

Retailing Industry

Retail weekly/JMA weather outlook: 19 Jan 2024

Industry Overview

Weather outlook: More warm winter, headwind for apparel

The Japan Meteorological Agency (JMA) updated its one-month forecast on 19 Jan. Over the next month (20 Jan-19 Feb), the JMA expects little impact from cold fronts and the warm winter to continue. By region, it expects higher-than-usual temperatures in eastern and western Japan, Okinawa, and Amami, and at or above average temperatures in northern Japan. Also, it forecasts at or below average snowfall. While winter conditions in FY24 have been unfavorable for apparel, we are looking forward to the start of the spring.

More regions expect lower pollen counts than last year

The Japan Weather Association (JWA) forecasts cedar/Japanese cypress pollen counts in 2024 to be in line with or slightly higher the historical average. However, the forecast calls for pollen counts in many regions to decline from the high levels in 2023. It should be noted that the amount of pollen in the air is affected by the weather and previous spring's pollen counts, and tends to decline the following year after a heavy pollen season. See page 2 onward for details about weather forecasts, overseas temperatures, and the performance of retail stocks.

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

Temperatures down YoY at times over the past week, but recently starting to rise YoY



Source: Japan Meteorological Agency, BofA Global Research

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19 January 2024

Equity
Japan
Retailing

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Exhibit 1: Next week's events

Please confirm official times with companies

23 Jan (Tues)
Earnings Results (Komeri, etc.)
Monthly data (Shimamura, etc.)
24 Jan (Wed)
JNTO (Dec 2023 data)
Monthly data (Kobe Bussan, etc.)
25 Jan (Thurs)
Earnings Results (Cawachi, etc.)

Source: BofA Global Research

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Timestamp: 19 January 2024 05:18AM EST

Retail share-price performance

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

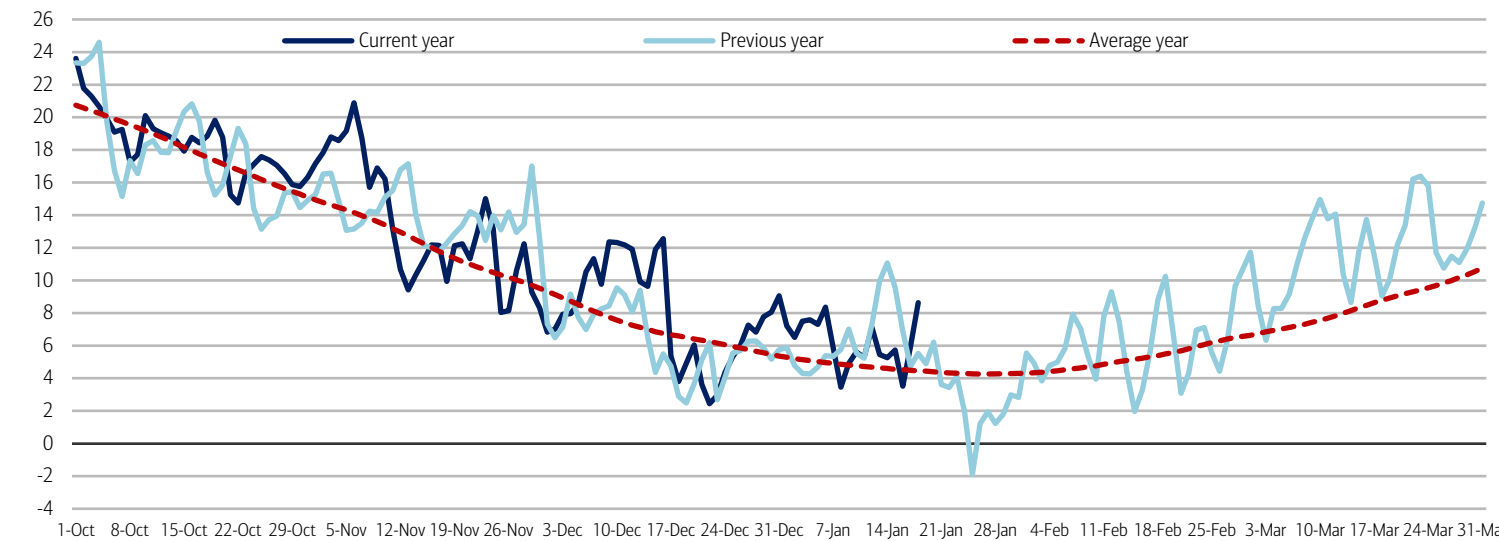
TOPIX Retail Index was -0.1 points vs. TOPIX over the last week, -1.7% over the last month, and -0.6%, over the last three months

	1 Week		1 Month		3 Month		6 Month		2023		2022
Lawson	11.6	Daikokuten Bussan	21.2	Daikokuten Bussan	33.2	Daikokuten Bussan	40.2	Pal	96.4	Takashimaya	72.2
Daikokuten Bussan	10.1	Tokyo Base	21.0	Pal	30.2	Ryohin Keikaku	39.2	Onward	55.2	Isetan Mitsukoshi	69.1
Isetan Mitsukoshi	5.4	Lawson	18.1	Nishimatsuya	26.7	Skylark	33.1	Asics	51.6	H2O	59.3
Asics	4.6	Skylark	17.3	Seria	24.3	Bic Camera	25.4	Ryohin Keikaku	50.7	MatsukiyoCocokara	54.9
Kura Sushi	4.6	Kura Sushi	15.8	Bic Camera	23.8	Kura Sushi	24.1	Adastria	48.2	PPIH	54.6
Skylark	4.5	Isetan Mitsukoshi	15.2	Tsuruha	21.1	Lawson	23.2	Lawson	44.8	ABC-Mart	51.5
Mizuno	4.4	Aeon	14.2	FOOD & LIFE	20.3	Kojima	22.2	Daikokuten Bussan	40.2	Pal	46.2
Aeon	4.2	Life	13.5	Kojima	19.9	PPIH	21.9	Mizuno	39.7	Adastria	45.1
Takashimaya	2.8	MatsukiyoCocokara	11.0	Kura Sushi	18.6	Aeon	20.6	PPIH	37.1	Goldwin	43.4
FOOD & LIFE	2.2	Mizuno	10.8	Ryohin Keikaku	17.0	Nishimatsuya	20.2	Skylark	35.2	Shimamura	35.6
J.Front	2.2	Takashimaya	8.6	Sugi	16.5	Kusuri no Aoki	20.1	Nishimatsuya	33.6	Yonex	35.4
Life	2.0	Fast Retailing	8.1	Nitori	16.1	Isetan Mitsukoshi	19.8	Kojima	32.1	Bic Camera	33.1
H2O	1.8	Sugi	8.0	Tokyo Base	16.0	Shimamura	19.8	Fast Retailing	30.3	Sundrug	30.3
MatsukiyoCocokara	1.7	Arcs	7.8	Lawson	15.6	Arcs	19.1	World	27.6	Mizuno	25.4
Sundrug	1.4	TOPIX	7.6	PPIH	14.9	JINS	17.7	Tsuruha	26.7	Fast Retailing	23.3
Bic Camera	1.2	J.Front	7.3	Skylark	14.6	Adastria	17.1	Arcs	26.7	Edion	19.9
Kohnan Shoji	1.2	Edion	7.1	Yaoko	14.5	Tsuruha	16.2	Kusuri no Aoki	25.3	Yamada	18.8
Izumi	0.9	TOPIX Retail	5.9	Sundrug	14.1	Mizuno	15.0	TOPIX	25.1	J.Front	14.7
TOPIX	0.6	Onward	5.8	Onward	14.0	Pal	13.9	Life	25.0	Asics	14.3
Edion	0.6	Marui	5.5	Shimamura	13.6	FOOD & LIFE	13.6	Edion	22.2	DCM	12.9
Yaoko	0.5	H2O	5.4	Fast Retailing	13.0	Yaoko	13.6	Cosmos	22.1	Nishimatsuya	12.2
Sugi	0.5	7&i	5.3	ZOZO	12.8	Kohnan Shoji	12.9	Izumi	21.1	7&i	11.9
TOPIX Retail	0.5	Yaoko	5.3	Aeon	12.7	ZOZO	12.5	Shimamura	20.3	World	10.9
Arcs	0.3	Yamada	4.8	DCM	11.5	Komeri	12.0	Yaoko	19.0	Kojima	9.2
Tokyo Base	0.3	Tsuruha	4.7	TOPIX	10.9	Life	11.8	H2O	18.4	TOPIX Retail	8.8
U.S.M.H.	0.2	FOOD & LIFE	4.7	JINS	10.4	Fast Retailing	11.8	K's	17.1	Komeri	6.9
7&i	0.1	Bic Camera	4.6	TOPIX Retail	10.3	Seria	11.5	TOPIX Retail	15.8	U.S.M.H.	6.4
Alpen	-0.1	Sundrug	4.6	World	9.9	DCM	10.9	Sundrug	15.8	Kusuri no Aoki	5.3
Kusuri no Aoki	-0.1	Komeri	3.7	Cosmos	9.3	Edion	10.8	Descente	15.2	Daikokuten Bussan	4.3
Komeri	-0.2	Shimamura	3.2	Life	8.5	TOPIX	10.1	Kohnan Shoji	14.8	Onward	3.7
Fast Retailing	-0.3	U.S.M.H.	2.4	Edion	8.4	Sundrug	9.4	Kura Sushi	13.7	Arcs	3.0
DCM	-0.3	Kohnan Shoji	1.7	7&i	6.5	TOPIX Retail	9.4	MatsukiyoCocokara	13.5	Aeon	2.7
United Arrows	-0.3	Welcia	1.6	Arcs	6.4	Asics	8.4	Aeon	13.2	United Arrows	1.1
Marui	-0.3	Izumi	1.5	Adastria	6.0	Nitori	7.6	Komeri	13.1	Skylark	1.1
World	-0.4	K's	1.4	Takashimaya	5.6	H2O	6.9	Yonex	12.4	Kohnan Shoji	1.0
Adastria	-0.5	PPIH	1.3	Komeri	5.0	Takashimaya	5.7	FOOD & LIFE	11.5	K's	0.9
Yamada	-0.6	Seria	1.3	Isetan Mitsukoshi	4.9	K's	4.7	Nitori	10.7	Marui	0.7
Tsuruha	-0.6	Kojima	0.8	ABC-Mart	4.6	Yamada	4.3	Sugi	10.4	Nitori	-1.0
Shimamura	-1.2	Alpen	0.5	Marui	4.2	Izumi	3.8	Kobe Bussan	9.9	Workman	-1.8
K's	-1.2	DCM	0.4	MatsukiyoCocokara	3.9	Sugi	3.8	Marui	8.4	Yaoko	-3.0
Welcia	-1.4	Ryohin Keikaku	0.3	Kusuri no Aoki	2.9	J.Front	1.7	DCM	7.6	TOPIX	-5.1
Cosmos	-1.4	Cosmos	0.2	Alpen	2.6	Kobe Bussan	1.3	Tokyo Base	7.1	Izumi	-7.3
Nishimatsuya	-1.4	Nitori	-0.1	Goldwin	2.1	Marui	0.9	J.Front	6.8	Tsuruha	-7.6
PPIH	-1.7	Asics	-0.3	Asics	0.9	Alpen	0.8	Isetan Mitsukoshi	6.8	Lawson	-7.7
Kojima	-1.7	World	-0.5	Kobe Bussan	0.6	MatsukiyoCocokara	0.6	Goldwin	6.1	Alpen	-8.6
Pal	-2.3	ZOZO	-2.0	United Arrows	0.1	Tokyo Base	-0.9	Bic Camera	4.8	ZOZO	-9.2
Goldwin	-2.4	Snow Peak	-2.7	H2O	-0.1	Cosmos	-1.4	Takashimaya	4.3	Ryohin Keikaku	-10.7
Seria	-2.6	Kusuri no Aoki	-2.9	Kohnan Shoji	-0.4	7&i	-3.4	JINS	2.0	Seria	-14.0
Onward	-2.6	United Arrows	-2.9	J.Front	-0.6	World	-5.2	United Arrows	1.9	Welcia	-14.3
Nitori	-3.2	Descente	-3.2	Welcia	-0.7	Onward	-5.5	Alpen	-0.6	Kobe Bussan	-14.9
Workman	-3.2	ABC-Mart	-3.4	U.S.M.H.	-3.2	ABC-Mart	-7.2	ABC-Mart	-1.0	Sugi	-15.8
JINS	-3.7	Nishimatsuya	-4.5	Workman	-3.9	U.S.M.H.	-8.7	7&i	-1.1	Kura Sushi	-17.4
ZOZO	-3.7	JINS	-4.7	Mizuno	-4.0	Descente	-11.6	ZOZO	-2.6	Cosmos	-21.2
ABC-Mart	-3.9	Workman	-7.2	Yamada	-4.5	Welcia	-13.0	Yamada	-6.1	Life	-22.3
Kobe Bussan	-4.2	Kobe Bussan	-7.5	Izumi	-5.1	Yonex	-13.4	Seria	-8.4	Descente	-23.7
Descente	-5.2	Yonex	-8.0	K's	-5.2	Goldwin	-16.5	U.S.M.H.	-9.6	Snow Peak	-26.1
Snow Peak	-6.3	Goldwin	-8.8	Descente	-14.4	Workman	-18.6	Welcia	-19.8	JINS	-34.2
Ryohin Keikaku	-6.4	Adastria	-10.7	Snow Peak	-14.8	United Arrows	-21.1	Workman	-23.0	FOOD & LIFE	-40.3
Yonex	-7.2	Pal	-16.2	Yonex	-21.9	Snow Peak	-50.3	Snow Peak	-60.7	Tokyo Base	-53.3

Note: Includes companies outside of our coverage

Source: Bloomberg, BofA Global Research

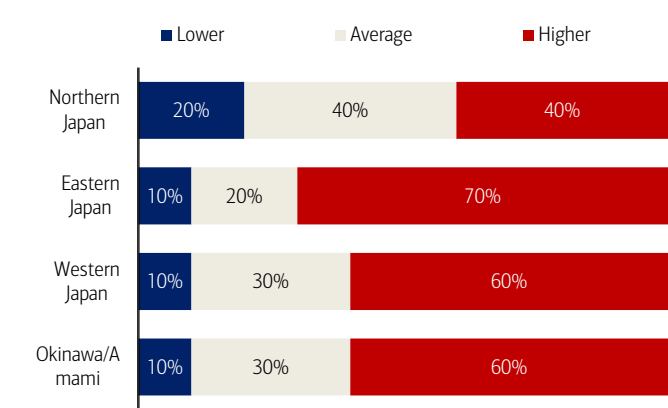
Exhibit 4: Current-/previous-year and average temperatures (average for 10 largest cities)
Temperatures down YoY at times over the past week, but recently starting to rise YoY



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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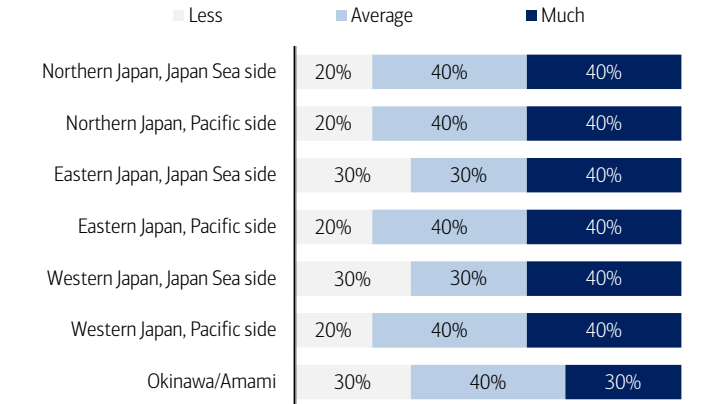
Exhibit 5: Temperature forecasts by region (20 Jan -19 Feb)
Forecast for temperatures at or above average in northern Japan, and above average in other regions



Source: Japan Meteorological Agency, BofA Global Research

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Exhibit 6: Precipitation forecasts by region (20 Jan -19 Feb)
Forecast for at or above average precipitation in all 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 ave	Average	vs. last year	vs. average	vs. 5 yrs ave	Average	vs. last year	vs. average	vs. 5 yrs ave	Average	vs. last year	vs. average	vs. 5 yrs ave	Average	vs. last year	vs. average	vs. 5 yrs ave
2021/1	5.4	-0.2	0.0	-0.5	6.2	-0.4	0.1	-0.5	6.2	-0.3	0.0	-0.4	5.0	-0.1	0.2	-0.4	-4.4	-1.4	-1.2	-1.3
2021/2	8.5	1.3	2.4	1.5	9.1	1.2	2.4	1.5	8.7	0.9	2.1	1.7	7.5	0.3	2.0	1.4	-2.2	0.4	0.5	0.4
2021/3	12.8	2.2	3.4	2.5	13.2	2.2	3.5	2.5	12.2	1.6	2.3	1.5	12.0	1.9	2.8	1.8	3.8	1.3	2.7	1.5
2021/4	15.1	1.5	0.8	0.4	15.2	1.3	0.7	0.2	15.5	0.9	0.3	0.0	15.2	1.1	0.6	0.3	7.9	-0.1	0.6	0.2
2021/5	19.6	-0.4	0.8	-0.3	19.6	-0.2	0.8	-0.3	20.0	-1.0	-0.1	-0.8	19.5	-0.9	0.1	-0.9	13.1	-2.6	0.1	-1.3
2021/6	22.7	0.9	0.8	0.3	22.7	0.8	0.9	0.3	23.9	0.2	0.3	0.3	23.4	0.3	0.4	0.1	18.9	1.5	1.9	2.0
2021/7	25.9	1.8	0.2	0.0	26.0	1.7	0.4	0.2	27.9	1.4	0.2	0.1	27.4	1.5	0.5	0.3	23.9	2.2	2.8	2.3
2021/8	27.4	-1.0	0.5	-0.4	27.5	-0.9	0.5	-0.4	28.1	-1.0	-0.9	-1.5	27.8	-1.1	-0.4	-1.3	22.9	0.4	0.6	0.4
2021/9	22.3	-2.8	-1.0	-1.6	22.6	-2.7	-1.1	-1.6	24.8	-1.8	-0.4	-0.5	24.1	-2.6	-0.4	-0.8	18.8	-0.5	0.2	-0.3
2021/10	18.2	-1.2	0.2	-0.1	18.7	-1.2	0.2	-0.1	20.3	-0.4	0.8	0.7	19.9	-0.4	1.3	0.9	12.5	-0.8	0.4	0.2
2021/11	13.7	0.6	1.2	0.8	14.3	0.3	0.9	0.6	14.1	-0.1	0.3	0.2	13.0	-0.4	0.4	-0.1	7.3	3.4	2.1	2.7
2021/12	7.9	-0.6	0.2	-0.1	8.8	-0.6	0.1	-0.2	8.8	-0.7	0.1	0.0	7.3	-1.5	0.1	-0.3	-0.5	0.3	0.4	0.8
2022/1	4.9	-2.2	-0.5	-0.8	5.5	-2.3	-0.6	-1.1	5.6	-3.0	-0.6	-0.9	4.1	-3.5	-0.7	-1.2	-3.2	-0.9	0.0	0.0
2022/2	5.2	-3.1	-0.9	-2.1	5.8	-3.1	-0.9	-2.1	5.5	-2.5	-1.1	-1.7	4.5	-2.6	-1.0	-1.8	-2.2	-0.1	0.5	0.4
2022/3	10.9	0.2	1.5	0.1	11.3	0.1	1.6	0.1	11.4	0.0	1.5	0.4	11.0	0.3	1.8	0.5	2.6	-0.7	1.5	-0.1
2022/4	15.3	2.5	1.0	0.7	15.4	2.0	0.9	0.5	16.8	3.1	1.6	1.5	16.8	3.4	2.2	2.0	9.1	2.3	1.8	1.4
2022/5	18.8	-0.7	0.0	-1.0	19.0	-0.7	0.2	-0.8	20.0	-0.8	-0.1	-0.6	19.5	-1.1	0.1	-0.7	14.9	1.2	1.9	0.8
2022/6	23.0	-0.2	1.1	0.6	22.9	-0.5	1.1	0.4	24.4	-0.5	0.8	0.7	24.3	-0.3	1.3	0.9	16.8	-1.5	-0.2	-0.6
2022/7	27.4	3.1	1.7	1.4	27.1	2.7	1.5	1.1	28.4	2.4	0.7	0.7	27.5	2.1	0.6	0.3	23.1	1.9	2.0	0.9
2022/8	27.5	-1.6	0.6	-0.4	27.6	-1.5	0.6	-0.3	29.5	-1.2	0.5	0.1	28.5	-1.8	0.3	-0.5	22.7	-0.6	0.4	0.4
2022/9	24.4	0.2	1.1	0.9	24.7	0.1	1.0	0.9	26.2	0.4	1.0	1.1	26.1	0.7	1.6	1.4	19.8	-0.3	1.2	0.8
2022/10	17.2	-0.3	-0.8	-1.0	17.9	0.0	-0.6	-0.8	19.0	0.3	-0.5	-0.6	18.7	0.7	0.1	-0.3	12.6	-0.5	0.5	0.0
2022/11	14.5	0.5	2.0	1.2	15.2	0.5	1.8	1.1	15.2	0.5	1.4	1.2	14.6	0.6	2.0	1.5	7.1	0.8	1.9	1.5
2022/12	7.5	-0.2	-0.2	-0.3	8.4	-0.4	-0.3	-0.4	7.9	-0.8	-0.8	-0.8	6.6	-0.8	-0.6	-0.9	-1.4	0.2	-0.5	-0.2
2023/1	5.7	0.3	0.3	0.2	6.4	0.2	0.3	0.1	6.5	0.3	0.3	0.1	5.2	0.2	0.4	0.1	-4.4	0.0	-1.2	-1.3
2023/2	7.3	-1.2	1.2	0.4	7.9	-1.2	1.2	0.4	7.0	-1.7	0.4	-0.1	6.5	-1.0	1.0	0.3	-2.7	-0.5	0.0	0.0
2023/3	12.9	0.1	3.5	1.6	13.2	0.0	3.5	1.5	13.0	0.8	3.1	1.6	12.7	0.7	3.5	1.7	4.9	1.1	3.8	2.0
2023/4	16.3	1.2	2.0	1.5	16.6	1.4	2.1	1.6	15.9	0.4	0.7	0.4	15.9	0.7	1.3	0.7	9.2	1.3	1.9	1.2
2023/5	19.0	-0.6	0.2	-0.5	19.0	-0.6	0.2	-0.6	20.0	0.0	-0.1	-0.4	20.2	0.7	0.8	0.2	13.8	0.7	0.8	-0.4
2023/6	23.2	0.5	1.3	0.6	23.2	0.5	1.4	0.6	23.8	-0.1	0.2	-0.3	23.8	0.4	0.8	0.0	19.3	0.4	2.3	1.7
2023/7	28.7	2.8	3.0	2.7	28.2	2.2	2.6	2.2	28.9	1.0	1.2	1.2	28.9	1.5	2.0	1.8	23.8	-0.1	2.7	1.5
2023/8	29.2	1.8	2.3	1.1	29.1	1.6	2.1	1.0	29.9	1.8	0.9	0.5	29.4	1.6	1.2	0.4	26.7	3.8	4.4	4.2
2023/9	26.7	4.4	3.4	2.9	26.9	4.3	3.2	2.8	27.9	3.1	2.7	2.4	27.3	3.2	2.8	2.1	21.5	2.7	2.9	2.1
2023/10	18.9	0.7	0.9	0.6	19.5	0.8	1.0	0.7	19.3	-1.0	-0.2	-0.4	18.3	-1.6	-0.3	-0.9	13.3	0.8	1.2	0.4
2023/11	14.4	0.7	1.9	0.5	15.2	0.9	1.8	0.6	14.4	0.3	0.6	-0.2	13.6	0.6	1.0	-0.2	6.7	-0.6	1.5	0.5
2023/12	9.4	1.5	1.7	1.4	10.2	1.4	1.5	1.3	9.3	0.5	0.6	0.4	8.4	1.1	1.2	0.8	-0.7	-0.2	0.2	0.4

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 ave	Average	vs. last year	vs. average	vs. 5 yrs ave	Average	vs. last year	vs. average	vs. 5 yrs ave	Average	vs. last year	vs. average	vs. 5 yrs ave	Average	vs. last year	vs. average	vs. 5 yrs ave
2021/1	7.0	-1.0	0.1	-0.5	6.1	-0.6	-0.1	-0.7	5.2	-1.2	-0.2	-0.8	1.2	-1.2	-0.8	-1.3	6.2	-1.0	0.0	-0.6
2021/2	10.2	0.8	2.4	1.9	8.8	0.8	2.3	1.7	8.2	0.6	2.0	1.7	3.7	0.0	1.3	0.5	8.9	0.7	2.1	1.6
2021/3	13.5	1.6	2.7	1.9	12.3	1.5	2.5	1.6	12.1	1.5	2.6	1.8	8.6	1.6	3.1	1.7	12.7	1.8	2.8	2.0
2021/4	16.7	1.3	1.3	0.7	15.3	0.8	0.3	-0.1	15.4	0.6	0.6	0.2	11.6	1.4	0.9	0.4	15.5	0.7	0.7	0.2
2021/5	20.4	-0.7	0.5	-0.4	19.7	-0.9	-0.1	-0.8	19.5	-1.0	-0.1	-0.8	17.0	-0.4	1.4	0.0	19.5	-0.8	0.1	-0.6
2021/6	24.2	0.8	0.9	0.5	23.7	0.3	0.3	0.4	23.8	0.6	0.6	0.5	20.6	1.6	1.4	0.8	23.4	0.4	0.5	0.2
2021/7	28.9	2.5	1.5	1.2	27.5	1.1	0.4	0.2	27.6	1.2	0.4	0.2	24.1	1.7	1.2	0.6	27.2	1.1	0.1	-0.1
2021/8	27.5	-0.5	-0.9	-1.9	27.8	-1.0	-0.8	-1.5	27.4	-1.1	-1.1	-1.9	24.9	-1.3	0.5	-0.4	27.5	-0.3	-0.6	-1.5
2021/9	25.9	0.0	1.2	1.0	25.1	-1.8	-0.3	-0.4	25.0	-1.3	0.3	0.3	20.8	-1.6	-0.4	-1.0	25.0	-1.3	0.4	0.1
2021/10	21.0	0.5	1.4	1.0	20.6	-0.6	0.8	0.6	19.9	-0.4	1.1	0.7	15.8	-1.1	0.1	-0.1	20.1	-0.6	1.0	0.4
2021/11	13.9	-1.0	-0.3	-0.6	14.5	-0.1	0.3	0.2	13.1	-0.4	0.2	-0.1	11.1	1.1	1.3	1.3	13.7	-0.4	0.1	-0.1
2021/12	9.1	-1.2	0.0	-0.3	8.9	-1.0	0.1	-0.2	7.8	-0.8	0.3	0.0	4.7	-0.7	0.2	0.1	8.8	-0.9	0.3	0.1
2022/1	6.9	-2.6	0.0	-0.6	5.7	-3.1	-0.5	-0.9	5.3	-2.8	-0.1	-0.6	1.7	-2.3	-0.3	-0.6	5.9	-2.8	-0.3	-0.8
2022/2	6.3	-3.4	-1.5	-2.5	5.6	-2.6	-0.9	-1.7	4.8	-3.0	-1.4	-2.1	1.9	-2.5	-0.5	-1.4	5.2	-3.2	-1.6	-2.4
2022/3	12.7	0.3	1.9	0.7	11.5	0.1	1.7	0.5	11.5	0.5	2.0	0.8	6.4	-1.1	0.9	-0.8	11.9	0.5	2.0	0.8
2022/4	16.4	2.3	1.0	0.4	16.6	3.0	1.6	1.5	16.4	3.2	1.6	1.4	11.8	1.7	1.1	0.6	15.9	2.6	1.1	0.7
2022/5	20.6	0.2	0.7	-0.1	19.8	-0.8	0.0	-0.5	20.0	-0.3	0.4	-0.1	16.5	-0.3	0.9	-0.5	19.3	-0.8	-0.1	-0.7
2022/6	24.8	-0.1	1.5	0.9	23.9	-0.4	0.5	0.5	24.2	0.0	1.0	0.8	20.2	-1.0	1.0	0.3	24.1	-0.1	1.2	0.9
2022/7	28.9	3.4	1.5	1.1	28.0	2.3	0.9	0.7	28.1	2.9	0.9	0.8	24.9	3.6	2.0	1.2	27.8	2.2	0.7	0.7
2022/8	29.8	-0.4	1.4	0.8	29.2	-0.8	0.6	0.2	29.2	-0.7	0.7	0.3	25.1	-1.5	0.7	0.0	29.1	-0.6	1.0	0.5
2022/9	25.7	1.2	1.0	0.6	26.7	0.8	1.3	1.4	26.0	1.0	1.3	1.3	22.2	-0.3	1.0	0.7	26.2	1.0	1.6	1.3
2022/10	19.6	0.2	0.0	-0.4	19.5	0.4	-0.3	-0.4	18.9	0.2	0.1	-0.3	15.5	-0.1	-0.2	-0.4	19.2	0.4	0.1	-0.3
2022/11	16.2	0.9	2.0	1.8	15.8	0.7	1.6	1.4	14.9	0.7	2.0	1.7	11.9	1.1	2.1	1.6	15.5	0.8	1.9	1.7
2022/12	7.7	-0.8	-1.4	-1.4	7.9	-0.9	-0.9	-1.0	6.4	-0.8	-1.1	-1.2	4.2	0.3	-0.3	-0.2	7.4	-0.5	-1.1	-1.1
2023/1	7.2	0.2	0.3	-0.2	6.6	0.5	0.4	0.1	5.7	0.5	0.3	-0.2	2.1	0.9	0.1	0.0	6.5	0.3	0.3	-0.1
2023/2	9.0	-1.2	1.2	0.6	7.2	-1.6	0.7	0.0	6.9	-1.3	0.7	0.3	3.0	-0.7	0.6	0.0	7.6	-1.3	0.8	0.4
2023/3	13.6	0.1	2.8	1.1	13.0	0.7	3.2	1.5	12.6	0.5	3.1	1.4	9.3	0.7	3.8	1.9	12.7	0.0	2.8	1.0
2023/4	16.7	0.0	1.3	0.8	15.9	0.6	0.9	0.6	15.7	0.3	0.9	0.5	13.3	1.7	2.6	2.1	15.9	0.4	1.1	0.7
2023/5	20.2	-0.2	0.3	-0.5	19.8	0.1	0.0	-0.3	19.9	0.4	0.3	-0.1	16.6	-0.4	1.0	-0.3	19.8	0.3	0.4	0.0
2023/6	24.4	0.2	1.1	0.2	23.4	-0.3	0.0	-0.3	23.3	-0.5	0.1	-0.4	21.6	1.0	2.4	1.3	23.1	-0.3	0.2	-0.4
2023/7	28.9	0.0	1.5	1.2	28.0	0.5	0.9	0.7	27.9	0.3	0.7	0.6	26.6	2.5	3.7	3.0	28.0	0.8	0.9	1.0
2023/8	29.7	2.2	1.3	0.6	29.7	1.9	1.1	0.7	30.0	2.6	1.5	1.0	28.6	3.7	4.2	3.1	28.9	1.4	0.8	0.2
2023/9	26.9	1.0	2.2	1.5	27.9	2.8	2.5	2.1	27.2	2.2	2.5	2.0	25.1	4.3	3.9	3.4	27.3	2.3	2.7	1.9
2023/10	19.8	-1.2	0.2	-0.1	19.6	-1.0	-0.2	-0.5	18.9	-1.0	0.1	-0.4	16.7	0.9	1.0	0.6	19.4	-0.7	0.3	-0.2
2023/11	15.1	1.2	0.9	0.2	14.7	0.2	0.5	-0.3	14.0	0.9	1.1	0.2	11.4	0.3	1.6	0.5	14.8	1.1	1.2	0.5
2023/12	9.9	0.8	0.8	0.7	9.7	0.8	0.9	0.7	8.2	0.4	0.7	0.5	5.7	1.0	1.2	1.2	9.3	0.5	0.8	0.7

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%

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. 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. last year	vs. average	vs. 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%

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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%

Source: Japan Meteorological Agency, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 12: Monthly sunshine hours

Fukuoka, Kobe, Hiroshima, Sendai, Matsuyama

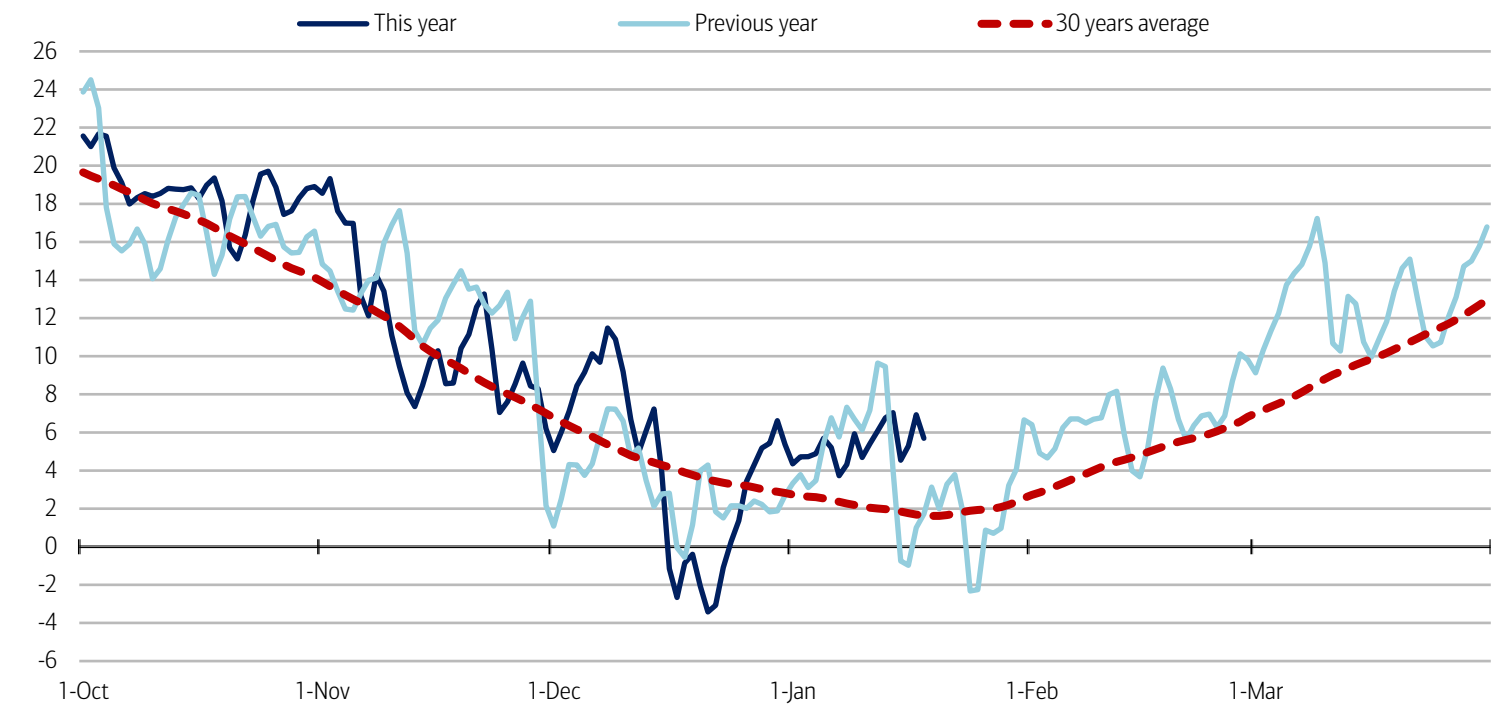
	Fukuoka			Kobe			Hiroshima			Sendai			Matsuyama		
	vs..	vs.	vs.	vs..	vs.	vs.	vs..	vs.	vs.	vs..	vs.	vs.	vs..	vs.	vs.
	last year	average	5 yrs ave	last year	average	5 yrs ave	last year	average	5 yrs ave	last year	average		last year	average	5 yrs ave
2021/1	27%	14%	12%	31%	15%	11%	21%	21%	15%	7%	-4%	-4%	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%

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 were at or above average over the past few days



Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 14: China monthly temperatures (simple average)
Above historical average and up YoY for Jan, as of 18 Jan

	2022												2023												2024	
	2	3	4	5	6	7	8	9	10	11	12		1	2	3	4	5	6	7	8	9	10	11	12		1
vs. last year	-4.5	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	0.7		
vs. average year	-1.0	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	3.1		

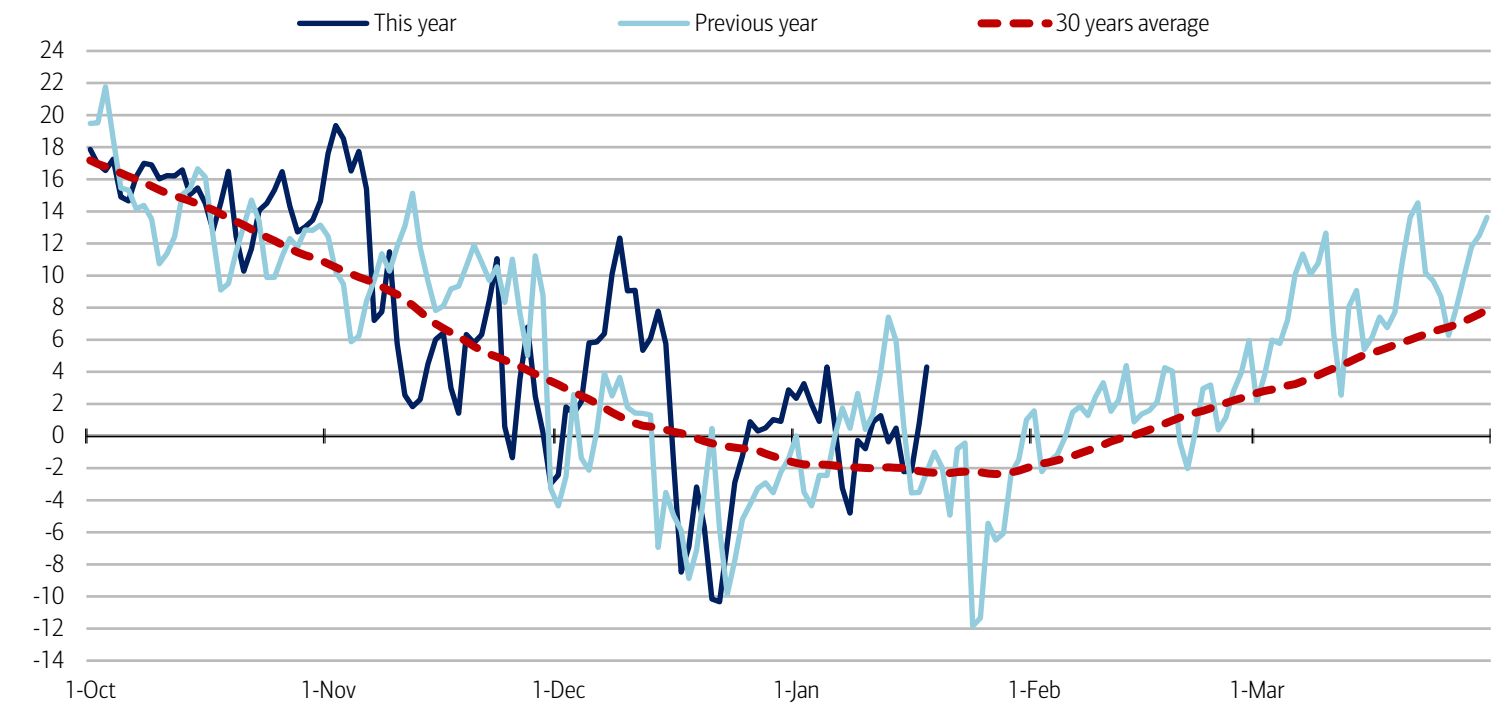
Note: Jan 2024 temperature is the average as of 18 Jan
Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH



Korea temperature trends

Exhibit 15: Korea temperature trends (current-year, previous-year, and 30-year averages)
Above historical average and up YoY over the past few days



Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 16: Korea monthly temperatures (simple average)
The Jan average was also up YoY, as of 18 Jan

	2022												2023												2024											
	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1												
vs. last year	-3.5	-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	0.3												
vs. average year	-1.5	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	2.3												

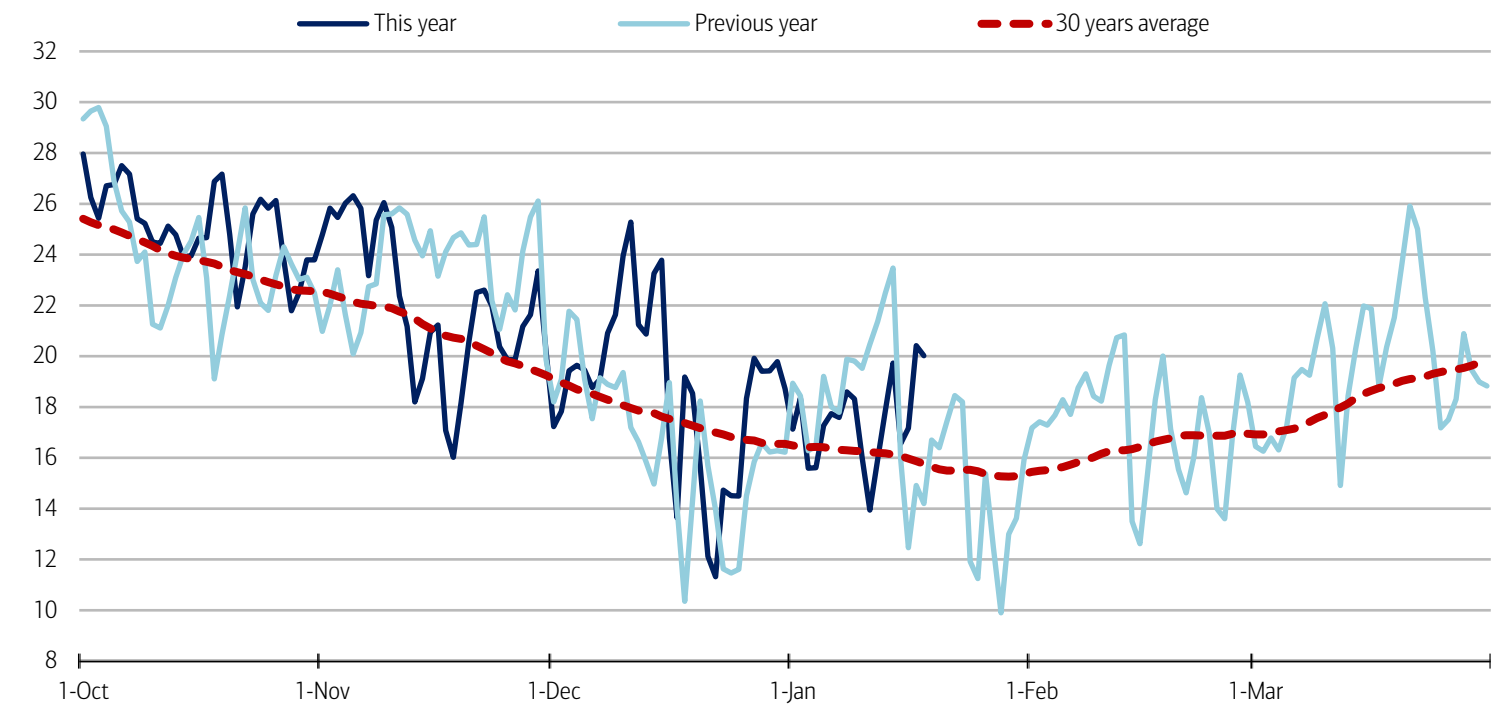
Note: Jan 2024 temperature is the average as of 18 Jan
Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH



Taiwan temperature trends

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



Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 18: Taiwan monthly temperatures (simple average)
The Jan average was down YoY, as of 18 Jan

	2022												2023												2023
	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	
vs. last year	-2.7	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	-0.9	
vs. average year	-0.1	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	1.2	

Note: Jan 2024 temperature is the average as of 18 Jan

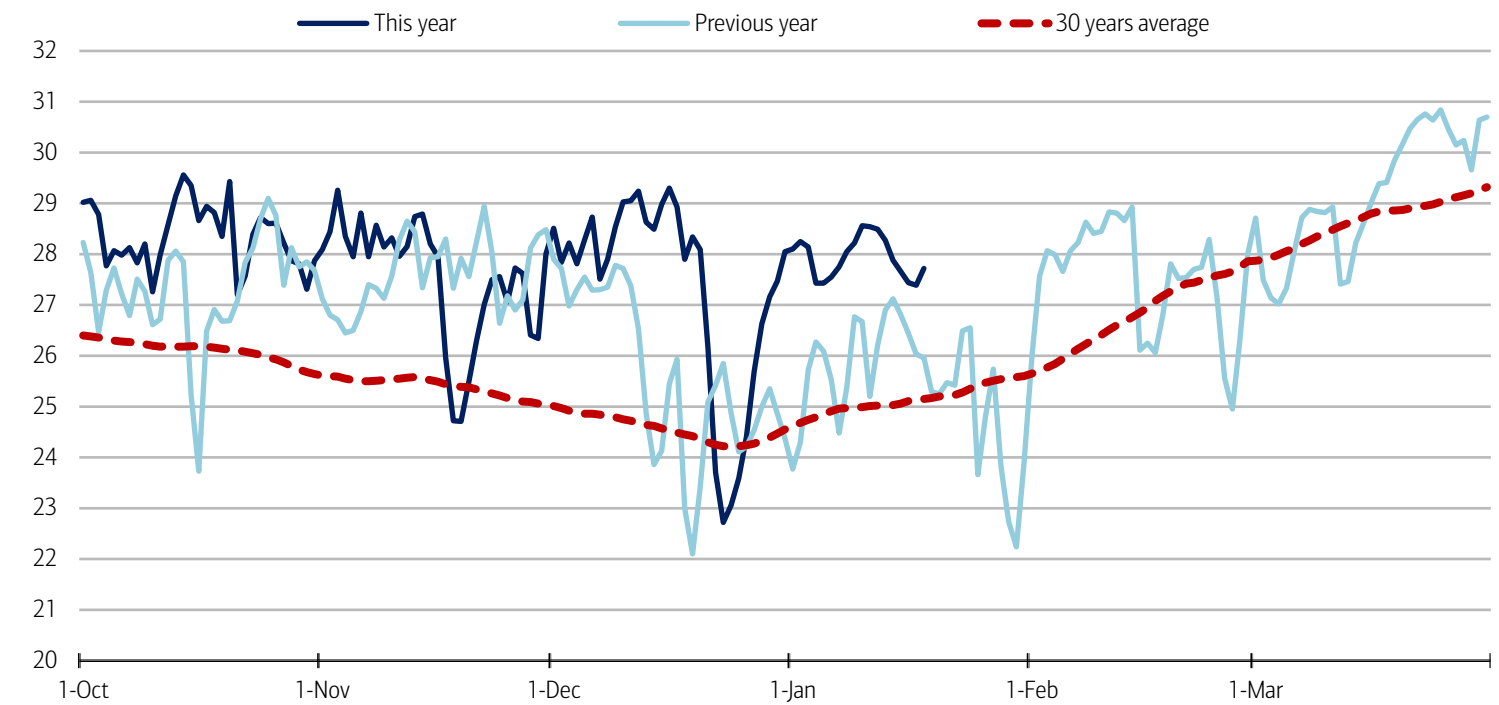
Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH



Thailand temperature trends

Exhibit 19: Thailand temperature trends (current-year, previous-year, and 30-year averages)
Temperatures higher than last year over the past few weeks



Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 20: Thailand monthly temperatures (simple average)
The Jan average was up YoY, as of 18 Jan

	2022												2023												2024											
	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1												
vs. last year	-0.3	-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	2.1												
vs. average year	0.2	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	3.0												

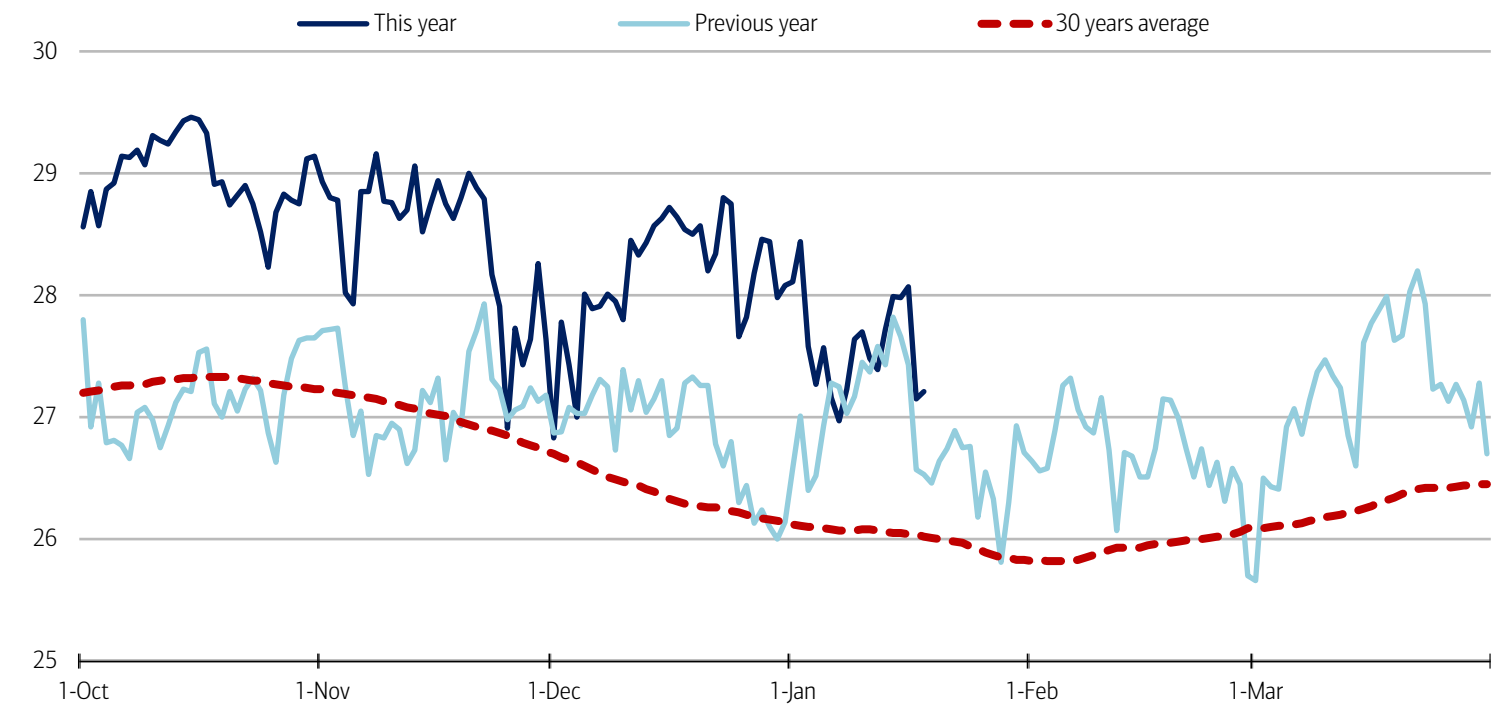
Note: Jan 2024 temperature is the average as of 18 Jan

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 on par with last year for about the past two weeks



Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 22: Indonesia monthly temperatures (simple average)
Monthly average remains up YoY in Jan, as of 18 Jan

	2022												2023												2024
	2	3	4	5	6	7	8	9	10	11	12		1	2	3	4	5	6	7	8	9	10	11	12	1
vs. last year	0.1	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	0.5
vs. average year	1.1	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	1.5

Note: Jan 2024 temperature is the average as of 18 Jan

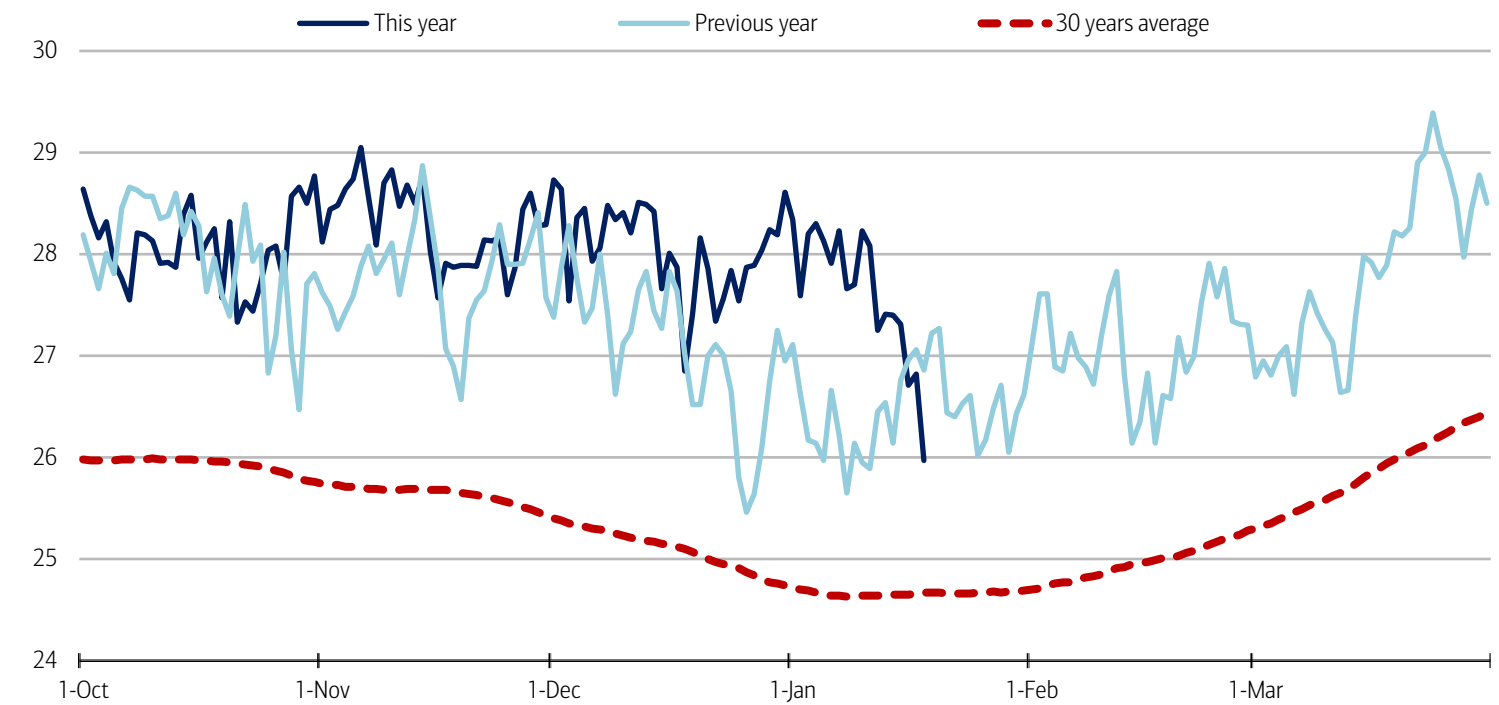
Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH



Philippines temperature trends

Exhibit 23: Philippines temperature trends (current-year, previous-year, and 30-year averages)
Temperatures declined over the past few days



Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 24: Philippines monthly temperatures (simple average)
Monthly average remains up YoY in Jan, as of 18 Jan

	2022												2023												2024
	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	
vs. last year	0.2	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	1.2	
vs. average year	2.1	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	3.0	

Note: Jan 2024 temperature is the average as of 18 Jan

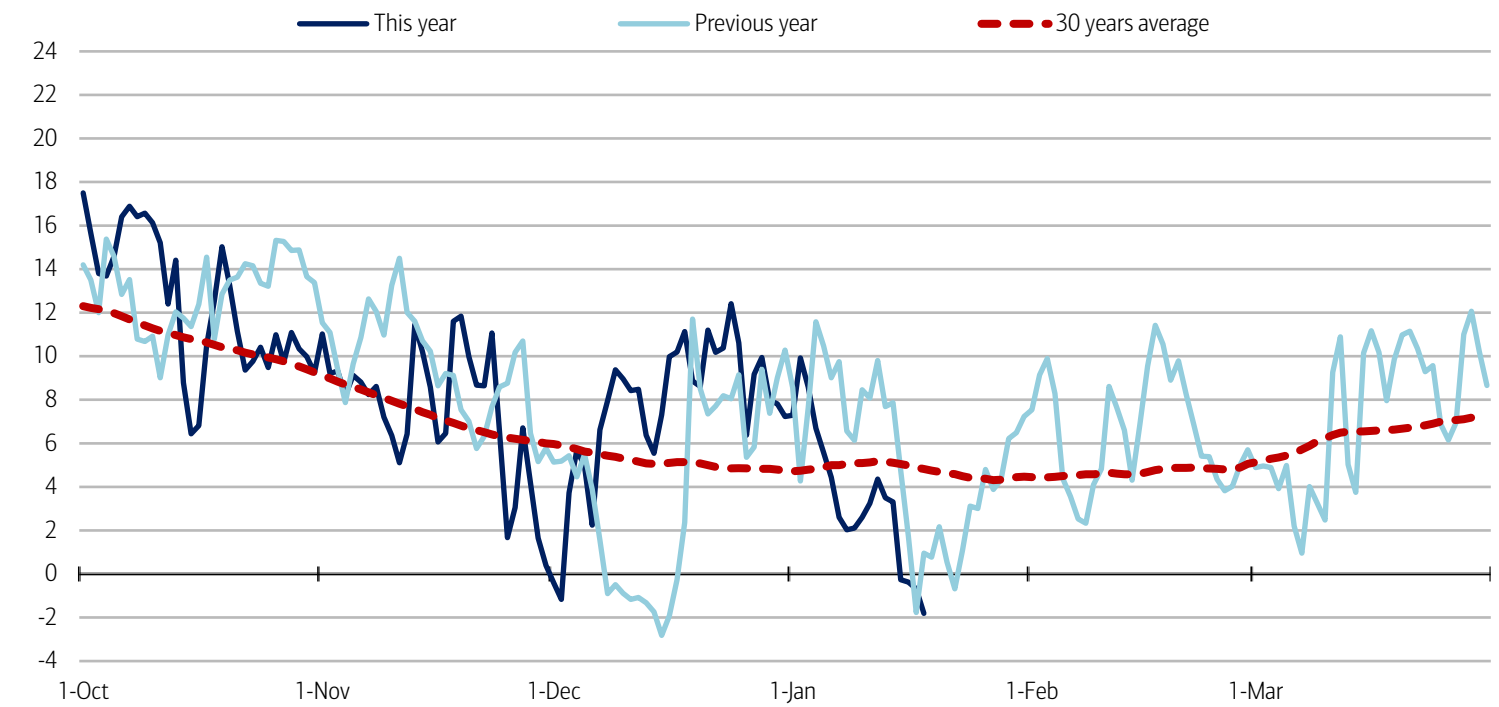
Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH



UK temperature trends

Exhibit 25: UK temperature trends (current-year, previous-year, and 30-year averages)
Temperatures recently declined to on par with those of last year



Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 26: UK monthly temperatures (simple average)
Below historical average and down YoY for Jan, as of 18 Jan

	2022												2023												2024	
	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1		
vs. last year	1.8	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	-3.2		
vs. average year	2.7	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	-1.5		

Note: Jan 2024 temperature is the average as of 18 Jan

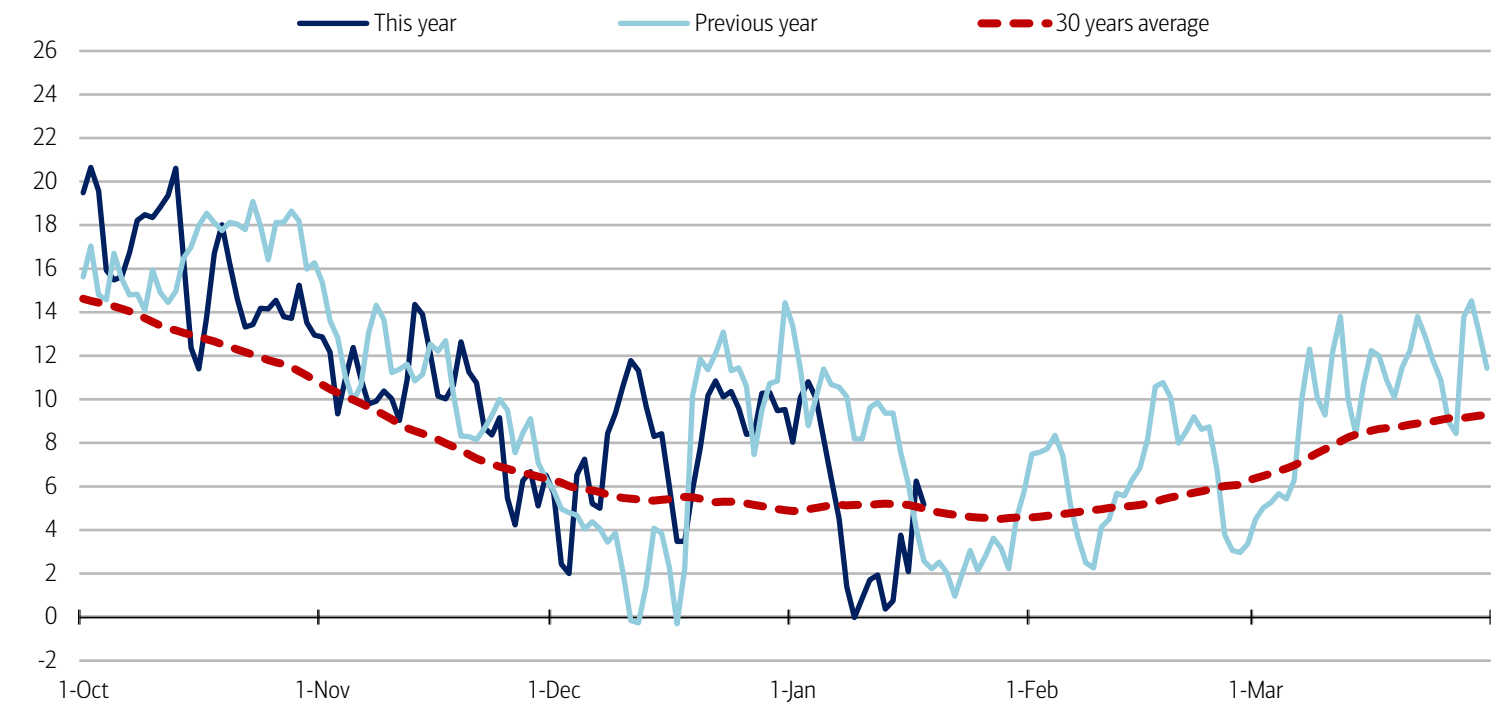
Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH



France temperature trends

Exhibit 27: France temperature trends (current-year, previous-year, and 30-year averages)
Temperatures heading up a bit lately



Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 28: France monthly temperatures (simple average)
Below historical average and down YoY for Jan, as of 18 Jan

	2022												2023												2024
	2	3	4	5	6	7	8	9	10	11	12		1	2	3	4	5	6	7	8	9	10	11	12	1
vs. last year	0.2	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	-4.4
vs. average year	2.9	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	-0.5

Note: Jan 2024 temperature is the average as of 18 Jan

Source: Bloomberg, BofA Global Research

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Lower than last year for about the past two weeks



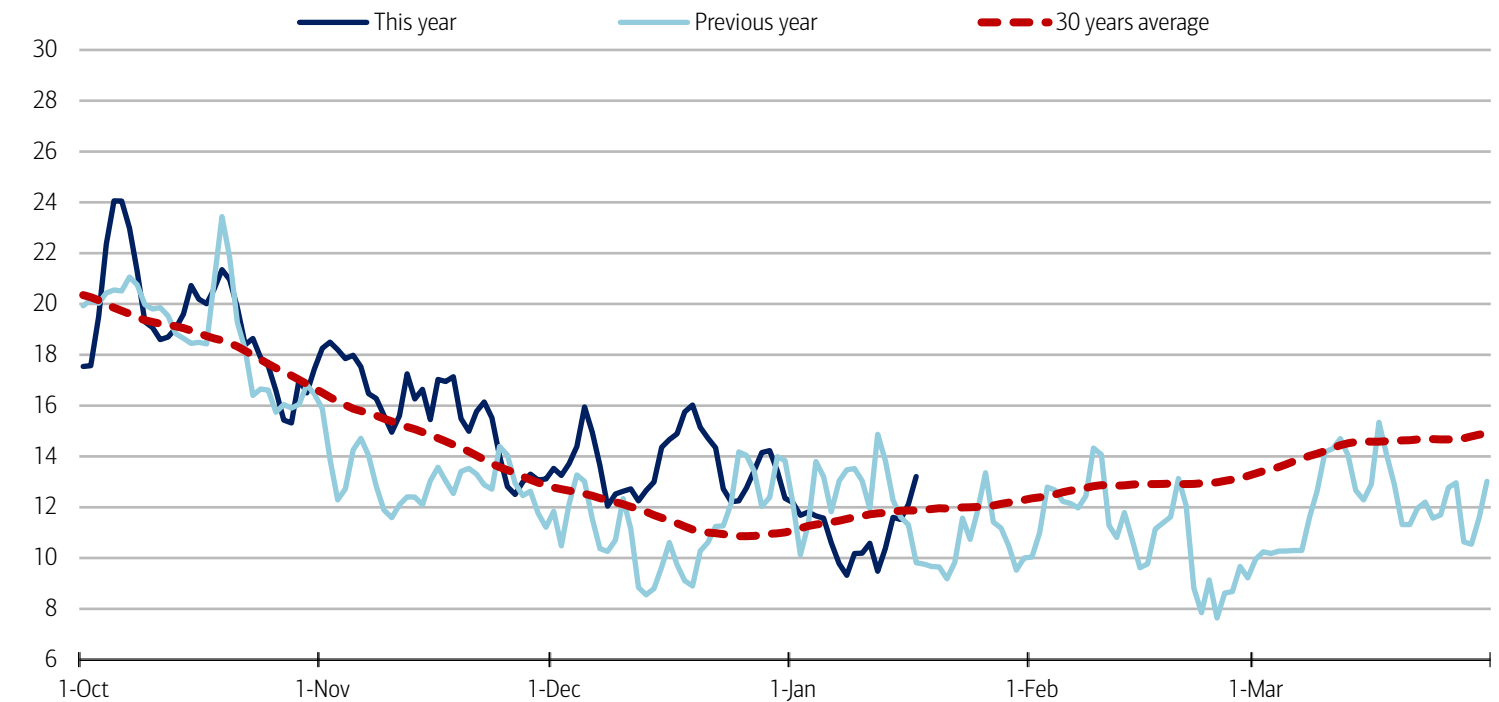
Below historical average and down YoY for Jan, as of 18 Jan

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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 rose



Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 32: California monthly temperatures (simple average)
Below historical average and down YoY for Jan, as of 17 Jan

	2022												2023												2024
	2	3	4	5	6	7	8	9	10	11	12		1	2	3	4	5	6	7	8	9	10	11	12	1
vs. last year	0.1	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	-1.4
vs. average year	0.5	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	-0.5

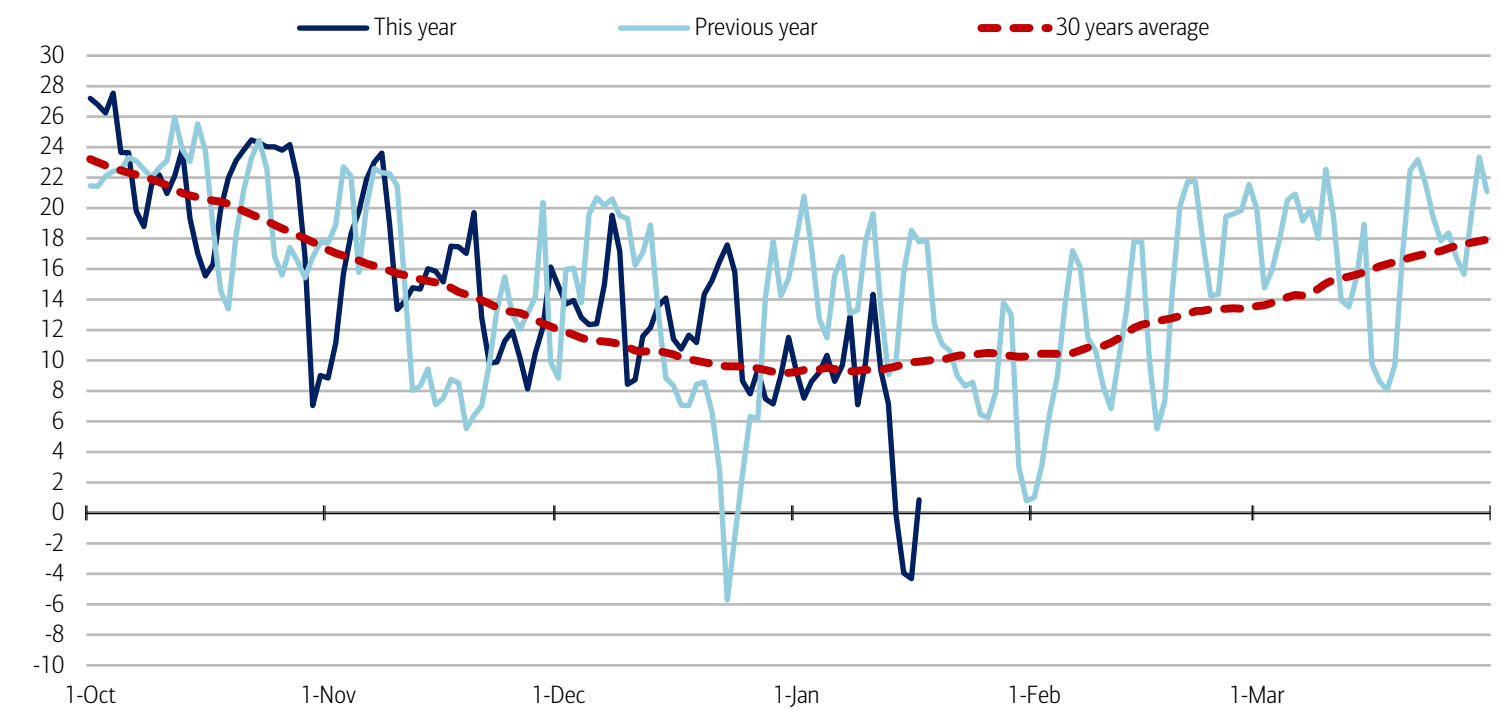
Note: Jan 2024 temperature is the average as of 17 Jan

Source: Bloomberg, BofA Global Research

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Exhibit 33: Texas temperature trends (current-year, previous-year, and 30-year averages)
Temperatures lower than last year over the past few weeks



Source: Bloomberg, BofA Global Research

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Exhibit 34: Texas monthly temperatures (simple average)
Below historical averages and down YoY for Jan, as of 17 Jan

	2022												2023												2024
	2	3	4	5	6	7	8	9	10	11	12		1	2	3	4	5	6	7	8	9	10	11	12	1
vs. last year	0.7	-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	-8.5
vs. average year	-2.8	-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	-2.6

Note: Jan 2024 temperature is the average as of 17 Jan

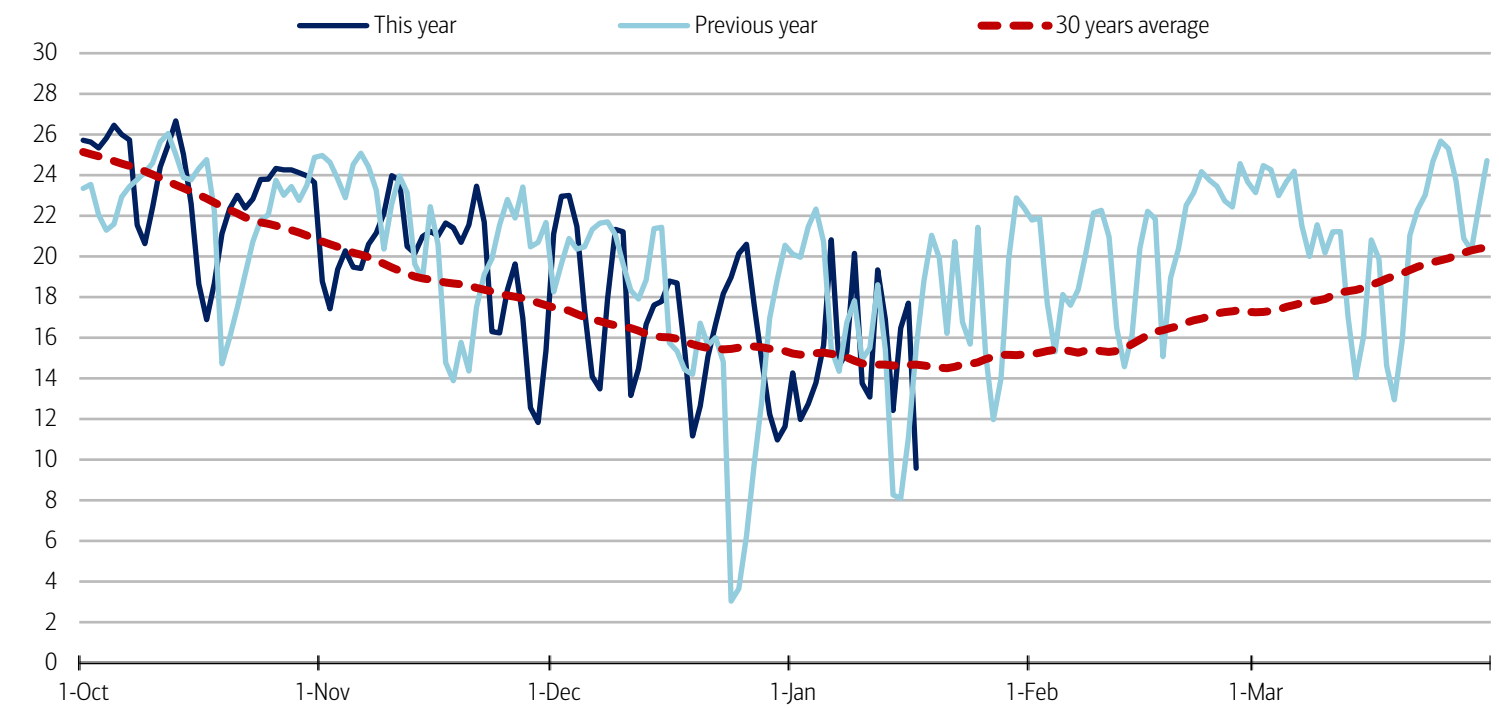
Source: Bloomberg, BofA Global Research

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

On par with last year



Source: Bloomberg, BofA Global Research

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Exhibit 36: Florida monthly temperatures (simple average)

The Jan average was down YoY, as of 17 Jan

	2022												2023												2024
	2	3	4	5	6	7	8	9	10	11	12		1	2	3	4	5	6	7	8	9	10	11	12	1
vs. last year	0.2	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	-1.0
vs. average year	1.6	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	0.3

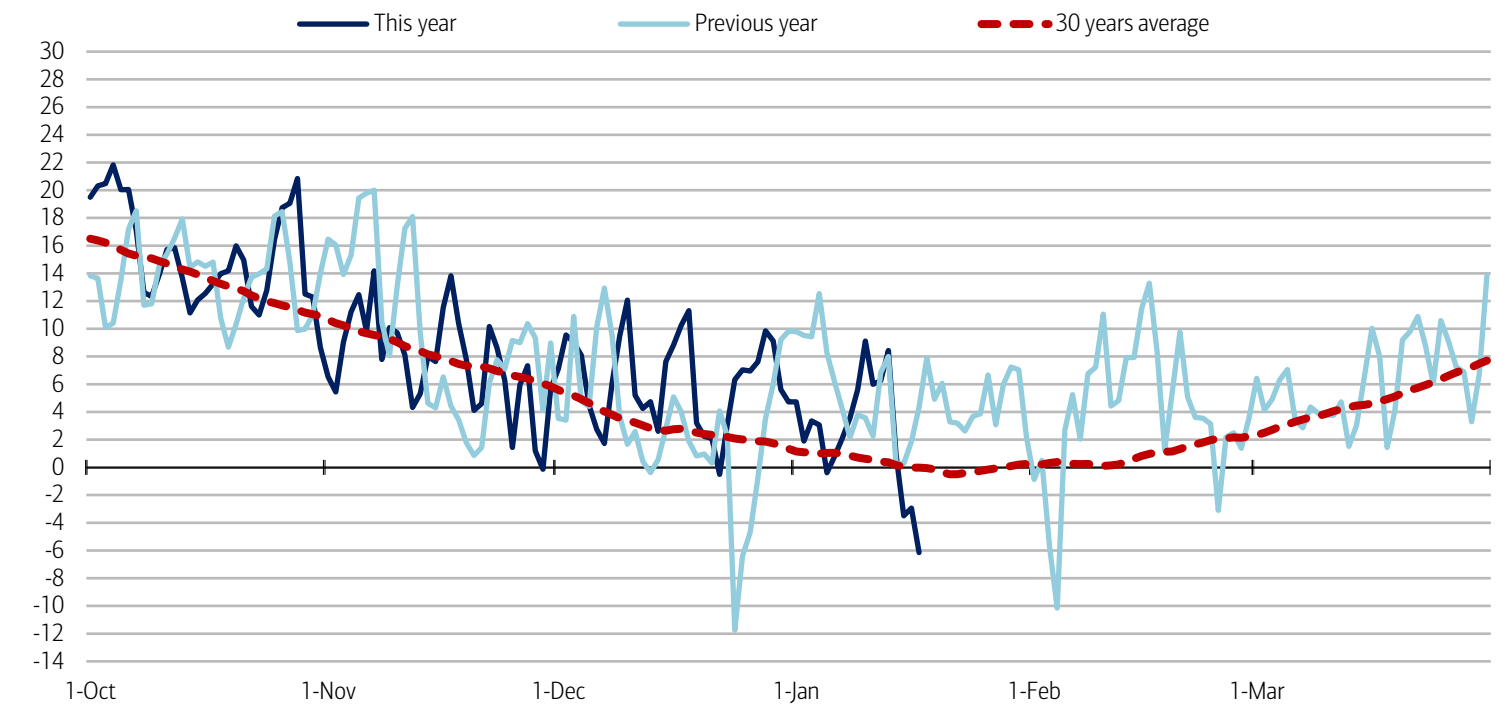
Note: Jan 2024 temperature is the average as of 17 Jan

Source: Bloomberg, BofA Global Research

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Exhibit 37: New York temperature trends (current-year, previous-year, and 30-year averages)
Temperatures recently declined



Source: Bloomberg, BofA Global Research

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Exhibit 38: New York monthly temperatures (simple average)
The Jan average was down YoY, as of 17 Jan

	2022												2023												2024
	2	3	4	5	6	7	8	9	10	11	12		1	2	3	4	5	6	7	8	9	10	11	12	1
vs. last year	1.4	-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
vs. average year	1.2	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

Note: Jan 2024 temperature is the average as of 17 Jan

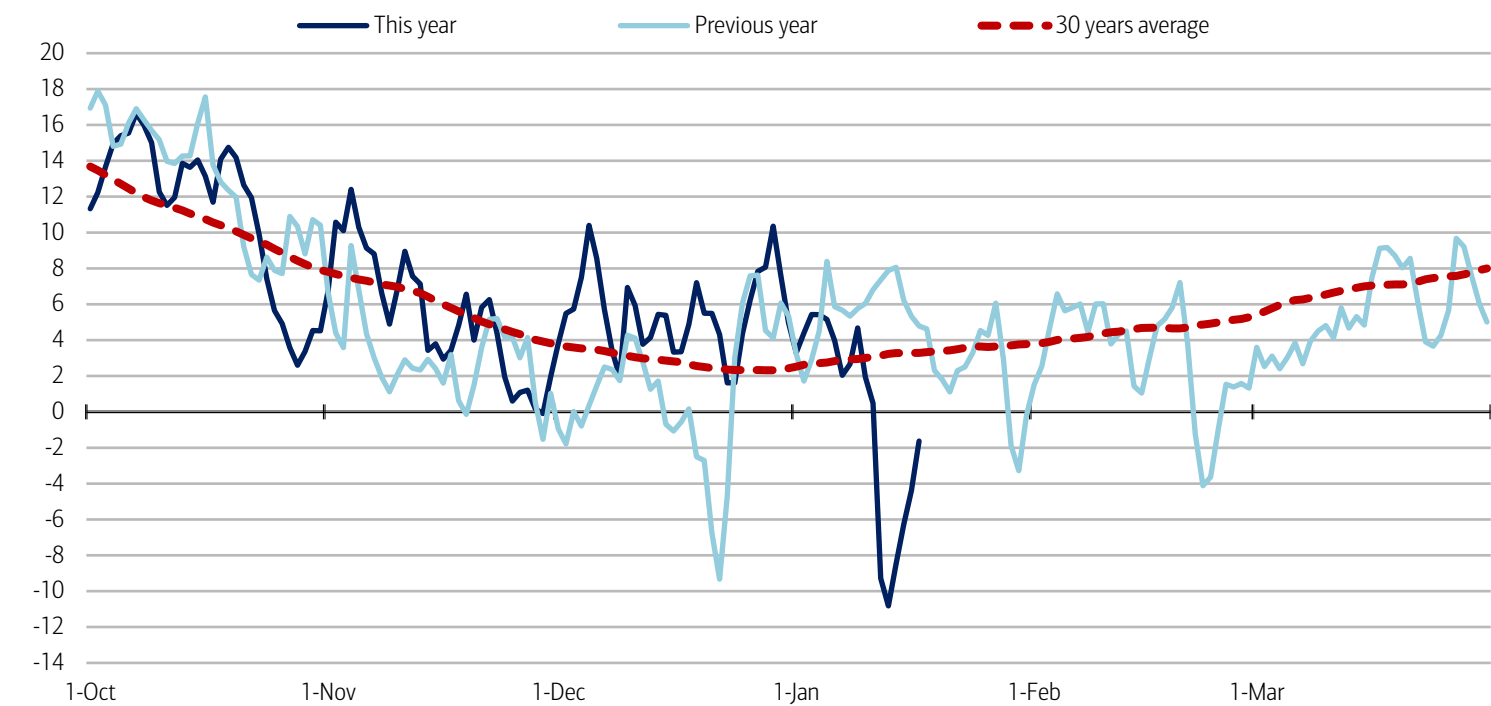
Source: Bloomberg, BofA Global Research

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

Temperatures recently much lower than those of last year



Source: Bloomberg, BofA Global Research

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Exhibit 40: Washington monthly temperatures (simple average)

Below historical averages and down YoY for Jan, as of 17 Jan

	2022												2023												2024
	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	
vs. last year	0.6	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	-5.7	
vs. average year	-0.8	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	-3.1	

Note: Jan 2024 temperature is the average as of 17 Jan

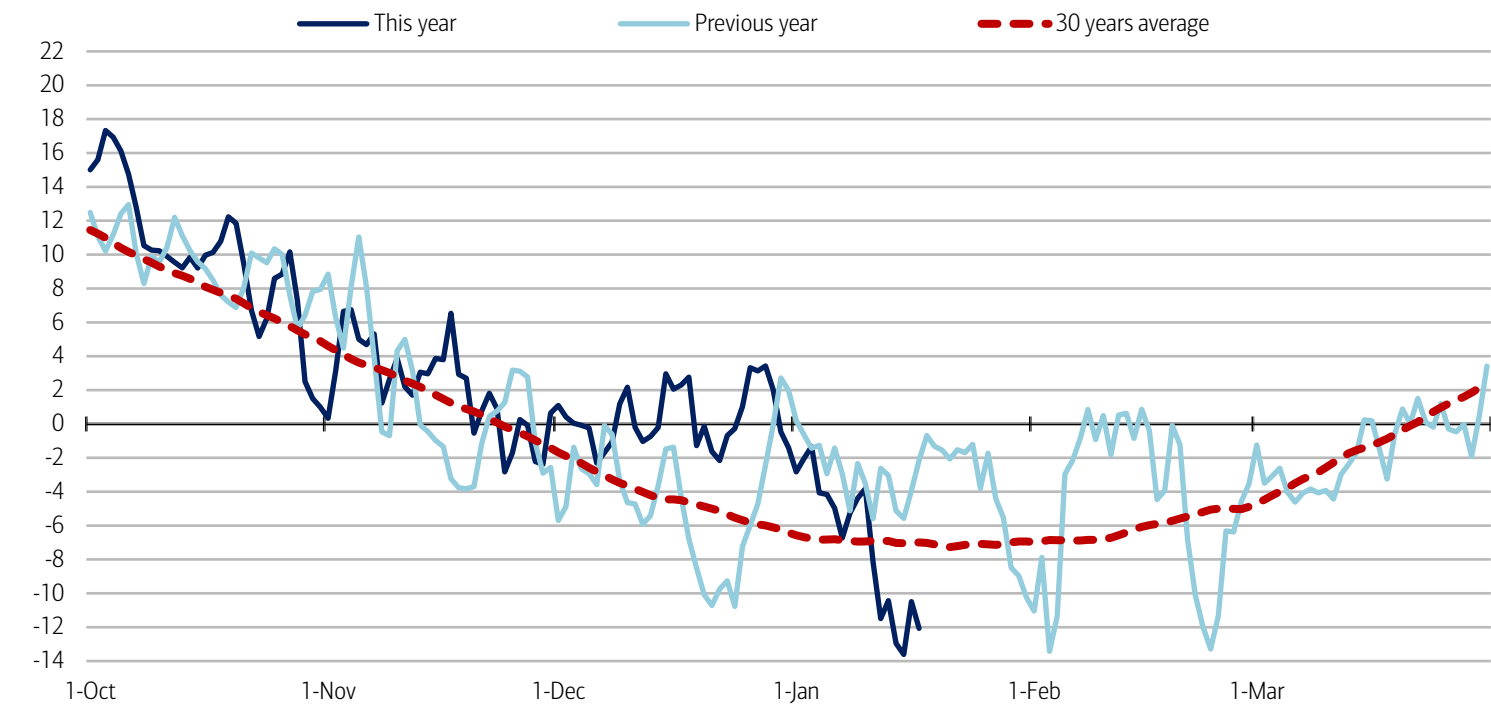
Source: Bloomberg, BofA Global Research

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Canada temperature trends

Exhibit 41: Canada temperature trends (current-year, previous-year, and 30-year averages)
Temperatures recently much lower than those of last year



Source: Bloomberg, BofA Global Research

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Exhibit 42: Canada monthly temperatures (simple average)
Below historical averages and down YoY for Jan, as of 17 Jan

	2022												2023												2024	
	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1		
vs. last year	1.6	-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	-4.1		
vs. average year	0.0	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	-0.1		

Note: Jan 2024 temperature is the average as of 17 Jan
Source: Bloomberg, BofA Global Research

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