Report Summary

2019-20 TRENDS
Industry Outlook & Market Data Research

Fastmarkets RISI

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2019 Trends Report summary

Following two years of negative growth in 2015 and 2016 and flat growth in 2017, US folding carton shipments (in tons) recorded another decline of 2.1% year-over-year in 2018. Growth suffered 2.0% and 0.7% declines in 2015 and 2016, respectively, largely the result of the ongoing headwinds facing major processed food and consumer product companies. In the past ten years, folding carton shipments have seen persistent downward pressure, declining at an average annual rate of 1.6%.

Broad macroeconomic indicators suggest that demand for folding cartons should continue its rebound after years of declining. Output growth in nondurables, which comprise many carton-packaged goods including processed foods, maintained strong growth in 2018, following robust growth in 2017, not seen since the initial rebound from the recession in 2010. General economic fundamentals in the US economy, such as job growth and consumer spending, recorded robust gains, indicating the general economy remains healthy. In aggregate, folding carton shipments are now about 1 million tons lower than their pre-recession peak from 2007 and have declined by 0.9% on average annually over the last five years.

The outlook for the macroeconomic environment appears generally favorable for folding carton producers over the horizon. However, technological and industry-related factors will place further pressures on converters. Overseas competition will continue to challenge domestic competition during the next five years, especially with the slightly stronger US dollar compared to most global currencies. In addition, competition from alternative packaging methods and materials is expected to remain in place, especially with increasing prices of boxboard substrates. Furthermore, e-commerce is a growing force in the dry foods and household supplies sectors and is expected to put pressure on folding carton shipments growth, allowing corrugated boxes to gain share. On the flip side, recent decisions by some of the largest fast food companies and municipalities across the country seem to be providing some hope that paperboard packaging materials could finally be poised to benefit from their environmentally friendly profile.

Considering the general business environment, folding carton shipments will record an average growth rate of 0.1% annually. Shipments growth in tons will show an uneven performance over the forecast, reflecting the changing impact of the driving factors. Carton shipments are expected to decrease by 0.7% in 2019 and show some growth in 2020, before deteriorating in 2021 due to the anticipated downturn in that year. While more favorable macroeconomic factors will result in slightly higher carton demand in 2020, the carton pricing environment will limit carton demand relative to other packaging alternatives, mainly in the sectors that use recycled boxboard. Following the anticipated macroeconomic slowdown in 2021, folding carton shipment growth is forecast to rebound by 0.8% in 2022 before it accelerates to 1.2% year-over-year in 2023, thanks to the expected recovery in consumer spending and industrial production. Over the forecast period of 2019-2023, we estimate that folding carton demand growth will average a flat 0.1% annually. The total value of US carton shipments should climb from an estimated $8.5 billion in 2018 to $9.3 billion in 2023, and while average values per ton, which dipped from 2015-2017 before recovering in 2018, are expected to grow by 1.7% over the forecast.

Increasing boxboard prices, which have consistently outpaced folding carton prices for a number of years, continue to significantly drag on profitability. During the past five years, paperboard costs rose annually at an average rate of 2.6%, while the average value of folding cartons declined annually by an average rate of 0.3%. As a result, this caused downward pressure on carton converters' profitability, indicating further margin erosion. Boxboard prices increased in the first quarter of 2019 after the demand/

Table 1

US folding carton shipments

	2016r	2017r	2018e	2019f	2020f	2021f	2022f	2023f
Thousand tons	4,903	4,904	4,803	4,769	4,789	4,735	4,773	4,831
%	-0.7%	0.0%	-2.1%	-0.7%	0.4%	-1.1%	0.8%	1.2%
Million dollars	8,595	8,393	8,500	8,871	9,253	9,283	9,193	9,311
%	-1.3%	-2.4%	1.3%	4.4%	4.3%	0.3%	-1.0%	1.3%
Average value per ton	1,753	1,711	1,770	1,860	1,932	1,961	1,926	1,928
%	-0.7%	-2.4%	3.4%	5.1%	3.9%	1.5%	-1.8%	0.1%
Real carton value per ton (2015$)	1,771	1,675	1,681	1,724	1,743	1,757	1,705	1,671
%	0.3%	-5.4%	0.4%	2.5%	1.1%	0.8%	-3.0%	-2.0%

Source: PPC's 2019 *Trends Report.* All forecasts and analysis presented by Fastmarkets RISI, Inc.

Note: r = revised, e = estimate, f = forecast.

Table 2

US folding carton market

Million US dollars

	2011	2012	2013	2014	2015	2016r	2017r	2018e
Shipments	$8,626.4	$8,844.8	$8,760.3	$8,939.7	$8,712.2	$8,595.4	$8,393.0	$8,499.9
Imports	$675.4	$690.1	$752.4	$782.0	$827.4	$850.5	$877.9	$942.9
Exports	$409.2	$425.6	$446.9	$455.2	$471.3	$483.5	$475.3	$486.7
Consumption	$8,893	$9,109	$9,066	$9,267	$9,068	$8,962	$8,796	$8,956
Import penetration (imports percent of consumption)	7.6%	7.6%	8.3%	8.4%	9.1%	9.5%	10.0%	10.5%
Exports as a percentage of shipments	4.7%	4.8%	5.1%	5.1%	5.4%	5.6%	5.7%	5.7%

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Note: r = revised, e = estimate, f = forecast.

supply balance shifted in producers' favor. On the heels of the increase in folding carton prices in 2018, Fastmarkets RISI anticipates that folding carton prices will rise a further 5.1% in 2019, similar to the 5.2% increase in market prices for boxboard in the same year, and reflecting the full effect of boxboard price increase in 2018.

The US folding carton end-use markets can be grouped into three broad categories: growth, mature and declining. Growth markets are classified by average annual growth of 1.0% or more. According to our analysis, five end-use markets are poised to grow by more than 1% a year. Six end-use segments are classified as mature markets and are expected to maintain current levels of demand over the five-year forecast cycle. The remaining six market segments are classified as declining markets this year. End-use markets analyzed in the full 2019 *Trends Report* are:

Food products

- Beverages
- Cereals/milled grains
- Confectionary
- Dairy
- Dry foods
- Frozen foods
- Meat
- Perishable bakery
- Retail carry-out

Non-food products

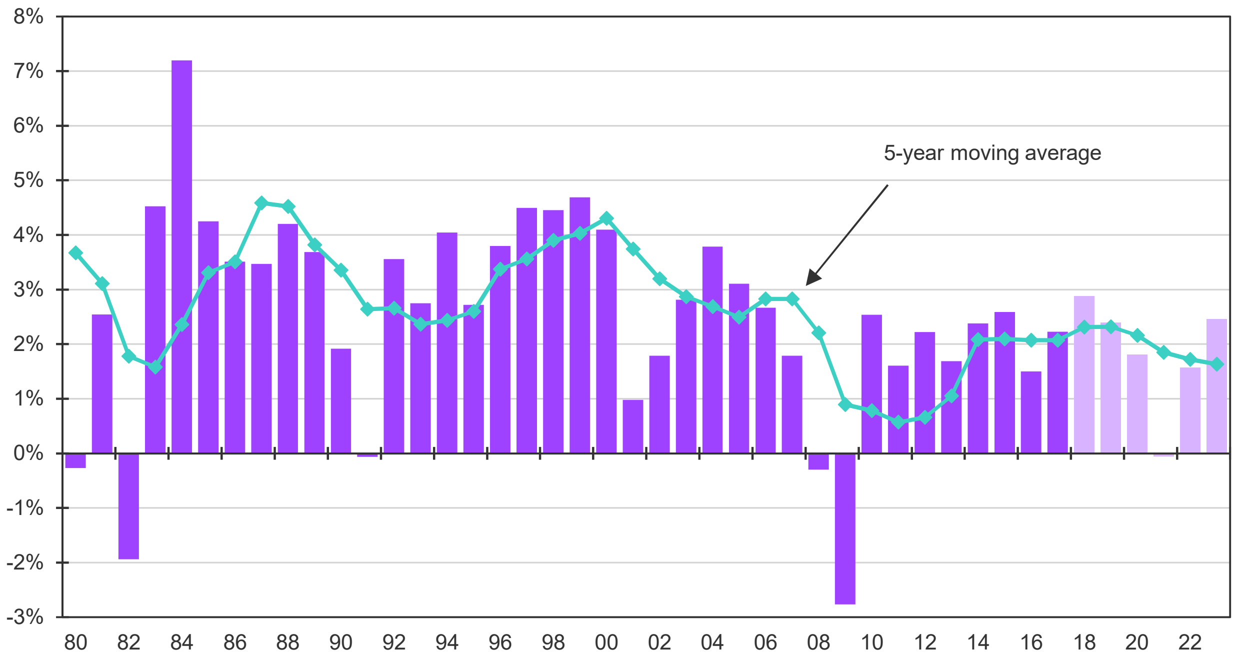
- Cosmetics
- Hardware & household supplies
- Converted paper products
- Pharmaceuticals
- Recreational products
- Soap and detergents
- Tobacco
- Miscellaneous

The forecasts and outlook analyses contained in the Report are prepared solely and exclusively by Fastmarkets RISI without input from PPC or its members.

Figure 1

US real GDP growth

Annual percentage change



For more information on how to join PPC so you can access the full *2019 Trends Report*, contact Emily Leonczyk at 413.686.9193 or email emily@paperbox.org.

This overview contains some key information from the 2019 Trends Industry Outlook and Market Data Report,*a compilation and analysis of industry data prepared for the Paperboard Packaging Council by Fastmarkets RISI, an independent economic consulting firm. The forecasts and outlook analyses in the Report are prepared solelyand exclusively by Fastmarkets RISI without input from the Paperboard Packaging Council.*