

Retailing Industry

Retail weekly/JMA weather outlook: 2 Feb 2024

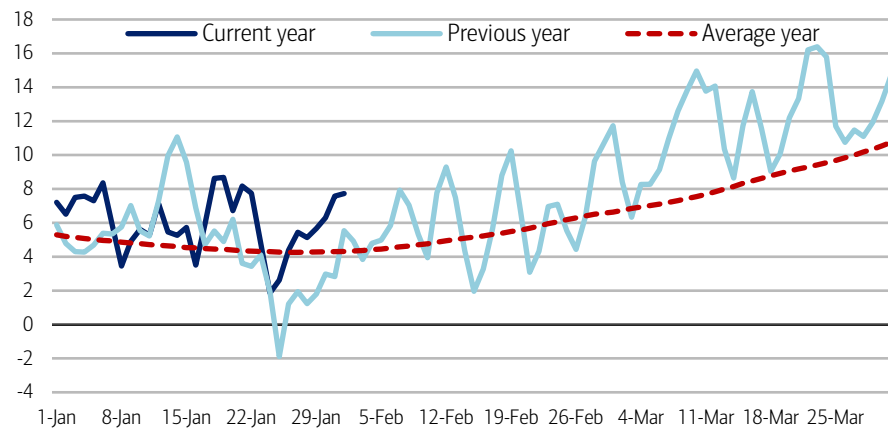
Industry Overview

Weather outlook: Especially warm in many regions in early Feb

The Japan Meteorological Agency (JMA) updated its one-month forecast on 1 February. Over the next month (3 Feb-2 Mar), the JMA expects little impact from cold fronts and temperatures at or above average. It expects especially warm weather in the first half of the month, except for in northern Japan. It forecasts precipitation over the next month will be at or above normal levels on the Pacific side of eastern Japan and the Sea of Japan side of western Japan, and above normal levels on the Pacific side of western Japan. In February 2023, there was little impact from cold fronts and temperatures were high in eastern and western Japan as well as Okinawa and Amami. We continue to look forward to the start of the spring.

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

Temperatures fell at times but were up YoY and above historical average over the past week



Source: Japan Meteorological Agency, BofA Global Research

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02 February 2024

Equity
Japan
Retailing

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Exhibit 1: Next week's events

Please confirm official times with companies

5 Feb (Mon)
Earnings Results (Descente, Workman, etc.)
Monthly data (ABC-Mart, JINS, etc.)

6 Feb (Tue)
Earnings Results (Goldwin, K's, Joshin Denki, etc.)
Monthly data (K's, etc.)

7 Feb (Wed)
Earnings Results (United Arrows, Alpen, etc.)

8 Feb (Thu)
Earnings Results (Nitori, Yonex etc.)

9 Feb (Fri)
Earnings Results (Food&LIFE, Asics, Valor, Zensho, etc.)

Source: BofA Global Research

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Timestamp: 02 February 2024 04:47AM EST

Retail share-price performance

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

TOPIX Retail Index was -0.2 points vs. TOPIX over the last week, -2.0% over the last month, and -1.5%, over the last three months

	1 Week	1 Month	3 Month	6 Month	2023	2022					
Isetan Mitsukoshi	8.4	Isetan Mitsukoshi	18.3	Seria	38.1	Daikokuten Bussan	44.9	Pal	96.4	Takashimaya	72.2
J.Front	8.2	Lawson	17.8	Daikokuten Bussan	37.7	Skylark	30.7	Onward	55.2	Isetan Mitsukoshi	69.1
H2O	6.8	Skylark	16.7	Pal	22.1	Bic Camera	30.0	Asics	51.6	H2O	59.3
Adastria	6.5	Kura Sushi	15.7	Lawson	20.0	Kura Sushi	28.3	Ryohin Keikaku	50.7	MatsukiyoCocokara	54.9
Takashimaya	5.5	Onward	13.7	Nitori	18.5	Nishimatsuya	27.0	Adastria	48.2	PPIH	54.6
Welcia	4.5	Daikokuten Bussan	13.5	Bic Camera	18.3	Lawson	21.7	Lawson	44.8	ABC-Mart	51.5
Seria	4.4	Life	13.3	DCM	16.7	Mizuno	21.6	Daikokuten Bussan	40.2	Pal	46.2
PPIH	4.3	Mizuno	13.2	Onward	15.9	Adastria	21.4	Mizuno	39.7	Adastria	45.1
Kura Sushi	4.2	J.Front	12.9	Kojima	15.5	Ryohin Keikaku	21.1	PPIH	37.1	Goldwin	43.4
Lawson	3.6	Aeon	12.5	Sugi	14.4	Seria	20.3	Skylark	35.2	Shimamura	35.6
Onward	3.4	Fast Retailing	10.9	FOOD & LIFE	14.2	ZOZO	19.7	Nishimatsuya	33.6	Yonex	35.4
Daikokuten Bussan	3.4	H2O	10.4	Fast Retailing	13.6	Arcs	18.3	Kojima	32.1	Bic Camera	33.1
Edion	3.3	Takashimaya	10.3	Adastria	13.3	PPIH	16.7	Fast Retailing	30.3	Sundrug	30.3
Nitori	3.0	Seria	8.7	ABC-Mart	12.8	Kusuri no Aoki	16.4	World	27.6	Mizuno	25.4
Izumi	2.9	MatsukiyoCocokara	8.6	World	12.5	Aeon	15.6	Tsuruha	26.7	Fast Retailing	23.3
Nishimatsuya	2.8	Sugi	7.8	Nishimatsuya	12.5	Isetan Mitsukoshi	15.5	Arcs	26.7	Edion	19.9
Mizuno	2.5	Komeri	7.4	PPIH	12.4	JINS	14.7	Kusuri no Aoki	25.3	Yamada	18.8
Pal	2.5	TOPIX	7.3	Aeon	11.5	Shimamura	14.7	TOPIX	25.1	J.Front	14.7
Aeon	2.3	ABC-Mart	6.4	Yaoko	9.5	Yaoko	14.7	Life	25.0	Asics	14.3
United Arrows	2.1	DCM	TOPIX	9.4	DCM	14.3	Edion	22.2	DCM	12.9	
FOOD & LIFE	2.1	Arcs	5.8	Sundrug	9.2	Kohnan Shoji	14.3	Cosmos	22.1	Nishimatsuya	12.2
Bic Camera	2.0	Yaoko	5.8	Isetan Mitsukoshi	8.7	Pal	14.1	Izumi	21.1	7&i	11.9
Skylark	2.0	7&i	5.6	ZOZO	8.6	Nitori	13.9	Shimamura	20.3	World	10.9
MatsukiyoCocokara	1.8	TOPIX Retail	5.3	TOPIX Retail	7.9	Kojima	13.9	Yaoko	19.0	Kojima	9.2
7&i	1.8	Marui	4.7	Kura Sushi	7.8	Edion	13.5	H2O	18.4	TOPIX Retail	8.8
Asics	1.8	Alpen	4.5	Edion	7.6	Komeri	12.8	K's	17.1	Komeri	6.9
World	1.7	Edion	4.5	Ryohin Keikaku	7.3	Fast Retailing	12.4	TOPIX Retail	15.8	U.S.M.H.	6.4
TOPIX	1.7	World	4.2	Shimamura	7.3	TOPIX	10.3	Sundrug	15.8	Kusuri no Aoki	5.3
DCM	1.6	Asics	4.0	7&i	7.0	TOPIX Retail	9.2	Descente	15.2	Daikokuten Bussan	4.3
Arcs	1.6	Nishimatsuya	3.7	H2O	6.6	Sugi	9.2	Kohnan Shoji	14.8	Onward	3.7
Yaoko	1.5	Nitori	3.7	Life	5.8	H2O	8.4	Kura Sushi	13.7	Arcs	3.0
TOPIX Retail	1.5	Tokyo Base	3.3	Komeri	5.6	Sundrug	6.8	MatsukiyoCocokara	13.5	Aeon	2.7
Cosmos	1.2	FOOD & LIFE	3.1	Takashimaya	4.9	Asics	6.7	Aeon	13.2	United Arrows	1.1
Kohnan Shoji	1.2	Shimamura	3.0	Arcs	4.4	Life	5.9	Komeri	13.1	Skylark	1.1
K's	1.1	ZOZO	2.9	Skylark	4.3	FOOD & LIFE	4.7	Yonex	12.4	Kohnan Shoji	1.0
Marui	1.1	United Arrows	2.7	Marui	4.0	Alpen	4.3	FOOD & LIFE	11.5	K's	0.9
Snow Peak	1.0	Bic Camera	2.1	Alpen	3.9	J.Front	3.9	Nitori	10.7	Marui	0.7
Kojima	0.9	Welcia	1.8	Workman	2.8	Tsuruha	3.2	Sugi	10.4	Nitori	-1.0
Sugi	0.8	K's	1.0	Tokyo Base	2.6	K's	2.7	Kobe Bussan	9.9	Workman	-1.8
Life	0.7	Adastria	0.7	MatsukiyoCocokara	2.6	Yamada	2.7	Marui	8.4	Yaoko	-3.0
Komeri	0.5	Yamada	0.6	JINS	2.4	ABC-Mart	2.5	DCM	7.6	TOPIX	-5.1
ABC-Mart	0.3	Kohnan Shoji	0.0	J.Front	1.9	Takashimaya	2.1	Tokyo Base	7.1	Izumi	-7.3
ZOZO	0.2	U.S.M.H.	-0.7	United Arrows	1.1	7&i	1.6	J.Front	6.8	Tsuruha	-7.6
Alpen	0.0	Sundrug	-1.6	K's	1.0	World	1.4	Isetan Mitsukoshi	6.8	Lawson	-7.7
Fast Retailing	-0.1	PPIH	-1.7	Goldwin	0.9	MatsukiyoCocokara	0.5	Goldwin	6.1	Alpen	-8.6
U.S.M.H.	-0.3	Kusuri no Aoki	-2.0	Welcia	0.6	Kobe Bussan	0.4	Bic Camera	4.8	ZOZO	-9.2
Shimamura	-0.6	Izumi	-2.6	Cosmos	0.4	Marui	-1.1	Takashimaya	4.3	Ryohin Keikaku	-10.7
Ryohin Keikaku	-1.2	Cosmos	-2.6	Mizuno	0.3	Cosmos	-1.2	JINS	2.0	Seria	-14.0
Goldwin	-1.3	Workman	-2.6	Kobe Bussan	0.0	Onward	-1.4	United Arrows	1.9	Welcia	-14.3
Kobe Bussan	-1.3	Goldwin	-3.6	Tsuruha	-0.7	Izumi	-2.0	Alpen	-0.6	Kobe Bussan	-14.9
Workman	-1.5	Kojima	-3.8	Kohnan Shoji	-0.9	Tokyo Base	-2.2	ABC-Mart	-1.0	Sugi	-15.8
Yamada	-1.6	Snow Peak	-4.3	Kusuri no Aoki	-3.2	Welcia	-7.4	7&i	-1.1	Kura Sushi	-17.4
Sundrug	-1.8	Ryohin Keikaku	-4.5	U.S.M.H.	-4.0	U.S.M.H.	-10.1	ZOZO	-2.6	Cosmos	-21.2
JINS	-2.6	Pal	-4.5	Asics	-5.8	Descente	-14.8	Yamada	-6.1	Life	-22.3
Kusuri no Aoki	-3.3	Descente	-8.5	Izumi	-6.8	Goldwin	-16.5	Seria	-8.4	Descente	-23.7
Tokyo Base	-4.3	Kobe Bussan	-9.2	Yamada	-8.8	United Arrows	-18.7	U.S.M.H.	-9.6	Snow Peak	-26.1
Descente	-4.9	JINS	-13.1	Snow Peak	-12.9	Yonex	-19.2	Welcia	-19.8	JINS	-34.2
Yonex	-7.5	Tsuruha	-15.0	Descente	-19.6	Workman	-20.7	Workman	-23.0	FOOD & LIFE	-40.3
Tsuruha	-11.9	Yonex	-15.2	Yonex	-30.0	Snow Peak	-48.4	Snow Peak	-60.7	Tokyo Base	-53.3

Note: Includes companies outside of our coverage

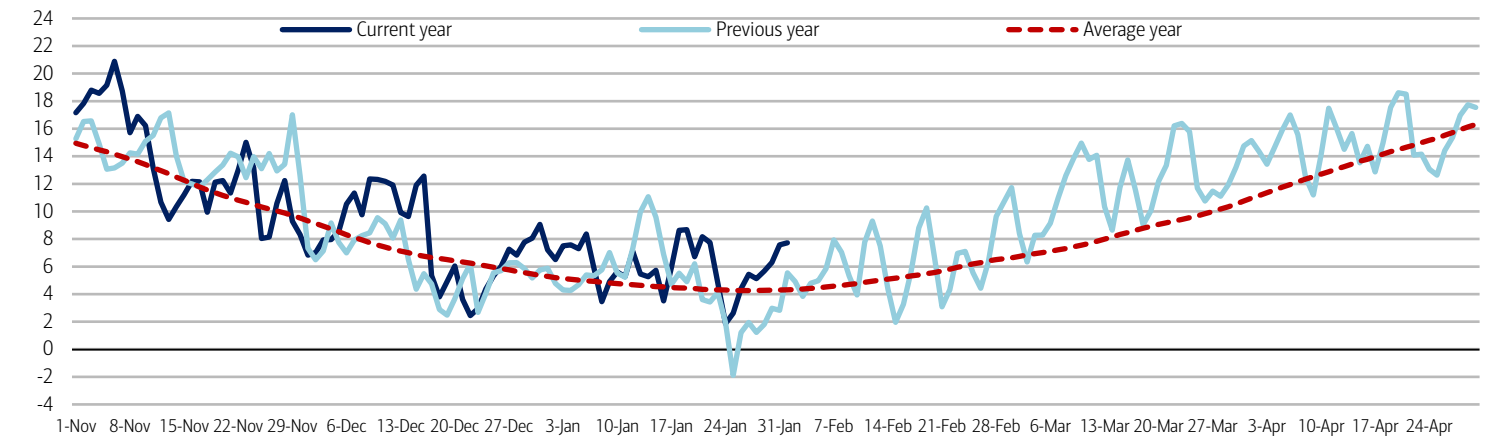
Source: Bloomberg, BofA Global Research

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

Temperatures fell at times but were up YoY and above historical average over the past week

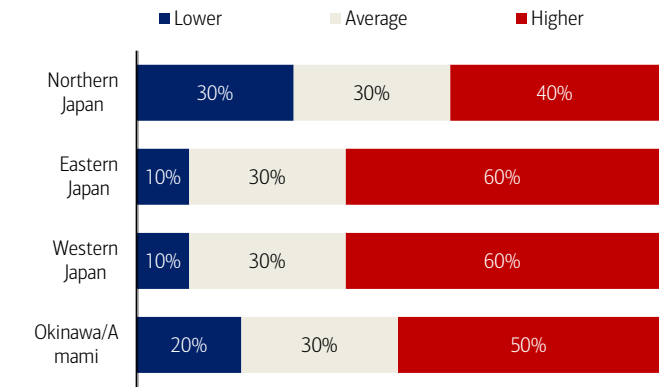


Note: Simple average for 10 cities (Tokyo, Yokohama, Osaka, Nagoya, Sapporo, Fukuoka, Kobe, Hiroshima, Sendai, Matsuyama). Average data based on 1991-2020.
Source: Japan Meteorological Agency, BofA Global Research

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Exhibit 5: Temperature forecasts by region (3 Feb -2 Mar)

Forecast for temperatures at or above average in northern Japan, and above average in other regions

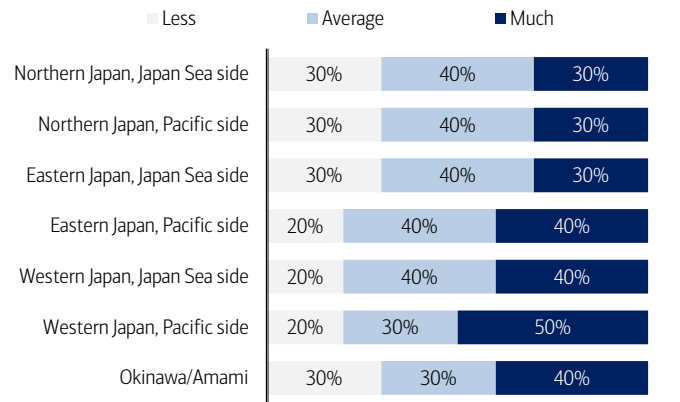


Source: Japan Meteorological Agency, BofA Global Research

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Exhibit 6: Precipitation forecasts by region (3 Feb -2 Mar)

Forecast for above average precipitation and at or 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 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	-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

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			
	vs.		vs.		vs.		vs.		vs.		vs.		vs.		vs.		vs.		vs.	
	Average	last year	average	vs. 5 yrs	Average	last year	average	vs. 5 yrs	Average	last year	average	vs. 5 yrs	Average	last year	average	vs. 5 yrs	Average	last year	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

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%

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. 5 yrs ave	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%
2024/1	-17%	8%	1%	-71%	-58%	-61%	-7%	-8%	-4%	725%	95%	148%	-46%	-33%	-33%

Source: Japan Meteorological Agency, BofA Global Research

BofA GLOBAL RESEARCH

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%

Source: Japan Meteorological Agency, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 12: Monthly sunshine hours

Fukuoka, Kobe, Hiroshima, Sendai, Matsuyama

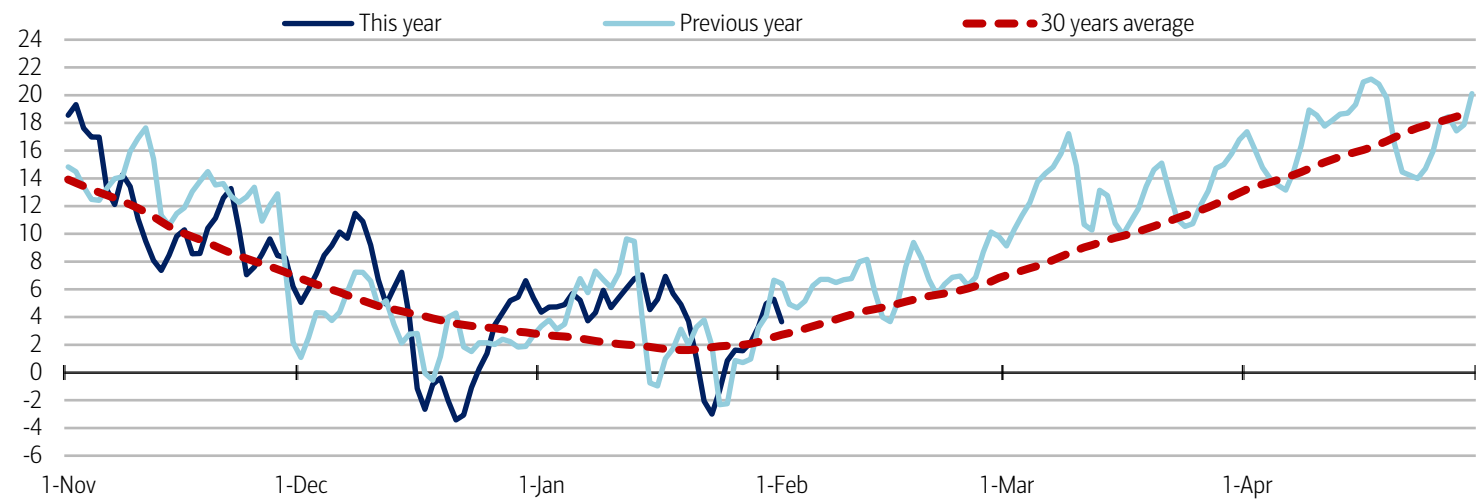
	Fukuoka			Kobe			Hiroshima			Sendai			Matsuyama		
	vs.	vs.	vs.	vs.	vs.	vs.	vs.	vs.	vs.	vs.	vs.	vs.	vs.	vs.	vs.
	last year	average	5 yrs ave	last year	average	5 yrs ave	last year	average	5 yrs ave	last year	average	5 yrs ave	last year	average	5 yrs ave
2021/1	27%	14%	12%	31%	15%	11%	21%	21%	15%	7%	-4%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

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 below historical 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

	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	0.3												
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	1.7												

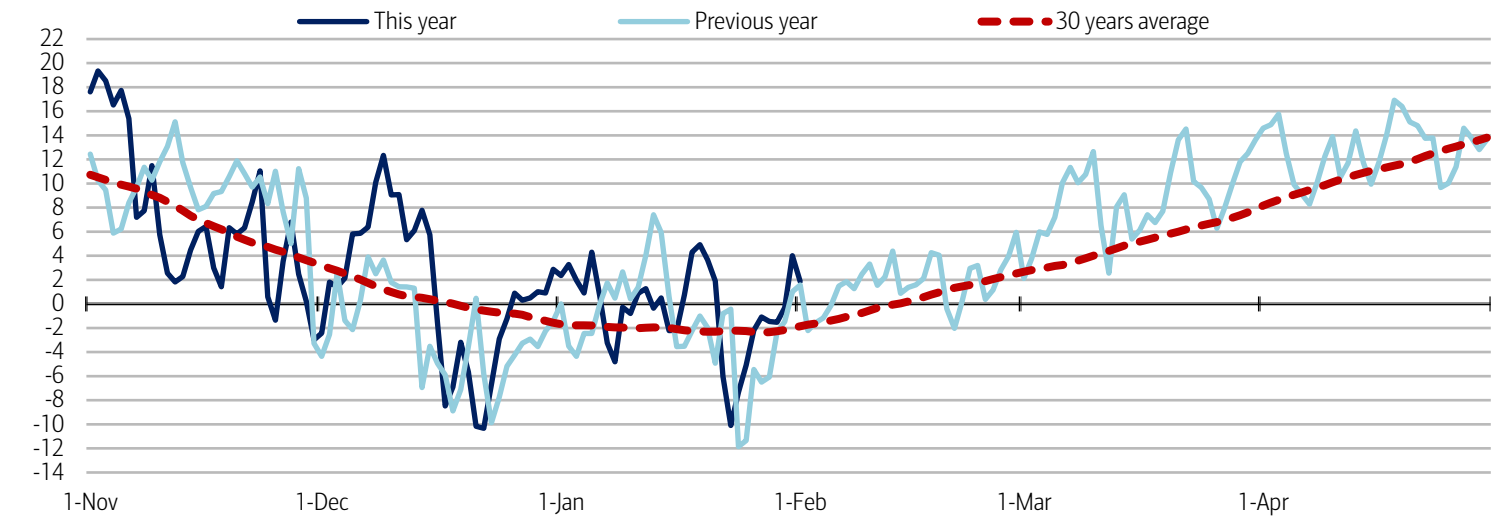
Note: Jan 2024 temperature is the average as of 1 Feb
Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH



Korea temperature trends

Exhibit 15: Korea temperature trends (current-year, previous-year, and 30-year averages)
On par with last year over the past few days



BofA GLOBAL RESEARCH

Exhibit 16: Korea monthly temperatures (simple average)
Above historical average and up YoY for 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	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	1.2												
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	1.6												

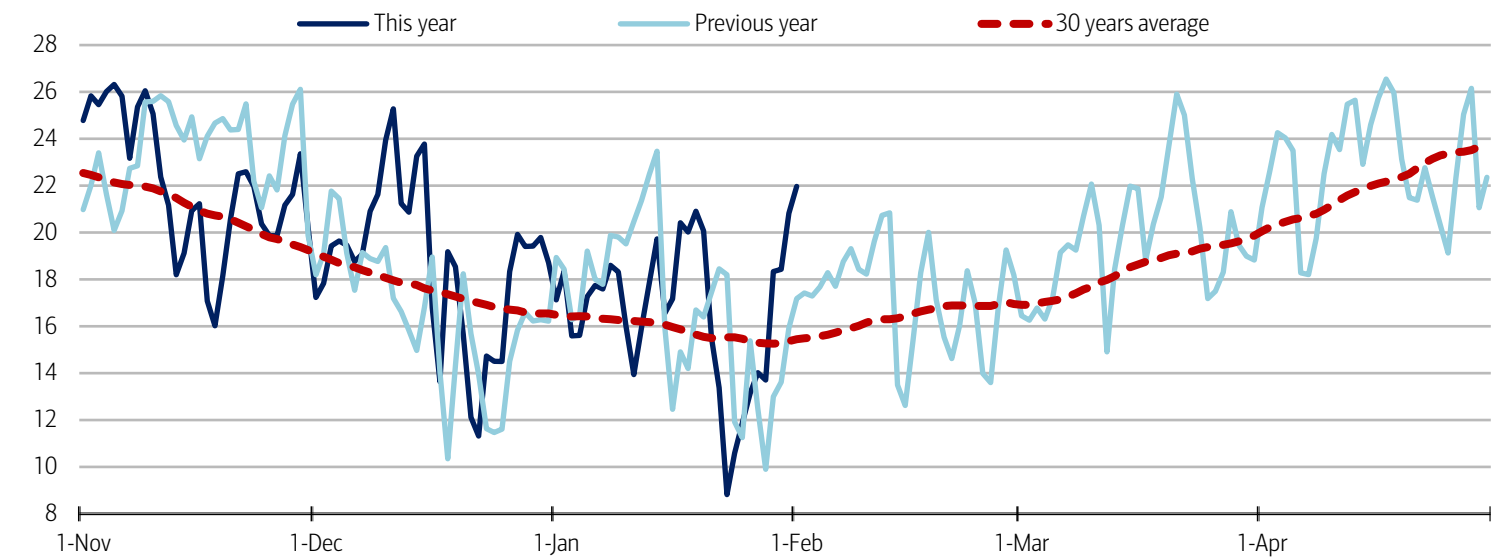
Note: Jan 2024 temperature is the average as of 1 Feb
Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH



Taiwan temperature trends

Exhibit 17: Taiwan temperature trends (current-year, previous-year, and 30-year averages)
Temperatures up YoY 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

	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	-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	-0.2												
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	0.7												

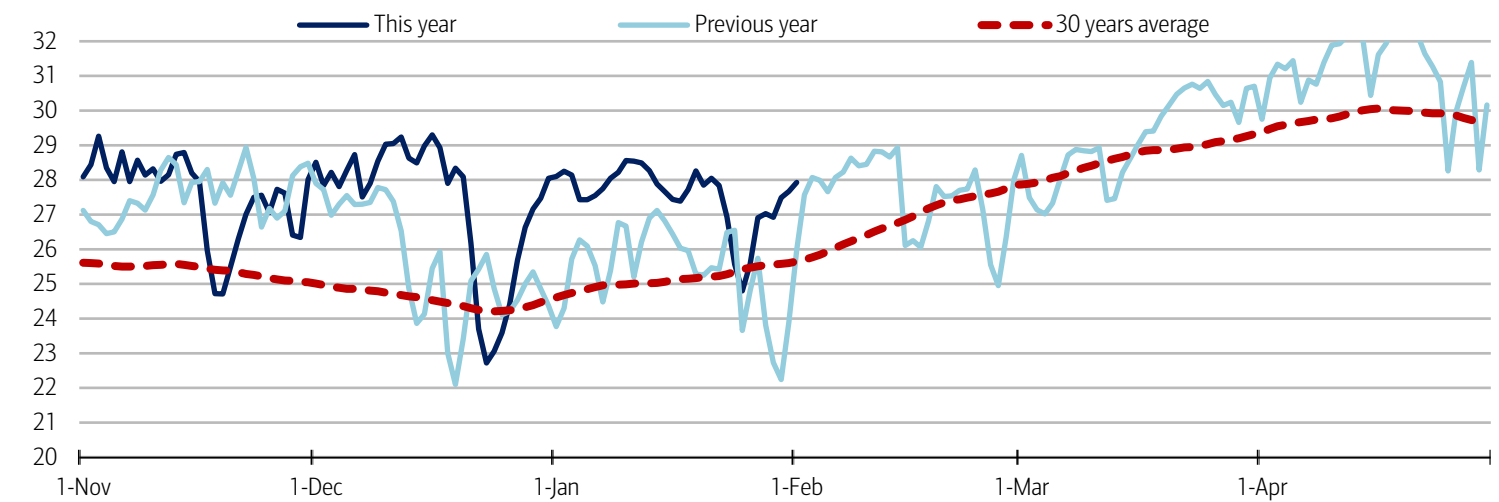
Note: Jan 2024 temperature is the average as of 1 Feb
Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH



Thailand temperature trends

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



Source: Bloomberg, BofA Global Research BofA GLOBAL RESEARCH

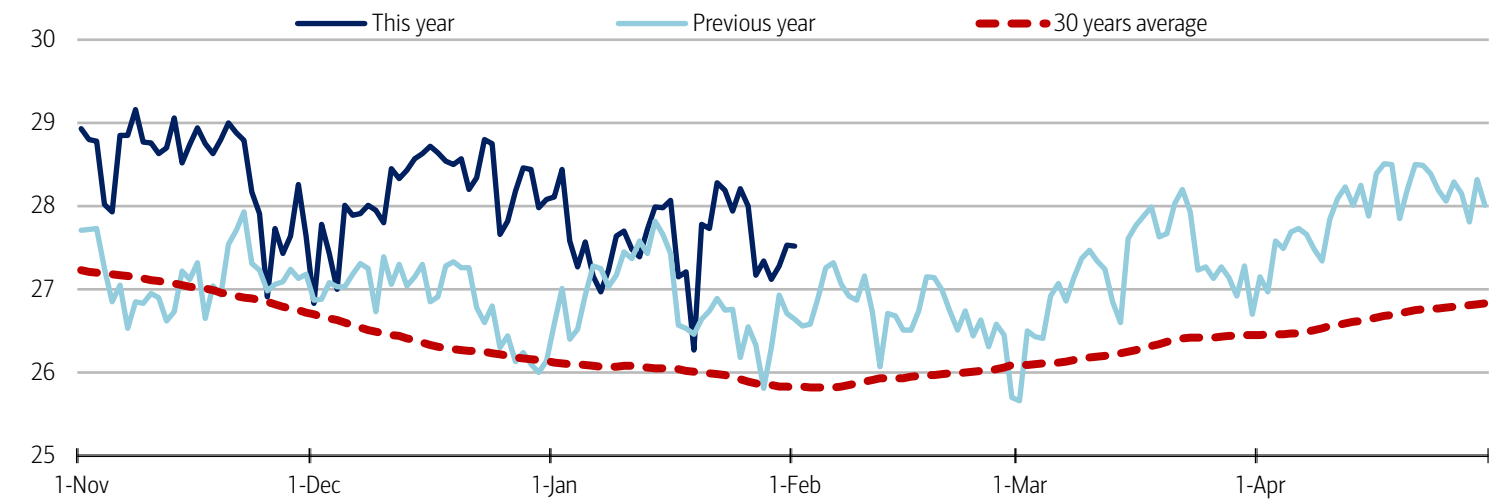
Exhibit 20: Thailand monthly temperatures (simple average)
The Jan average was up YoY and above historical average

	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	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	2.2												
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	2.4												

Note: Jan 2024 temperature is the average as of 1 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 two weeks



Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 22: Indonesia monthly temperatures (simple average)
Monthly average remains up YoY in 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	0.7												
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	1.6												

Note: Jan 2024 temperature is the average as of 1 Feb

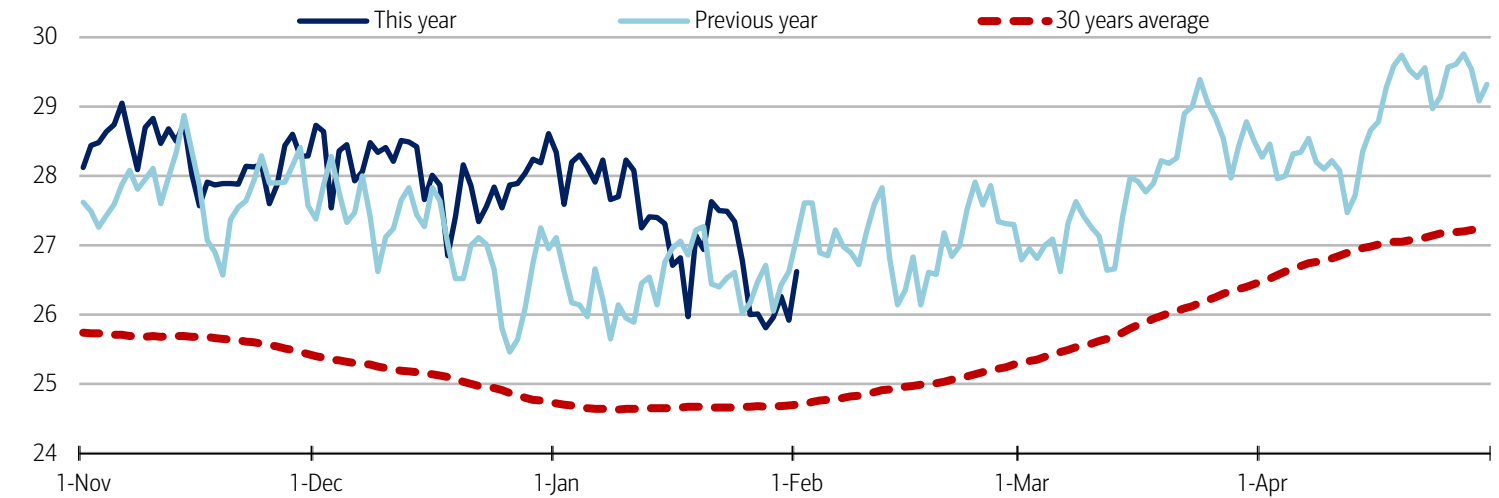
Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH



Philippines temperature trends

Exhibit 23: Philippines temperature trends (current-year, previous-year, and 30-year averages)
Temperatures down YoY over the past week or so



BofA GLOBAL RESEARCH

Exhibit 24: Philippines monthly temperatures (simple average)
Monthly average remains up YoY in 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	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	0.8												
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	2.6												

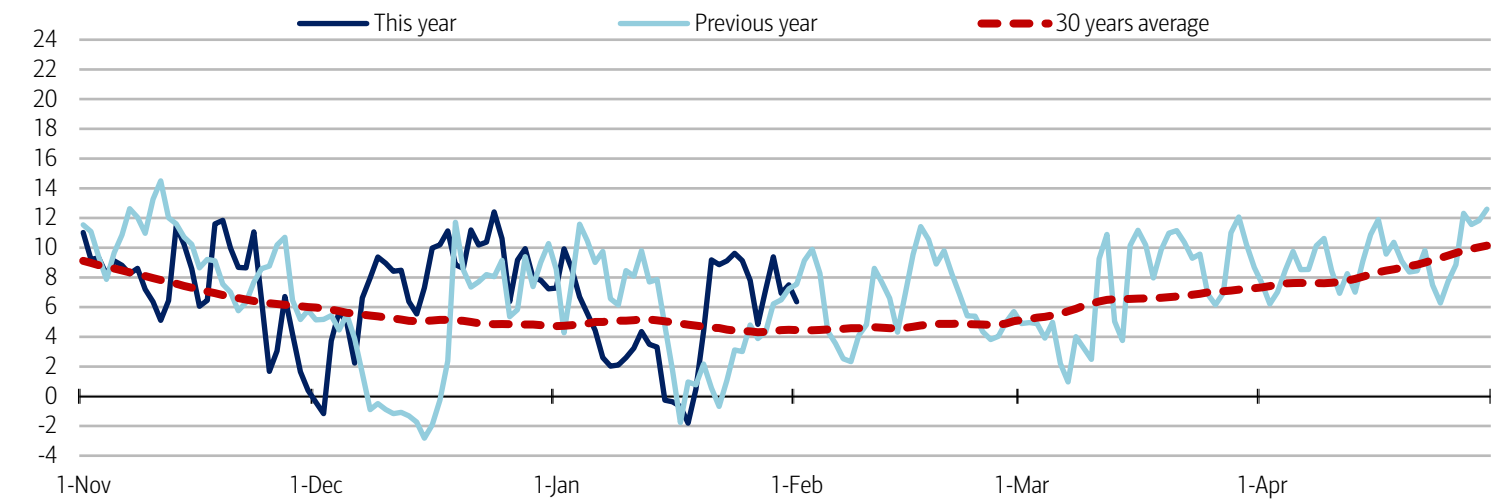
Note: Jan 2024 temperature is the average as of 1 Feb
Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH



UK temperature trends

Exhibit 25: UK temperature trends (current-year, previous-year, and 30-year averages)
Temperatures below year-earlier levels



Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 26: UK monthly temperatures (simple average)
Down YoY for 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	-0.2												
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	0.3												

Note: Jan 2024 temperature is the average as of 1 Feb

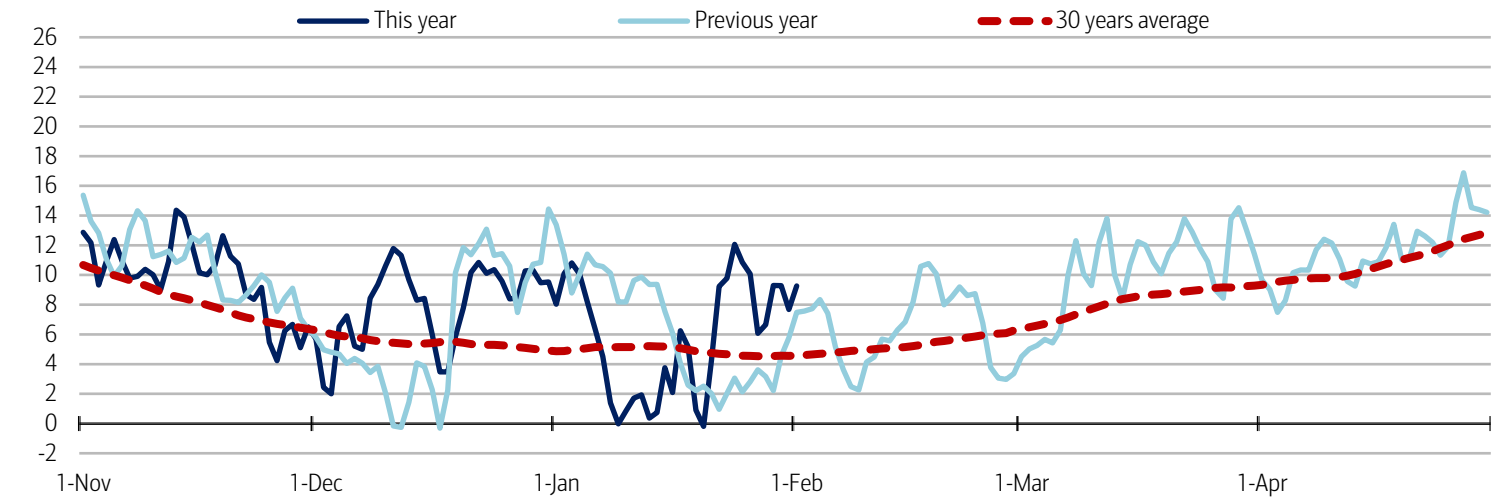
Source: Bloomberg, BofA Global Research

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France temperature trends

Exhibit 27: France temperature trends (current-year, previous-year, and 30-year averages)
Temperatures up YoY and above historical average over the past week or so



BofA GLOBAL RESEARCH

Exhibit 28: France monthly temperatures (simple average)
Down YoY for 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	-0.6												
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	0.8												

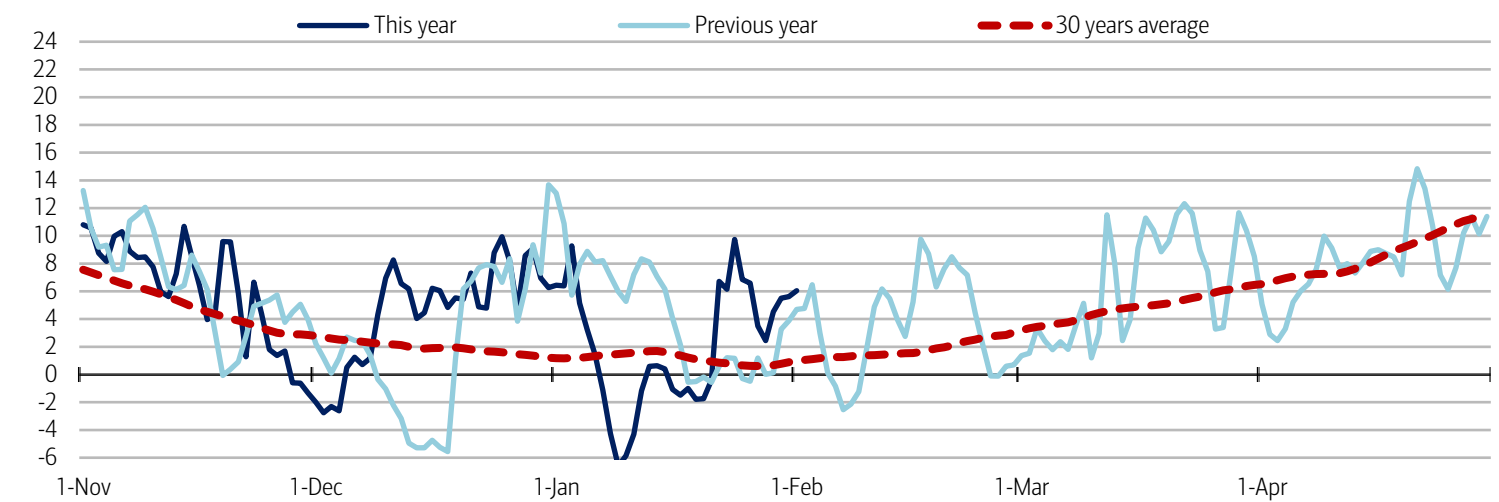
Note: Jan 2024 temperature is the average as of 1 Feb
Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH



Germany temperature trends

Exhibit 29: Germany temperature trends (current-year, previous-year, and 30-year averages)
Temperatures up YoY and above historical average over the past two weeks



Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 30: Germany monthly temperatures (simple average)
Down YoY for 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	3.1	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												
vs. average year	3.4	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												

Note: Jan 2024 temperature is the average as of 1 Feb

Source: Bloomberg, BofA Global Research

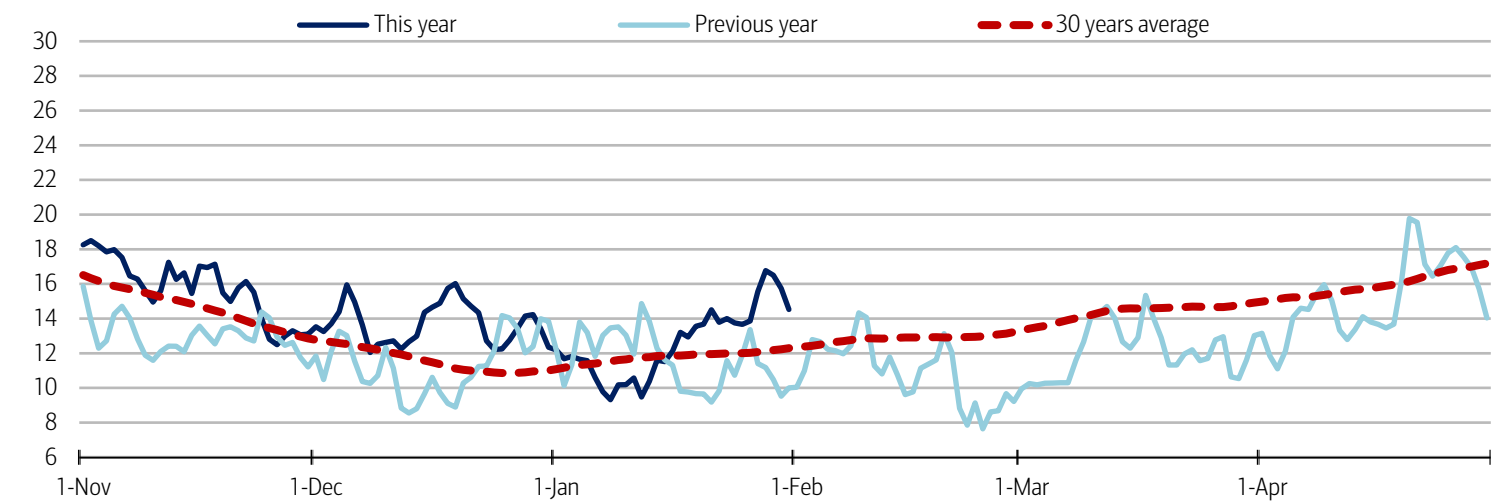
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US temperature trends

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 up YoY and above historical average over the past two week



Source: Bloomberg, BofA Global Research. BofA GLOBAL RESEARCH

Exhibit 32: California monthly temperatures (simple average)
Above historical average and up YoY for 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	1.0												
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	0.8												

Note: Jan 2024 temperature is the average as of 31 Jan
Source: Bloomberg, BofA Global Research BofA GLOBAL RESEARCH

Exhibit 33: Texas temperature trends (current-year, previous-year, and 30-year averages)
Temperatures up YoY and above historical average over the past few days

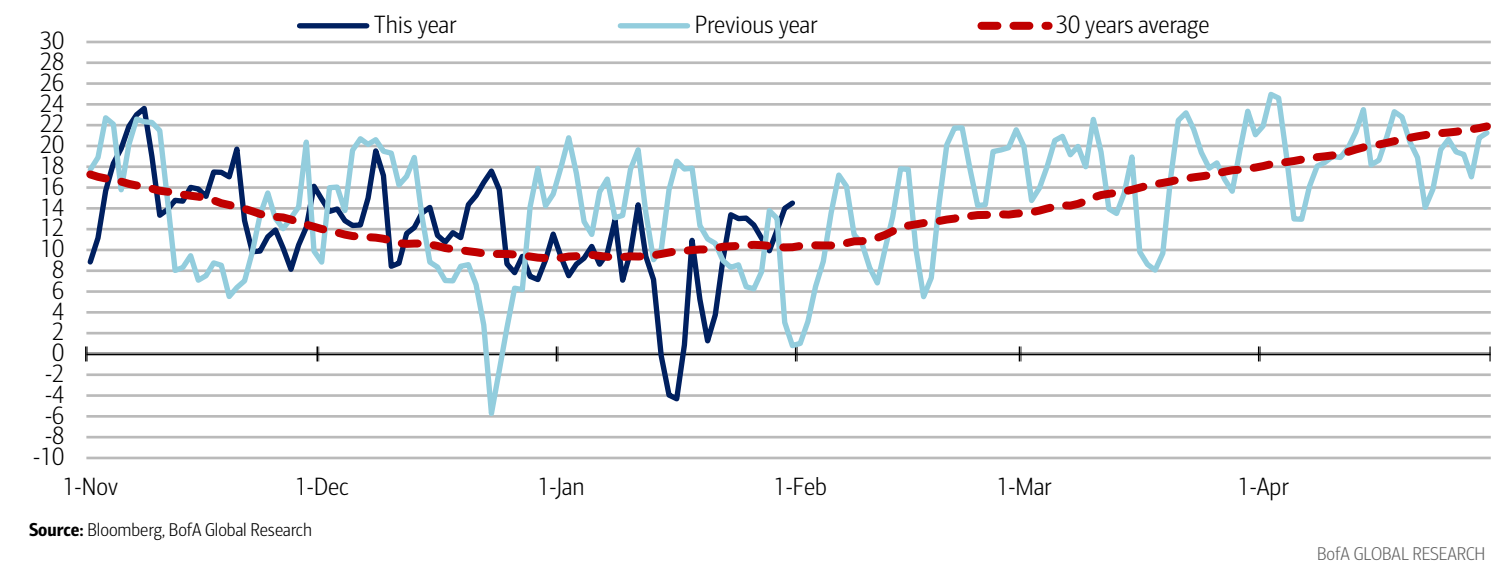


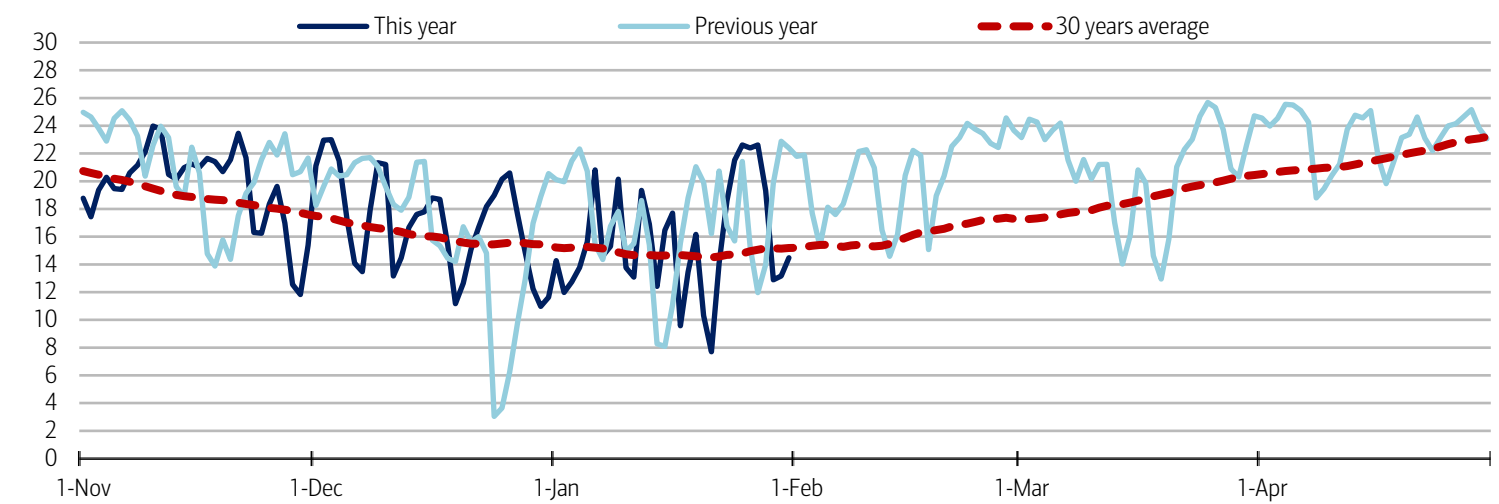
Exhibit 34: Texas monthly temperatures (simple average)
Below historical average and down YoY for Jan

	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	-4.2												
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	-1.5												
Note: Jan 2024 temperature is the average as of 31 Jan																																				
Source: Bloomberg, BofA Global Research																																				
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Exhibit 35: Florida temperature trends (current-year, previous-year, and 30-year averages)

Temperatures down YoY and below historical average



Source: Bloomberg, BofA Global Research

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Exhibit 36: Florida monthly temperatures (simple average)

The Jan average was down YoY

	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	-1.5												
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	0.9												

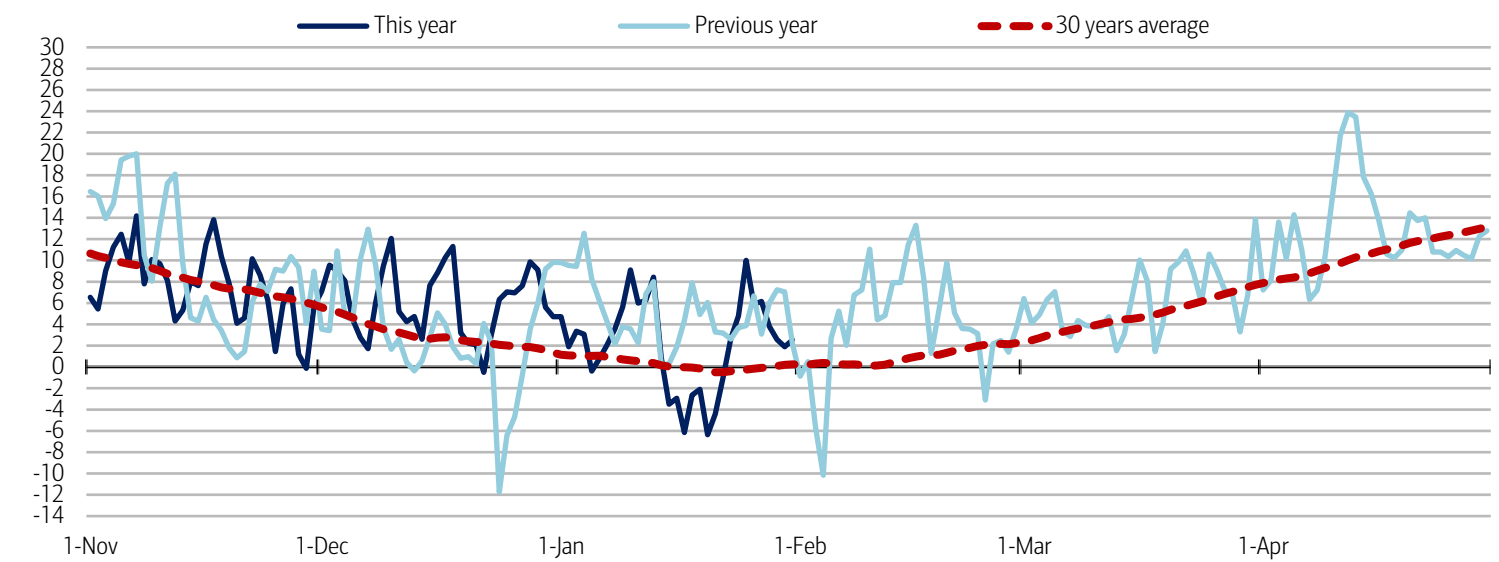
Note: Jan 2024 temperature is the average as of 31 Jan

Source: Bloomberg, BofA Global Research

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Exhibit 37: New York 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 38: New York monthly temperatures (simple average)
Down YoY for 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 31 Jan

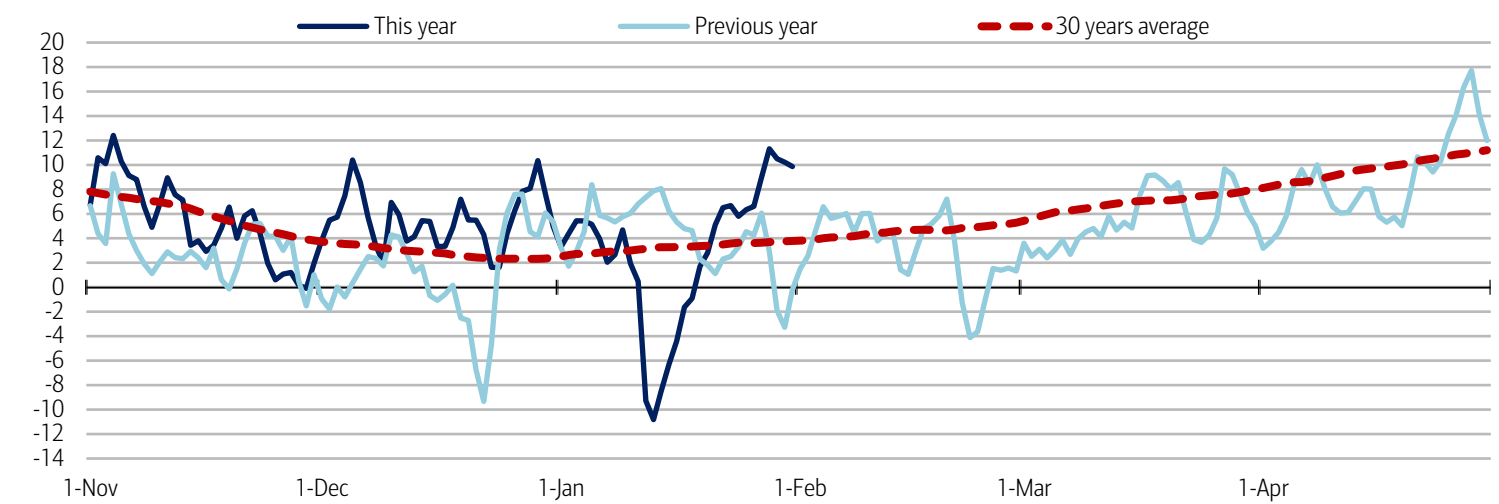
Source: Bloomberg, BofA Global Research

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

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



Source: Bloomberg, BofA Global Research

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Exhibit 40: Washington monthly temperatures (simple average)

Above historical average and up YoY in 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	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	-1.2												
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	-0.3												

Note: Jan 2024 temperature is the average as of 31 Jan

Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH



Canada temperature trends

Exhibit 41: Canada temperature trends (current-year, previous-year, and 30-year averages)
Temperatures up YoY

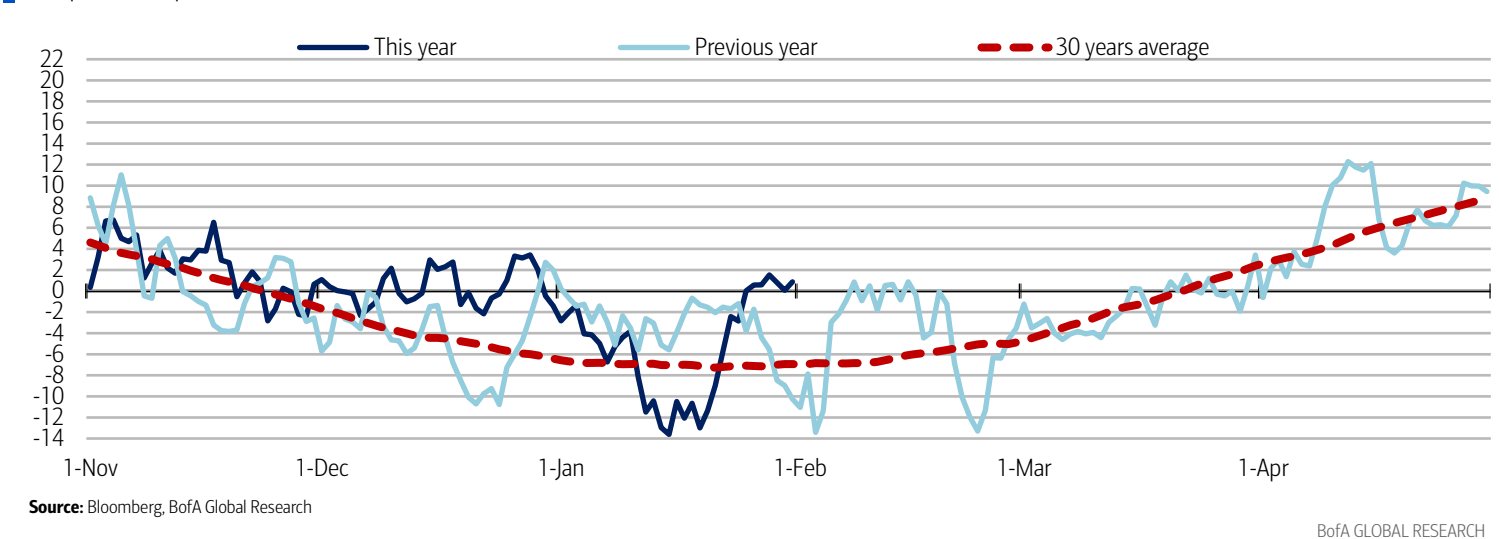


Exhibit 42: Canada monthly temperatures (simple average)
Down YoY for Jan

	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	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	-2.2												
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	1.5												

Note: Jan 2024 temperature is the average as of 31 Jan

Source: Bloomberg, BofA Global Research

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Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster ^{R1}
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Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

^{R1} Ratings dispersions may vary from time to time where BofA Global Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

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