloomberg, BofA Global Research BofA GLOBAL RESEARCH

Exhibit 33: Texas temperature trends (current-year, previous-year, and 30-year averages)
Temperatures on par with last year over the past few days



Source: Bloomberg, BofA Global Research

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Exhibit 34: Texas monthly temperatures (simple average)
Above historical average and up YoY for Feb

	2022												2023												2024	
	3	4	5	6	7	8	9	10	11	12		1	2	3	4	5	6	7	8	9	10	11	12		1	2
vs. last year	-1.3	2.4	3.3	2.1	3.4	0.3	0.2	-1.5	-1.2	-5.1		3.3	4.0	2.0	-2.4	-2.2	-0.9	-0.2	3.2	2.2	0.6	1.0	0.6		-4.2	2.5
vs. average year	-0.1	1.9	2.4	2.1	2.4	0.1	0.9	0.2	-0.9	1.5		2.8	1.2	1.8	-0.5	0.1	1.2	2.1	3.3	3.1	0.8	0.1	2.1		-1.5	2.1

Note: Feb 2024 temperature is the average as of 20 Feb

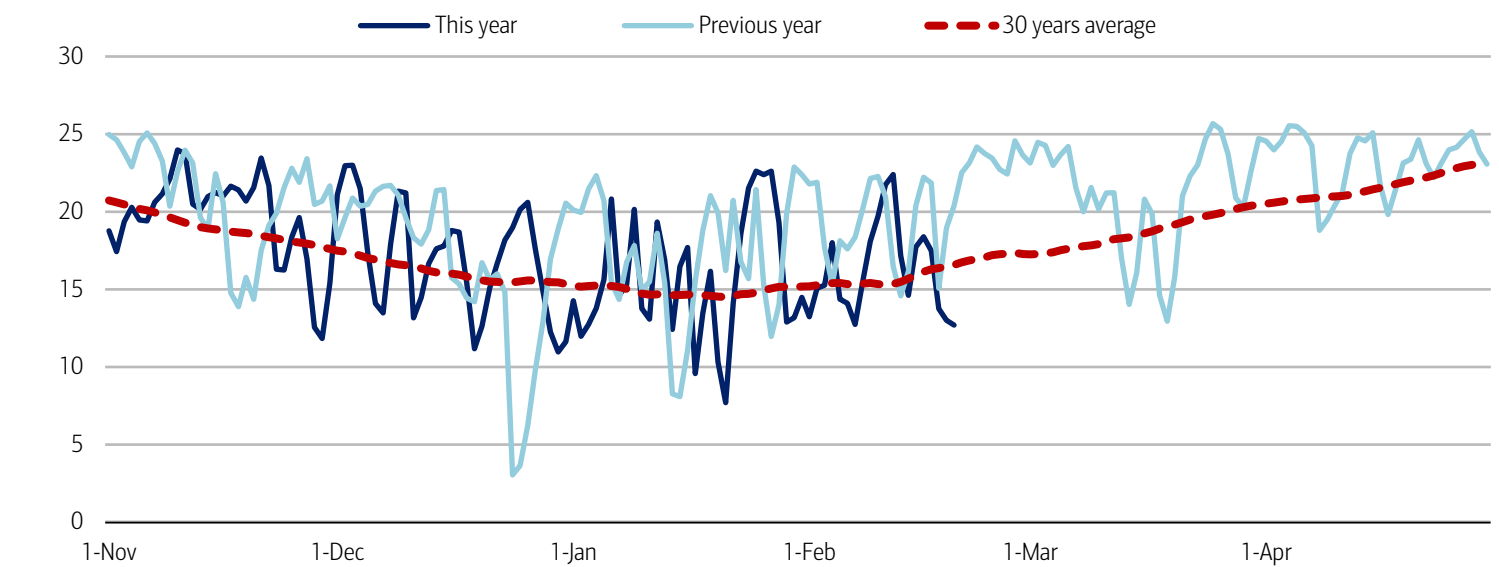
Source: Bloomberg, BofA Global Research

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Exhibit 35: Florida temperature trends (current-year, previous-year, and 30-year averages)

Temperatures recently down YoY and below historical average



Source: Bloomberg, BofA Global Research

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Exhibit 36: Florida monthly temperatures (simple average)

Above historical average but down YoY for Feb

	2022												2023												2024			
	3	4	5	6	7	8	9	10	11	12		1	2	3	4	5	6	7	8	9	10	11	12		1	2		
vs. last year	0.8	1.1	0.9	1.4	1.0	0.3	0.3	-1.5	3.5	-2.6		2.6	2.7	0.6	1.0	-0.9	-0.8	0.5	1.2	0.5	0.9	-1.5	0.3		-1.5	-2.9		
vs. average year	1.9	0.8	0.8	0.9	0.6	0.4	0.1	-0.4	2.1	0.6		2.3	4.3	2.4	1.8	0.0	0.1	1.1	1.7	0.6	0.5	0.6	0.9		0.9	0.6		

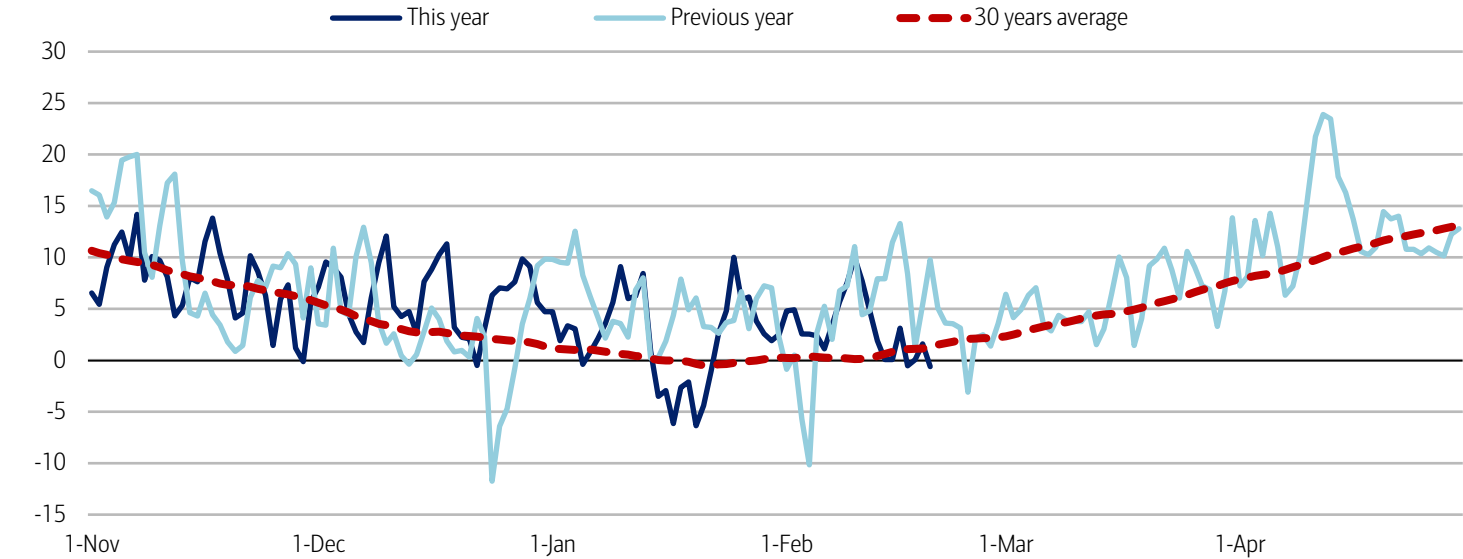
Note: Feb 2024 temperature is the average as of 20 Feb

Source: Bloomberg, BofA Global Research

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Exhibit 37: New York temperature trends (current-year, previous-year, and 30-year averages)
Temperatures down YoY to historical average



Source: Bloomberg, BofA Global Research

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Exhibit 38: New York monthly temperatures (simple average)
Above historical average but down YoY for Feb

	2022												2023												2024											
	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2
vs. last year	-0.3	-1.0	0.6	-1.5	1.8	0.5	-0.9	-3.0	2.0	-3.1	6.5	1.9	-0.6	2.3	-0.7	-1.1	-0.5	-2.1	0.0	1.7	-2.3	3.1	-3.0	-1.5												
vs. average year	1.8	0.1	1.2	0.1	1.6	2.0	0.6	0.0	1.8	0.1	4.9	3.1	1.2	2.4	0.5	-1.0	1.1	-0.1	0.6	1.7	-0.5	3.2	1.9	2.6												

Note: Feb 2024 temperature is the average as of 20 Feb

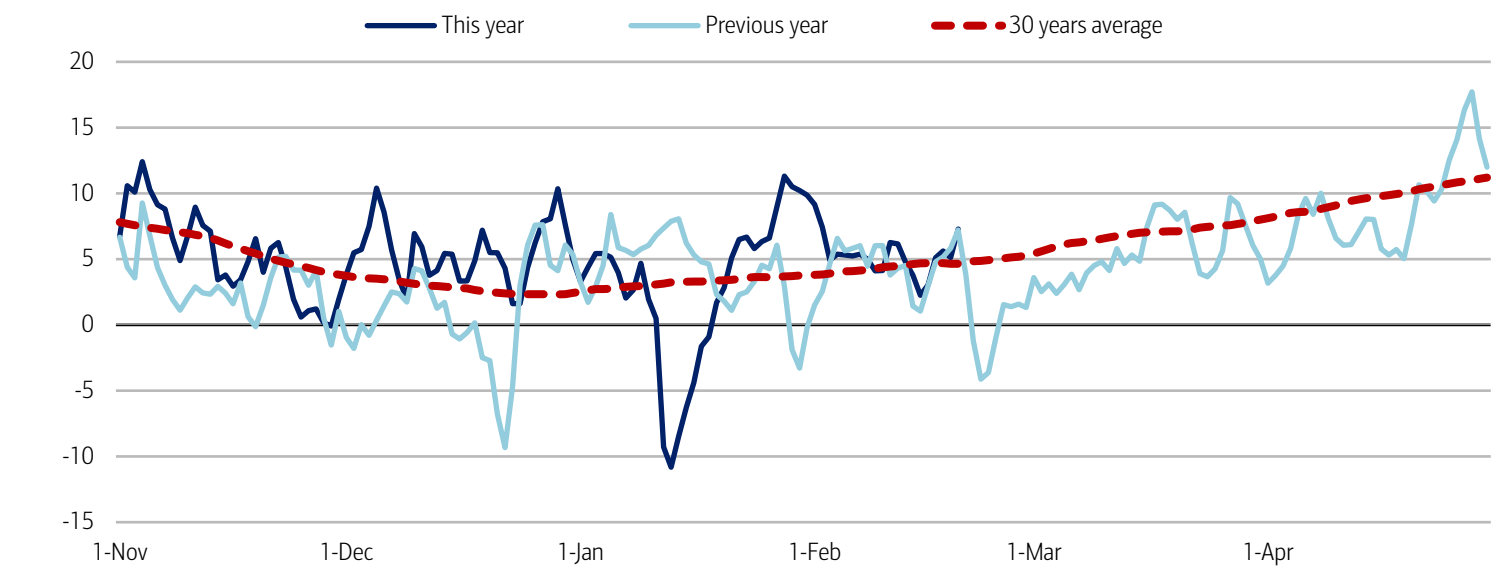
Source: Bloomberg, BofA Global Research

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Exhibit 39: Washington temperature trends (current-year, previous-year, and 30-year averages)

Temperatures on par with last year over the past two weeks or so



Source: Bloomberg, BofA Global Research

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Exhibit 40: Washington monthly temperatures (simple average)

Above historical average and up YoY for Feb

	2022												2023												2024	
	3	4	5	6	7	8	9	10	11	12		1	2	3	4	5	6	7	8	9	10	11	12		1	2
vs. last year	1.1	-3.4	-2.3	-3.5	-0.2	1.7	1.5	2.9	-4.2	-0.5		1.4	-0.5	-1.9	1.2	5.0	1.0	0.0	-0.5	-1.5	-1.8	2.3	4.4		-1.2	0.8
vs. average year	0.5	-2.4	-2.1	0.1	1.5	2.2	1.5	2.3	-2.9	-1.7		0.8	-1.4	-1.4	-1.1	2.9	1.1	1.4	1.7	0.0	0.5	-0.5	2.7		-0.3	0.9

Note: Feb 2024 temperature is the average as of 20 Feb

Source: Bloomberg, BofA Global Research

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Canada temperature trends

Exhibit 41: Canada temperature trends (current-year, previous-year, and 30-year averages)
Recently down YoY to on par with historical average

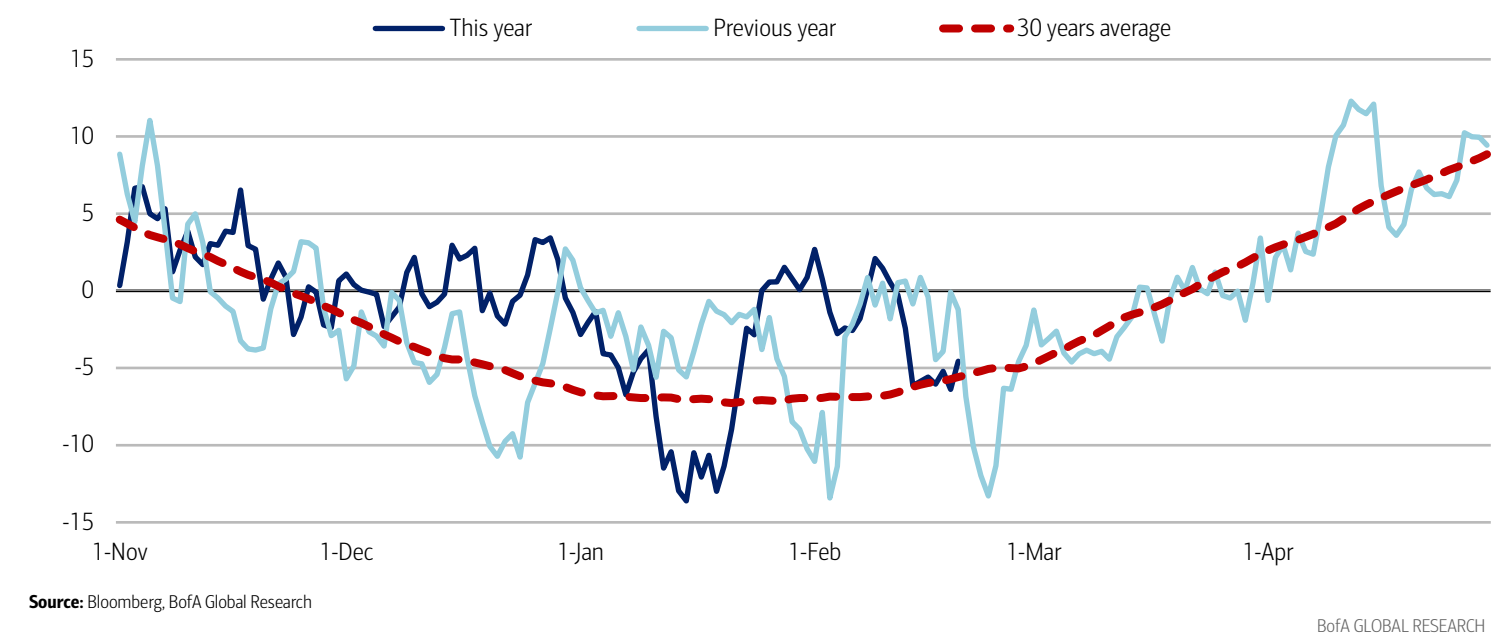


Exhibit 42: Canada monthly temperatures (simple average)
Above historical average and up YoY for Feb

	2022												2023												2024											
	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2
vs. last year	-1.9	-2.0	1.0	-2.3	0.5	-0.2	-0.1	-1.0	-0.8	-0.2	5.7	1.4	-1.4	1.6	0.4	0.6	-0.3	-1.8	0.6	0.5	0.5	4.9	-2.2	0.7												
vs. average year	1.1	-0.6	1.7	0.7	1.2	1.8	1.1	1.4	0.0	-0.1	3.7	1.4	-0.3	1.0	2.1	1.3	0.9	0.0	1.7	1.9	0.5	4.7	1.5	4.2												

Note: Feb 2024 temperature is the average as of 20 Feb

Source: Bloomberg, BofA Global Research

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Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

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