

# BofA Athletic Supply Chain Indicators

## 4Q23 update: Notable improvement, thanks to easier comps

Industry Overview

### BofA Athletic Supply Chain Indicators: 4Q23 update

BofA Athletic Supply Chain Indicators show future revenue growth trends for global athletic footwear and apparel industries, as well as key companies, using revenue growth of major athletic apparel and footwear suppliers, export data from key apparel-sourcing countries, and other macro variables. We have six individual indicators, namely: (1) global athletic footwear growth, (2) global athletic apparel growth, (3) Nike footwear growth, (4) Nike apparel growth, (5) Foot Locker same-store sales growth (SSSG), and (6) Under Armour apparel growth.

On a back-tested basis, the Global Athletic Footwear Indicator leads the sales-weighted average industry revenue growth by two quarters, with a correlation of 0.75 since 1Q14 (correlation prior to 3Q19 is back-tested). On a back-tested basis, the Global Athletic Apparel Indicator leads the sales-weighted average industry revenue growth by three quarters, with a correlation of 0.79 since 1Q11 (correlation prior to 3Q19 is back-tested). For our full methodology, see: [Introducing BofA Athletic Supply Chain Indicators](#).

### Meaningful improvement across the board

All six indicators are still in the negative growth territory. Yet, we note that the magnitude of decline has meaningfully narrowed across the board in the last quarter data, thanks to easier comps for major inputs, including suppliers' revenue growth and textile exports growth of major sourcing countries. Major suppliers' revenue and textile exports growth turned negative since 4Q22/1Q23 due to industry destocking. Thus, it had set up an easy comps starting from 4Q23.

### Eclat: Positive tone by management during results briefing

Eclat, an apparel supplier for athletic brands/retailers, recently posted a 4Q23 results beat, (see our 29 February 2024 report '4Q23 results: Margins beat, headline EPS miss due likely to FX loss') and hosted its results briefing (see our 8 March 2024 report 'Cautiously optimistic on 2024 outlook; Feb revenue miss due to CNY holidays'). Eclat's top three customers are Nike, Lululemon and Under Armour. Management provided a positive tone for the orderbook outlook for 2024. Orderbook visibility has improved and is up to six months now. Customer's order-placing pattern is normalizing as the percentage of rush orders declined to the usual level. Retailers have been more active than brands in placing orders in 1H24 but brands' orders are also coming in recently with expected delivery in 2H23. As utilization for Eclat's self-operated factories is at 90%+, it expects the output contribution from outsourcing capacities to rise in coming quarters to satisfy higher orders demand.

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Refer to important disclosures on page 11 to 13.

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### Exhibit 1: 4Q23-3Q24 trends in BofA Athletic Supply Chain Indicators

Improvement seen for all six indicators

BofA Indicators	4Q23	1Q24	2Q24	3Q24
BofA Global Athletic Footwear Indicator	Red	Yellow	Green	Green
BofA Global Athletic Apparel Indicator	Red	Yellow	Green	Green
BofA Nike Footwear Indicator (note)	Yellow	Green	Green	Green
BofA Nike Apparel Indicator (note)	Red	Green	Green	Green
BofA Foot Locker SSS Indicator	Red	Yellow	Green	Green
BofA Under Armour Apparel Indicator	Green	Green	Green	Green

Source: BofA Global Research

Note: The arrows indicate the sequential year-on-year growth trend of the indicators for the quarter compared to the prior quarter. The color codes are Green (acceleration from prior quarter); Yellow (stable with prior quarter); Red (deceleration from prior quarter).

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OEM: Original Equipment  
Manufacturer

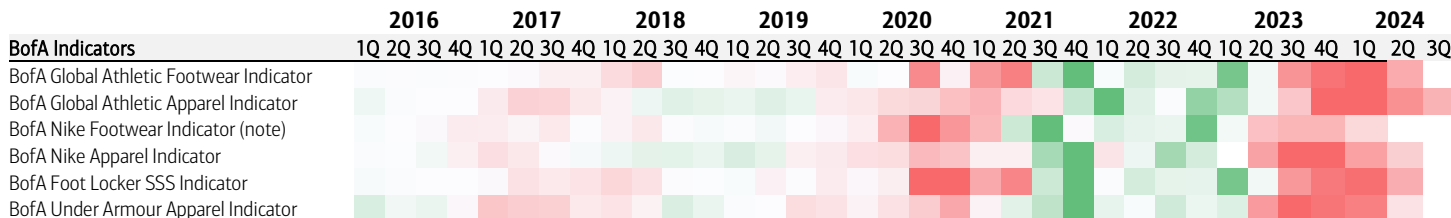
# BofA Athletic Supply Chain Indicators

## 4Q23 update

BofA Athletic Supply Chain Indicators show how revenue growth for global athletic footwear and apparel industries, as well as key firms, is likely to trend in future quarters.

### Exhibit 2: BofA Athletic Supply Chain Indicators heat map (green - high; red - low)

Individual indicators are still in the negative territory



Source: BofA Global Research

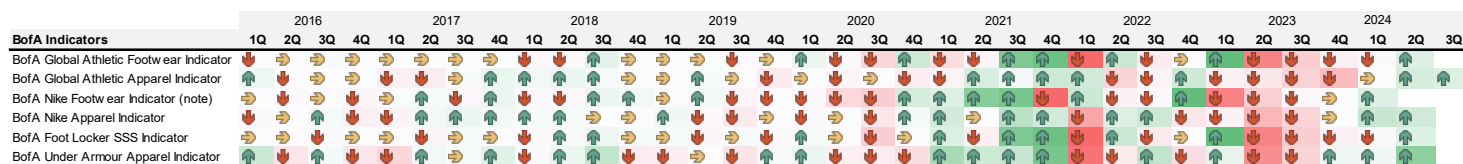
2Q24: (F4Q24) Nike footwear revenue is beyond the lead time of the indicator

3Q24: Only BofA Global Athletic Apparel Indicator can predict to 3Q24

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### Exhibit 3: BofA Athletic Supply Chain Indicators sequential trends

Individual indicators are still in the negative territory, but we have seen a meaningful narrowing of the magnitude of decline in the latest quarter



Source: BofA Global Research

2Q24: (F4Q24) Nike footwear revenue is beyond the lead time of the indicator

3Q24: Only BofA Global Athletic Apparel Indicator can predict to 3Q24

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### Exhibit 4: Summary of BofA Athletic Supply Chain Indicators

BofA Athletic Supply Chain Indicators show how revenue growth for the global athletic industry and key companies is likely to trend in future quarters

	Correlation with category/brand revenue trends (Note 3)	Directionality hit rate	Inputs	Update frequency	Lead by	Start date
Category indicators:						
BofA Global Athletic Footwear Indicator (Note 1)	0.75	70%	Weighted average supplier growth rates, footwear PCE and initial jobless claims	Quarterly	2 quarters	1Q 2014
BofA Global Athletic Apparel Indicator (Note 2)	0.79	61%	Weighted average supplier growth rates, and Taiwan/China/Vietnam garments and fabrics exports value change	Quarterly	3 quarters	4Q 2011
Brand-specific indicators:						
BofA Nike Footwear Indicator	0.78	67%	Weighted average supplier growth rates, footwear PCE and initial jobless claims	Quarterly	1 quarter	2Q 2011
BofA Nike Apparel Indicator	0.84	58%	Weighted average supplier growth rates, and Taiwan/China/Vietnam garments and fabrics exports value change	Quarterly	2 quarters	3Q 2011
BofA Foot Locker Same-Store Sales Indicator	0.86	63%	Weighted average supplier growth rates, footwear PCE and initial jobless claims	Quarterly	2 quarters	1Q 2014
BofA Under Armour Apparel Indicator	0.64	55%	Weighted average supplier growth rates, and Taiwan/China/Vietnam garments and fabrics exports value change	Quarterly	2 quarters	3Q 2011

Source: BofA Global Research

Note 1: Athletic footwear brands include Nike, Converse, adidas, PUMA, Asics, Skechers, Under Armour and HOKA.

Note 2: Athletic apparel brands include Nike, adidas, PUMA, Under Armour and lululemon.

Note 3: Correlation prior to 3Q19 is back-tested and does not represent the actual performances of any accounts or funds. Back-tested performance depicts the theoretical (not actual) performance of a particular strategy over the time period indicated. No representation is being made that any actual portfolio is likely to have achieved returns similar to those shown herein.

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The indicators correlate with forward revenue growth of key categories and brands:

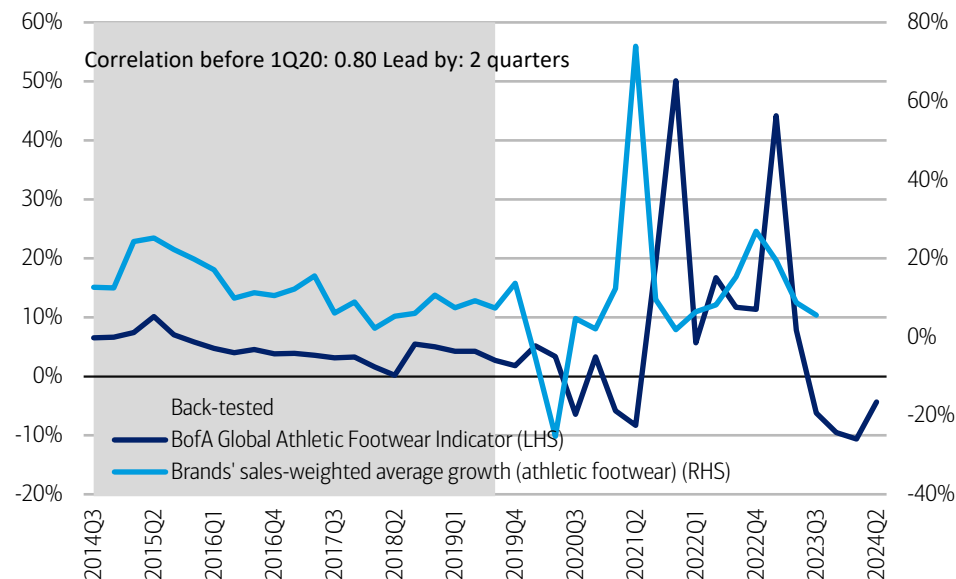
- **BofA Global Athletic Footwear Indicator** correlates on a two-quarter lead, with the sales-weighted average YoY revenue growth of major athletic footwear brands, including Nike, Converse (Nike), adidas, PUMA, Asics, Skechers, Under Armour and HOKA (Deckers). On a back-tested basis, the Global Athletic Footwear Indicator leads the sales-weighted average industry revenue growth by two quarters, with a correlation of 0.75 over the past 24 quarters (correlation prior to 3Q19 is back-tested).
- **BofA Global Athletic Apparel Indicator** correlates on a three-quarter lead, with the sales-weighted average YoY revenue growth of the major athletic apparel brands, including Nike, adidas, PUMA, Under Armour and Lululemon. On a back-tested basis, the Global Athletic Apparel Indicator leads the sales-weighted average industry revenue growth by three quarters, with a correlation of 0.79 over the past 33 quarters (correlation prior to 3Q19 is back-tested).
- **BofA Nike Footwear Indicator** correlates with Nike footwear FX-neutral YoY revenue growth on a one-quarter lead. On a back-tested basis, BofA Nike Footwear Indicator leads Nike footwear FX-neutral YoY revenue growth by one quarter, with a correlation of 0.78 over the past 36 quarters (correlation prior to 3Q19 is back-tested).
- **BofA Nike Apparel Indicator** correlates with Nike apparel FX-neutral YoY revenue growth on a two-quarter lead. On a back-tested basis, BofA Nike Apparel Indicator leads Nike apparel FX-neutral YoY revenue growth by two quarters, with a correlation of 0.84 over the past 35 quarters (correlation prior to 3Q19 is back-tested).
- **BofA Foot Locker Same-Store Sales Indicator** correlates with Foot Locker's same-store sales YoY change on a two-quarter lead. On a back-tested basis, BofA Foot Locker Same-Store Sales Indicator leads Foot Locker SSSG by two quarters, with a correlation of 0.86 over the past 24 quarters (correlation prior to 3Q19 is back-tested).
- **BofA Under Armour Apparel Indicator** correlates with Under Armour apparel YoY revenue growth on a two-quarter lead. On a back-tested basis, BofA Under Armour Indicator leads Under Armour apparel YoY revenue growth by two quarters, with a correlation of 0.64 over the past 34 quarters (correlation prior to 3Q19 is back-tested).

## BofA Global Athletic Footwear Indicator

The BofA Global Athletic Footwear Indicator suggests global athletic footwear revenue growth (including Nike, Converse, Adidas, PUMA, Asics, Skechers, Under Armour and HOKA) would trend down slightly in 1Q24 and then trend up in 2Q24.

### Exhibit 5: BofA Global Athletic Footwear Indicator

BofA Global Athletic Footwear Indicator suggests global footwear revenue growth will trend down slightly in 1Q24 and then trend up in 2Q24.



**Source:** BofA Global Research, company data, the U.S. Bureau of Economic Analysis and the U.S. Department of Labor

**Note:** Correlation prior to 3Q19 is back-tested and does not represent the actual performances of any accounts or funds. Back-tested performance depicts the theoretical (not actual) performance of a particular strategy over the time period indicated. No representation is being made that any actual portfolio is likely to have achieved returns similar to those shown herein.

Brand sales-weighted average growth includes Nike, Converse, adidas, PUMA, Asics, Skechers, Under Armour and HOKA

Shaded area is back-tested

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### Exhibit 6: BofA Global Athletic Footwear Indicator summary

Correlations and directionality hit rates of each input vs athletic footwear revenue growth

Correlation with global footwear category revenue growth (before 1Q20)

Directionality hit rate with global footwear category revenue growth

**Source:** BofA Global Research

**Note:** Correlation prior to 3Q19 is back-tested and does not represent the actual performances of any accounts or funds. Back-tested performance depicts the theoretical (not actual) performance of a particular strategy over the time period indicated. No representation is being made that any actual portfolio is likely to have achieved returns similar to those shown herein.

We have not included initial jobless claims as input since 2Q20 as the data was skewed by COVID disruption

Indicator	Suppliers average growth rate	PCE	Initial jobless claims (inverse)
0.80	0.65	0.32	0.48
70%	54%	58%	67%

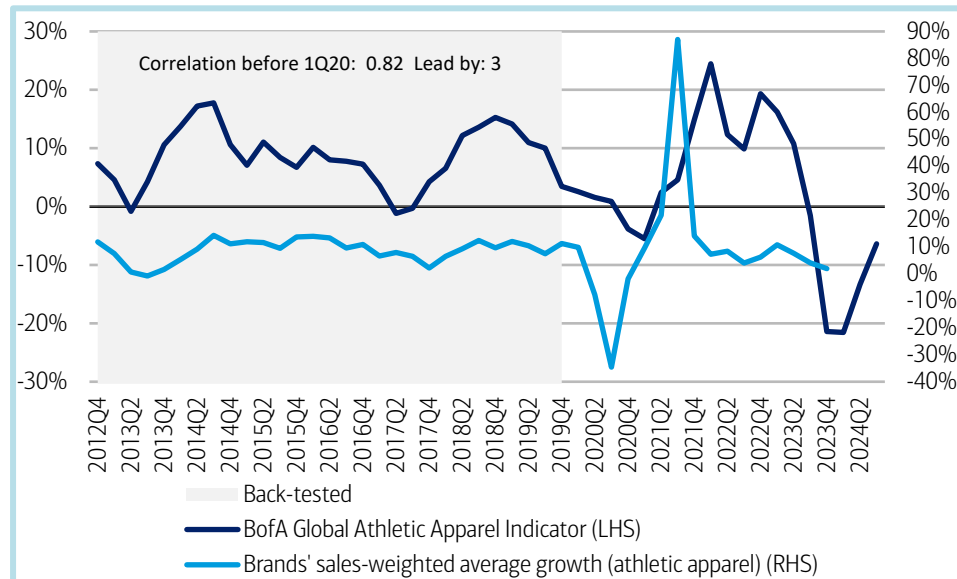
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## BofA Global Athletic Apparel Indicator

The BofA Global Athletic Apparel Indicator suggests global athletic apparel revenue growth (including Nike, adidas, PUMA, Under Armour and Lululemon) will trend up in 2Q24 and 3Q24.

### Exhibit 7: BofA Global Athletic Apparel Indicator

The BofA Global Athletic Apparel Indicator suggests global athletic apparel revenue growth will trend up in 2Q24 and 3Q24



**Source:** BofA Global Research, BofA Global Research estimates, company data, Taiwan Ministry of Finance, General Statistics Office Of Vietnam, and Customs General Administration PRC

Note: For certain major supplier whose latest revenue hasn't been announced by the time of this report, we used latest estimates by BofA Global Research. Correlation prior to 3Q19 is back-tested and does not represent the actual performances of any accounts or funds. Back-tested performance depicts the theoretical (not actual) performance of a particular strategy over the time period indicated. No representation is being made that any actual portfolio is likely to have achieved returns similar to those shown herein.

Athletic apparel brands include Nike, adidas, PUMA, Under Armour and lululemon.

Shaded area is back-tested

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### Exhibit 8: BofA Global Athletic Apparel Indicator summary

Correlation and directionality hit rates of each input vs. athletic apparel revenue growth

Indicator	Suppliers average growth rate	Exports growth rates
Correlation with global athletic apparel category revenue growth (before 1Q20)	0.82	0.77
Directionality hit rate with global athletic apparel revenue category growth	53%	62%

**Source:** BofA Global Research

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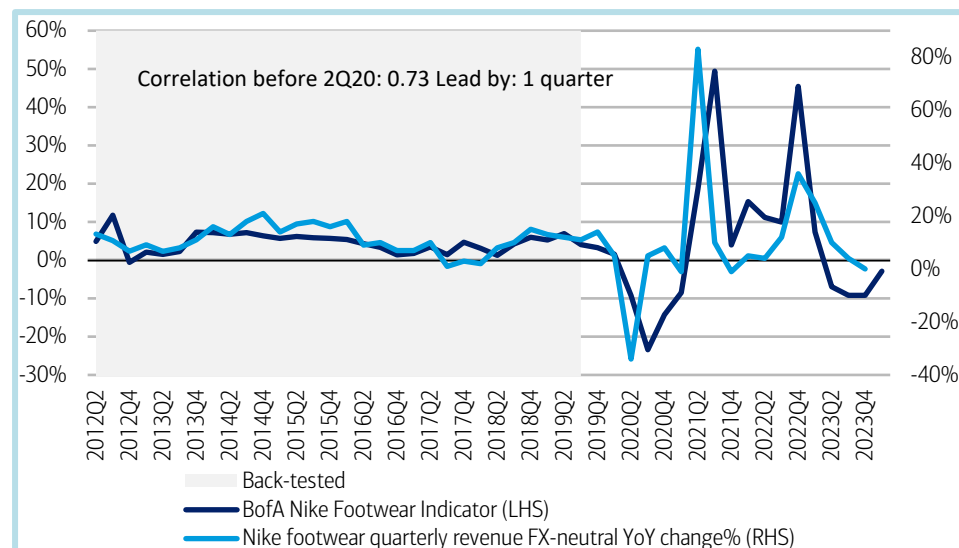
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## BofA Nike Footwear Indicator

Nike is the largest global athletic footwear brand in the world, with an estimated 27.5% market share in 2022 (Source: Euromonitor). Footwear constituted about 68% of Nike's total revenue in FY23 (ended May 2023). The BofA Footwear Indicator suggests Nike footwear revenue growth will trend up in 1QCY24.

### Exhibit 9: BofA Nike Footwear Indicator

The BofA Footwear indicator suggests Nike footwear revenue growth will trend up in 1QCY24



**Source:** BofA Global Research, company data, the U.S. Bureau of Economic Analysis and the U.S. Department of Labor

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**Disclaimer:** The BofA Nike Footwear Indicator is intended to be an indicative metric only and may not be used for reference purposes or as a measure of performance for any financial instrument or contract, or otherwise relied upon by third parties for any other purpose, without the prior written consent of BofA Global Research. This BofA Nike Footwear Indicator was not created to act as a benchmark

Shaded area is back-tested.

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### Exhibit 10: BofA Nike Footwear Indicator

Correlation and directionality hit rates of each input vs. Nike footwear growth

	Indicator	Suppliers average growth rate	PCE	Initial jobless claims (inverse)
Correlation with Nike footwear revenue growth (before 2Q20)	0.79	0.57	0.49	0.42
Directionality hit rate with Nike footwear revenue growth	64%	54%	59%	54%

**Source:** BofA Global Research

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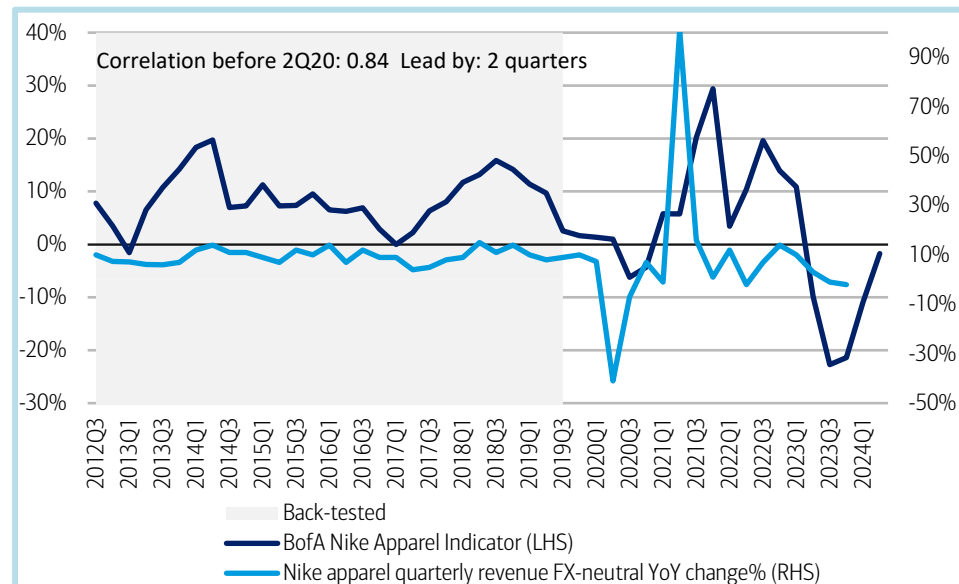
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## BofA Nike Apparel Indicator

Nike is the largest global athletic apparel brand, with about 9.3% market share in 2022 (source: Euromonitor). Apparel constituted nearly 28% of Nike's total revenue in FY22 (ended May 2023). The BofA Nike Apparel Indicator suggests Nike's apparel revenue growth will trend up in calendar-year 1Q24 and 2Q24.

### Exhibit 11: BofA Nike apparel Indicator

The BofA Nike Apparel Indicator suggests Nike's apparel revenue growth will trend up in CY1Q24 and 2Q24.



**Source:** BofA Global Research, BofA Global research estimates, company data, Taiwan Ministry of Finance, General Statistics Office Of Vietnam, and Customs General Administration PRC

Note: For certain major supplier whose latest revenue hasn't been announced by the time of this report, we used latest estimates by BofA Global Research. Correlation prior to 3Q19 is back-tested and does not represent the actual performances of any accounts or funds. Back-tested performance depicts the theoretical (not actual) performance of a particular strategy over the time period indicated. No representation is being made that any actual portfolio is likely to have achieved returns similar to those shown herein.

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Shaded area is back-tested.

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### Exhibit 12: BofA Nike Apparel Indicator

Correlation and directionality hit rates of each input vs. Nike apparel growth

	Indicator	Suppliers average growth rate	Exports growth rates
Correlation with Nike apparel revenue growth (before 2Q20)	0.84	0.80	0.71
Directionality hit rate with Nike apparel revenue growth	58%	53%	56%

**Source:** BofA Global Research

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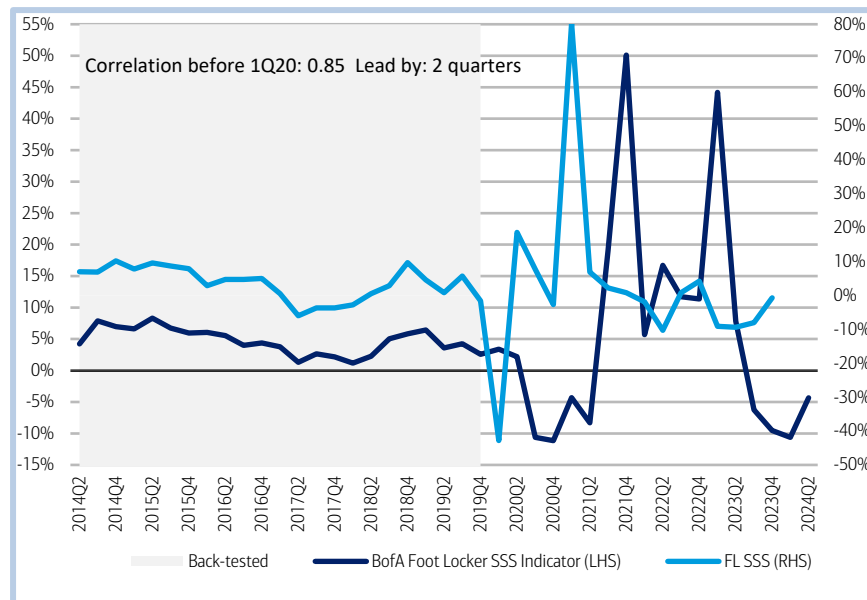
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## BofA Foot Locker Same-Store Sales Indicator

Foot Locker is the largest global athletic footwear retailer (US\$8.7bn revenue in FY22) and Nike's largest customer (we estimate Foot Locker is 8-9% of Nike global sales) with about 2,714 stores globally (as of Jan-2023). In 2022, Nike constituted 65% of Foot Locker purchases (86% from its largest-five brand suppliers). Foot Locker derived 80% of its revenue from footwear in FY22.

### Exhibit 13: BofA Foot Locker Same-Store Sales Indicator

Foot Locker same-stores sales decline narrowed in 4Q23



**Source:** BofA Global Research, company data, the U.S. Bureau of Economic Analysis and the U.S. Department of Labor

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Shaded area is back-tested

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### Exhibit 14: BofA Foot Locker Same-Store Sales Indicator

Correlation and directionality hit rates of each input vs. Foot Locker SSSG growth

	Indicator	Suppliers average growth rate	PCE	Initial jobless claims (inverse)
Correlation with Foot Locker SSS (before 1Q20)	0.85	0.66	0.35	0.41
Directionality hit rate with Foot Locker SSS	59%	50%	66%	59%

**Source:** BofA Global Research

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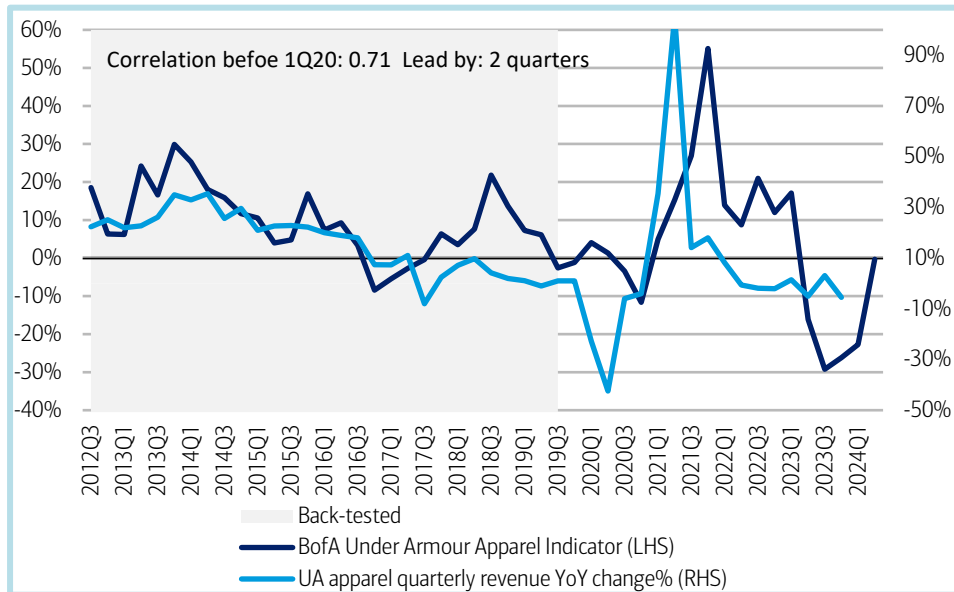


## BofA Under Armour Apparel Indicator

Under Armour is the third-largest athletic apparel brand in the world, with an estimated 2.9% market share in 2022 (source: Euromonitor). Apparel constituted 66% of Under Armour's revenue in FY23. The BofA Under Armour Apparel Indicator suggests revenue growth would trend up in 1Q24 and further in 2Q24.

### Exhibit 15: BofA Under Armour Apparel Indicator

Under Armour athletic apparel revenue growth would trend up in 1Q24 and further in 2Q24



**Source:** BofA Global Research, company data, Taiwan Ministry of Finance, General Statistics Office Of Vietnam, and Customs General Administration PRC

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### Exhibit 16: BofA Under Armour Apparel Indicator

Correlation and directionality hit rates of each input vs. Under Armour apparel revenue growth

	Indicator	Suppliers average growth rate	Exports growth rates
Correlation with Under Armour apparel revenue growth (before 1Q20)	0.71	0.69	0.49
Directionality hit rate with Under Armour apparel revenue growth	55%	51%	38%

**Source:** Correlation prior to 3Q19 is back-tested and does not represent the actual performances of any accounts or funds. Back-tested performance depicts the theoretical (not actual) performance of a particular strategy over the time period indicated. No representation is being made that any actual portfolio is likely to have achieved returns similar to those shown herein.

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## Apparel and footwear supplier revenue trends

### Exhibit 18: Footwear and apparel suppliers' quarterly revenue growth (YoY) trend (based on reporting currency)

Footwear and apparel suppliers' revenue decline narrowed on average in 4Q23

	Key customers	2Q21	3Q21	4Q21	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23
<b>Footwear suppliers</b>												
Feng Tay	Nike	23.7%	-27.3%	6.3%	15.8%	25.7%	105.6%	22.1%	-13.5%	-16.0%	-10.9%	-1.4%
Yue Yuen (Note)	Nike, adidas	21.7%	-15.2%	2.8%	13.1%	18.3%	82.6%	11.6%	-18.2%	-20.4%	-24.0%	-10.1%
Paiho	Nike, adidas	100.5%	2.6%	9.4%	-8.7%	-16.2%	17.0%	-27.5%	-29.9%	-45.9%	-14.4%	6.4%
Fulgent Sun	VF Corp, Columbia	46.4%	29.0%	51.0%	32.5%	78.2%	74.4%	38.2%	11.6%	-25.5%	-51.1%	-40.8%
Stella International (manufacturing) (Note)	Prada, Nike, Cole Haan	54.9%	28.2%	43.8%	24.9%	12.7%	5.1%	-15.5%	-25.9%	-3.1%	-16.9%	13.5%
<b>Average</b>		<b>48.1%</b>	<b>-2.7%</b>	<b>17.4%</b>	<b>13.2%</b>	<b>26.5%</b>	<b>56.9%</b>	<b>5.8%</b>	<b>-15.2%</b>	<b>-22.2%</b>	<b>-23.5%</b>	<b>-6.5%</b>
<b>Apparel suppliers</b>												
Eclat	Nike, lululemon, UA	79.6%	9.1%	5.6%	23.8%	14.6%	32.9%	-22.6%	-36.2%	-30.3%	-25.6%	11.4%
Makalot	GAP, Target, FR	29.5%	3.4%	27.4%	16.9%	19.9%	13.4%	-4.3%	-1.7%	-1.6%	-1.4%	10.4%
Hansae	GAP, Kohl's, Nike	-9.3%	-34.6%	45.3%	54.7%	48.5%	41.3%	-9.4%	-29.3%	-29.6%	-13.0%	
Youngone	VF Corp, Nike	24.2%	-1.5%	28.6%	34.9%	39.5%	46.2%	37.9%	9.7%	6.6%	-14.1%	
Quang Viet Enterprise	Patagonia, Nike	6.4%	-19.3%	111.3%	91.6%	41.9%	77.9%	20.3%	-11.6%	-1.5%	-16.3%	-41.0%
Tainan Enterprises	GAP, Ann Taylor	9.4%	-2.1%	20.1%	36.4%	83.2%	14.1%	10.2%	-24.8%	-11.2%	-10.4%	-3.7%
<b>Average</b>		<b>23.3%</b>	<b>-7.5%</b>	<b>39.7%</b>	<b>43.1%</b>	<b>41.3%</b>	<b>37.6%</b>	<b>5.4%</b>	<b>-15.7%</b>	<b>-11.3%</b>	<b>-13.5%</b>	<b>-5.7%</b>
<b>Textile suppliers</b>												
Tainan Spinning		49.3%	9.3%	2.8%	8.6%	5.3%	16.8%	5.9%	-5.8%	-10.2%	-11.1%	-19.1%
Everest Textile		89.5%	39.6%	25.8%	22.9%	4.3%	4.0%	-29.0%	-26.8%	-30.3%	-24.1%	3.9%
De Licacy		75.7%	23.2%	16.9%	22.5%	22.3%	27.5%	1.1%	-13.3%	-33.6%	-18.9%	-13.3%
Toray		29.2%	19.8%	14.9%	11.9%	17.9%	19.4%	9.6%	1.0%	-4.6%	-5.3%	-1.6%
<b>Average</b>		<b>60.9%</b>	<b>23.0%</b>	<b>15.1%</b>	<b>16.5%</b>	<b>12.5%</b>	<b>16.9%</b>	<b>-3.1%</b>	<b>-11.2%</b>	<b>-19.7%</b>	<b>-14.9%</b>	<b>-7.5%</b>

Source: Company data

Note: Yue Yuen manufacturing growth excluded our estimated TCHC revenue.

FR = FR = Fast Retailing, UA = Under Armour

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Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster <sup>R1</sup>
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

<sup>R1</sup> 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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