

May 1, 2020



KeyBanc
Capital Markets




AICC COVID-19 Videoconference

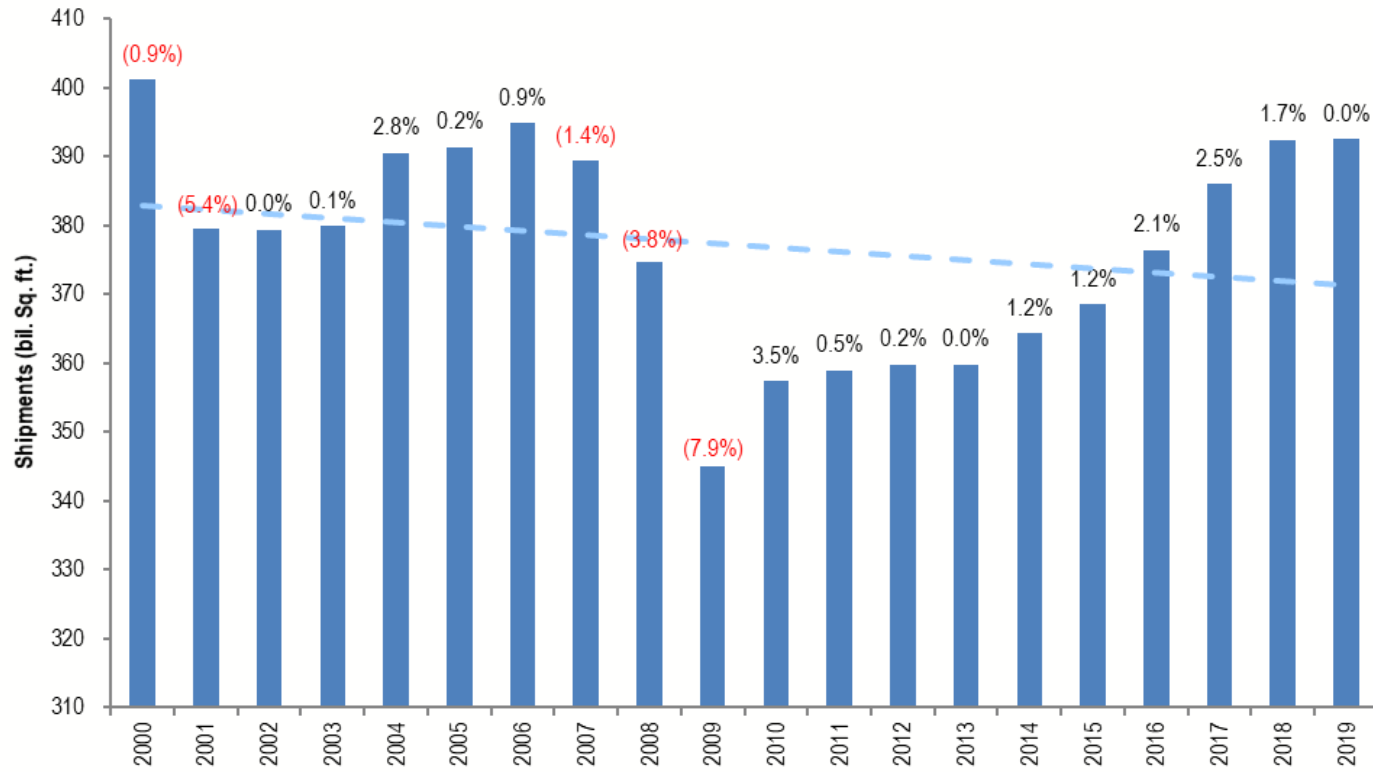
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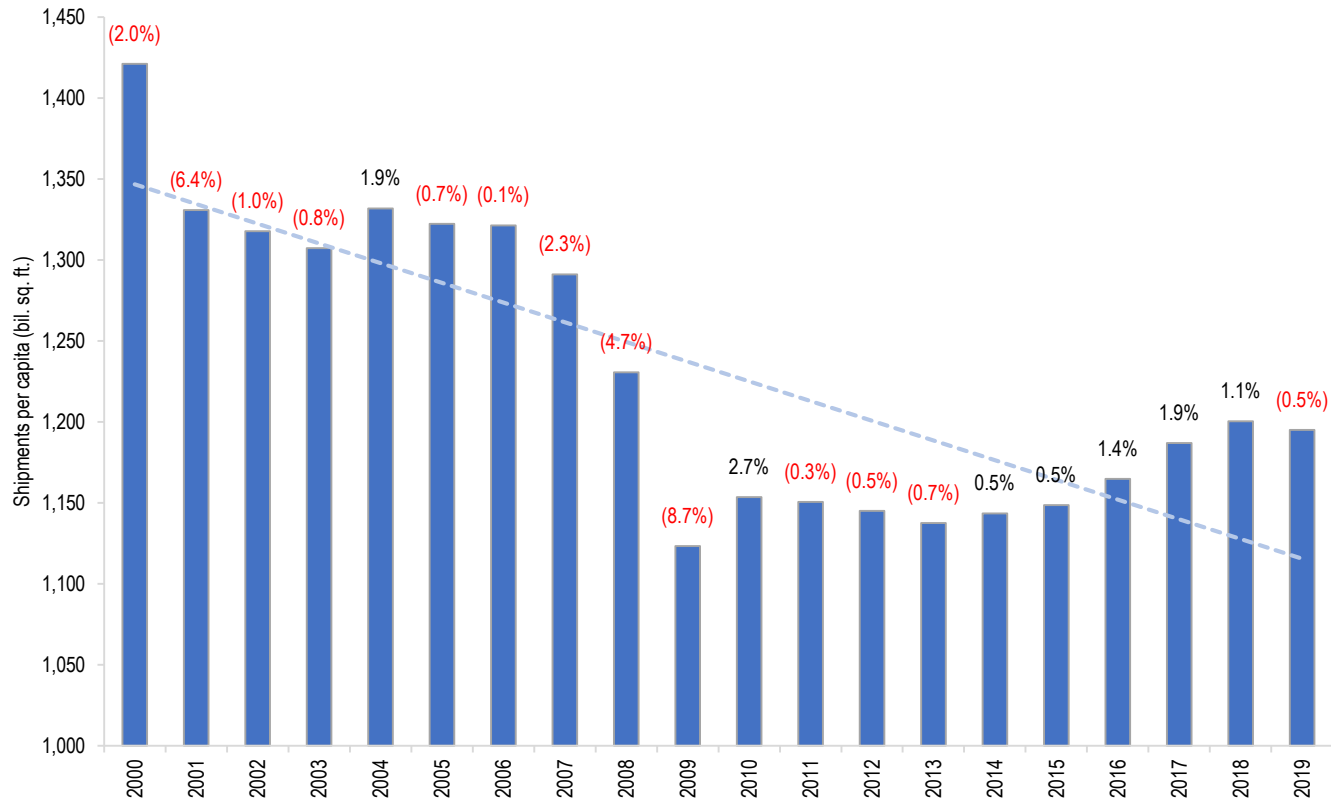
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Since the turn of the century, U.S. box demand has been flat and demand per capita has been declining, evidence of a lack of penetration of new markets.

U.S. Box Shipments, 2000-pres.

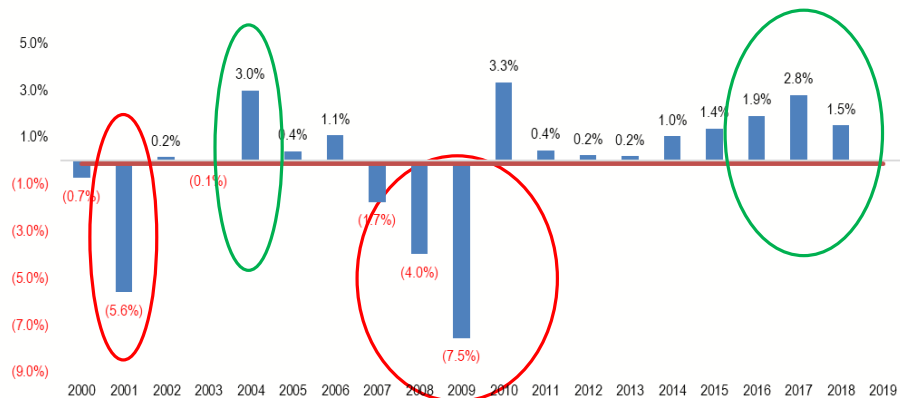


U.S. Box Shipments per Capita, 2000-pres.

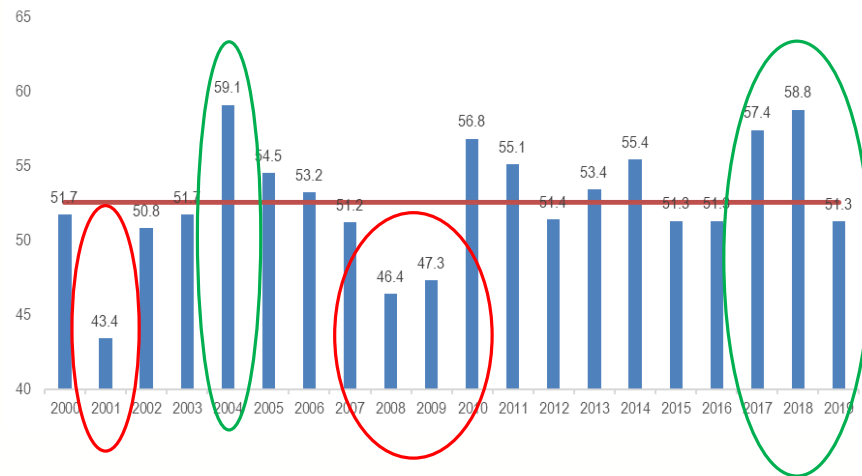


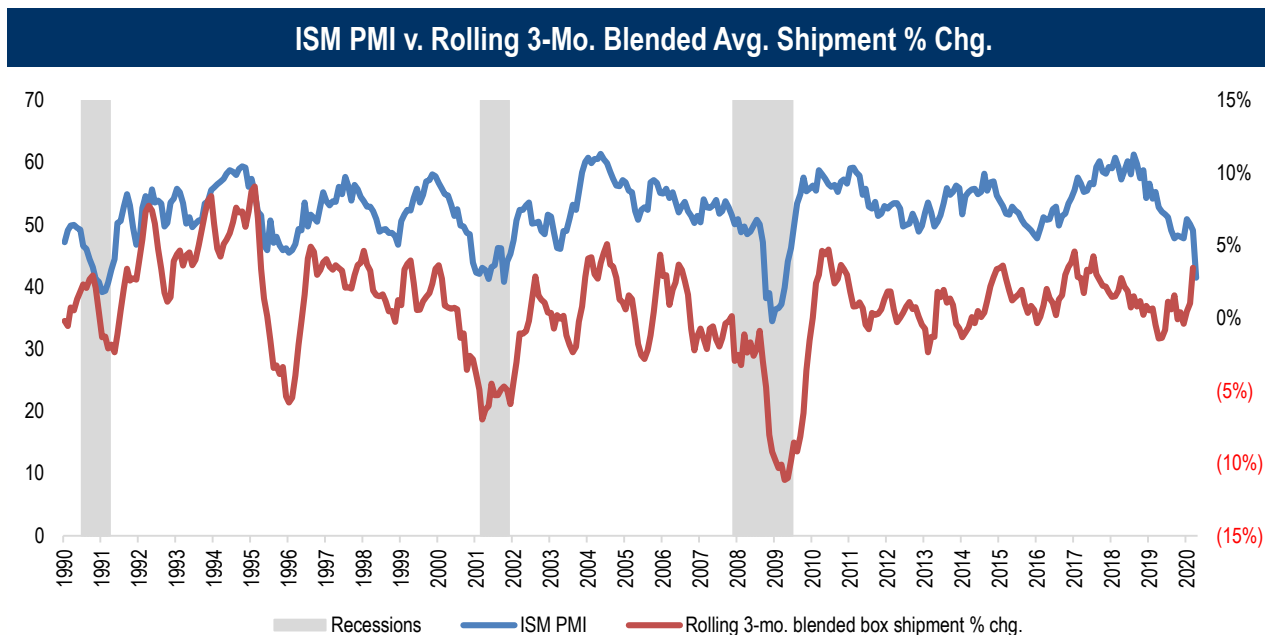
What has driven fluctuations in box demand year to year?

U.S. Blended Avg. Box Shipment % Chg.



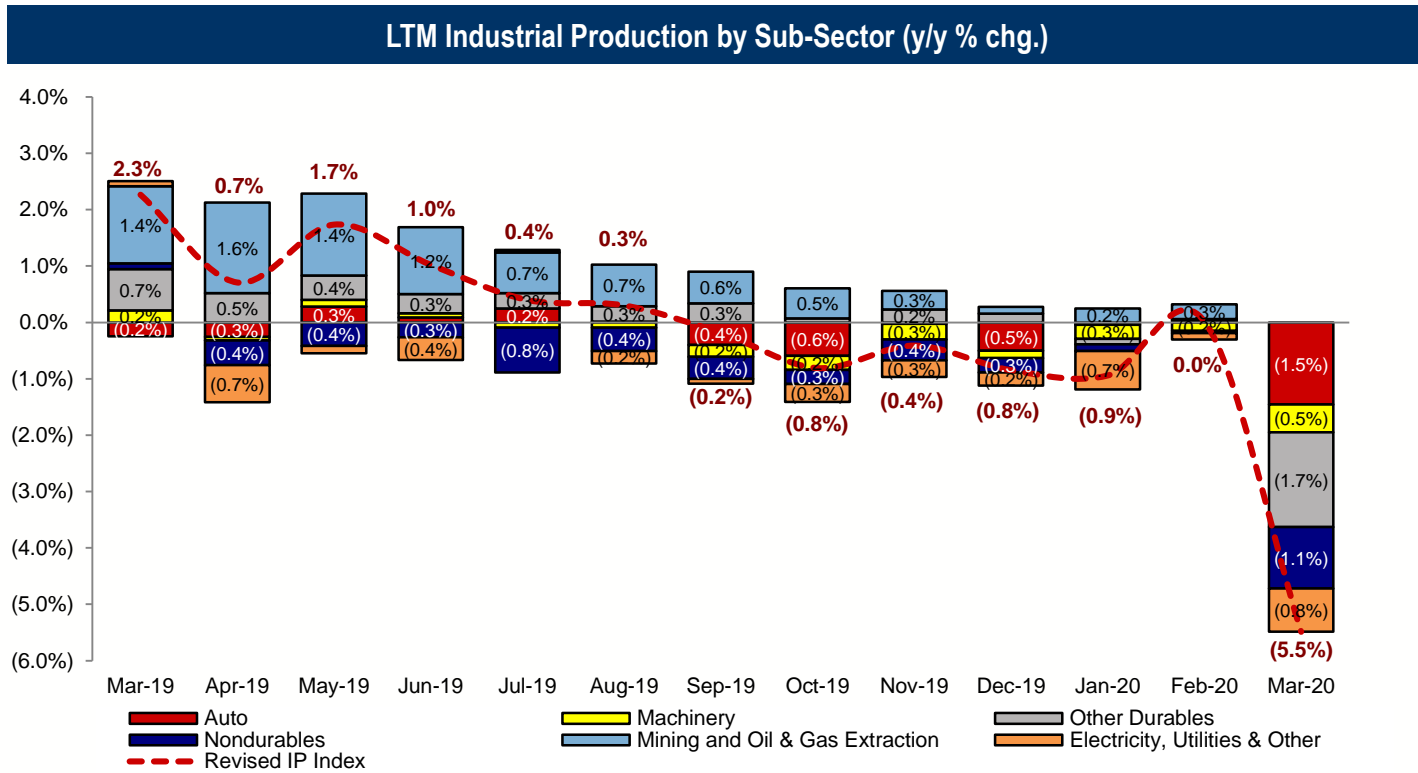
ISM Manufacturing PMI





What's going on now? Industrial demand is weak and getting weaker, and non-durable demand appears to be slowing following the panic-buying surge.

Box Demand End Markets				
Customer Segment	% Industry Estimates ¹	Initial Impact	Near-Term Outlook	Comments
Food & Beverage				
	45%			
Processed Food				Strong immediate demand for shelf stable options; growth moderating after consumer stock-up
Beverage				Decline in foodservice demand not offset by strong retail
Protein				Strong retail demand; near term impact of processing plant shutdowns
Fresh Produce				Decline in foodservice demand not offset by retail; varies by category
Other Non-Durables				
	30%			
Chemicals & Pharmaceuticals				Consumer focus on health and sanitation
Paper, Towels & Tissue				Strong demand for personal care and hygiene products; partly offset by printing papers
Other Non-Durables				Pullback in discretionary spending and impact of "non-essential" business
Durable Goods & Distribution				
	25%			
E-commerce, Shipping & Distribution				Greater dependence on e-commerce as primary spending channel
Durable Goods				Pullback in discretionary spending

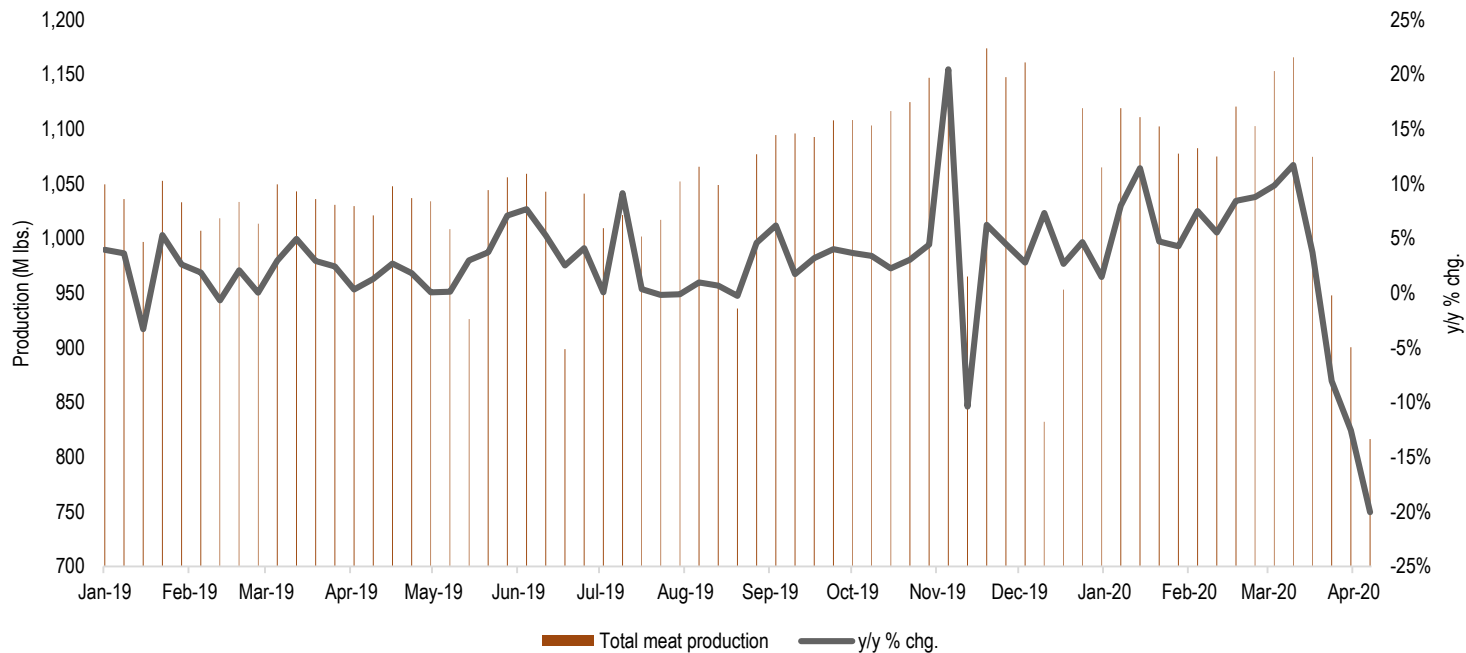


Durables (~25% of box demand) are in bad shape for obvious reasons

Top 25 Market Manufacturing PMI by Country

Country	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20
United States	54.9	53.0	52.4	52.6	50.5	50.6	50.4	50.3	51.1	51.3	52.6	52.4	51.9	50.7	48.5	36.1
China	48.3	49.9	50.8	50.2	50.2	49.4	49.9	50.4	51.4	51.7	51.8	51.5	51.1	40.3	50.1	49.4
Japan	50.3	48.9	49.2	50.2	49.8	49.3	49.4	49.3	48.9	48.4	48.9	48.8	48.8	47.8	44.8	41.9
Germany	49.7	47.6	44.1	44.4	44.3	45.0	43.2	43.5	41.7	42.1	44.1	43.7	45.3	48.0	45.4	34.4
India	53.9	54.3	52.6	51.8	52.7	52.1	52.5	51.4	51.4	50.6	51.2	52.7	55.3	54.5	51.8	
France	51.2	51.5	49.7	50.0	50.6	51.9	49.7	51.1	50.1	50.7	51.7	50.4	51.1	49.8	43.2	31.5
United Kingdom	52.8	52.1	55.1	53.1	49.4	48.0	48.0	47.4	48.3	49.6	48.9	47.5	50.0	51.7	47.8	32.6
Italy	47.8	47.7	47.4	49.1	49.7	48.4	48.5	48.7	47.8	47.7	47.6	46.2	48.9	48.7	40.3	
Brazil	52.7	53.4	52.8	51.5	50.2	51.0	49.9	52.5	53.4	52.2	52.9	50.2	51.0	52.3	48.4	
Canada	53.0	52.6	50.5	49.7	49.1	49.2	50.2	49.1	51.0	51.2	51.4	50.4	50.6	51.8	46.1	33.0
South Korea	48.3	47.2	48.8	50.2	48.4	47.5	47.3	49.0	48.0	48.4	49.4	50.1	49.8	48.7	44.2	
Russia	50.9	50.1	52.8	51.8	49.8	48.6	49.3	49.1	46.3	47.2	45.6	47.5	47.9	48.2	47.5	31.3
Spain	52.4	49.9	50.9	51.8	50.1	47.9	48.2	48.8	47.7	46.8	47.5	47.4	48.5	50.4	45.7	
Australia	53.9	52.9	52.0	50.9	51.0	52.0	51.6	50.9	50.3	50.0	49.9	49.2	49.6	50.2	49.7	44.1
Mexico	50.9	52.6	49.8	50.1	50.0	49.2	49.8	49.0	49.1	50.4	48.0	47.1	49.0	50.3	46.9	
Indonesia	49.9	50.1	51.2	50.4	51.6	50.6	49.6	49.0	49.1	47.7	48.2	49.5	49.3	51.9	45.3	
Netherlands	55.1	52.7	52.5	52.0	52.2	50.7	50.7	51.6	51.6	50.3	49.6	48.3	49.9	52.9	50.5	
Saudi Arabia	56.2	56.6	56.8	56.8	57.3	57.4	56.6	57.0	57.3	57.8	58.3	56.9	54.9	52.5	42.4	
Switzerland	54.3	55.4	50.3	48.5	48.6	47.7	44.7	47.2	44.6	49.4	48.8	50.2	47.8	49.5	43.7	
Turkey	44.2	46.4	47.2	46.8	45.3	47.9	46.7	48.0	50.0	49.0	49.5	49.5	51.3	52.4	48.1	
Taiwan	47.5	46.3	49.0	48.2	48.4	45.5	48.1	47.9	50.0	49.8	49.8	50.8	51.8	49.9	50.4	
Poland	48.2	47.6	48.7	49.0	48.8	48.4	47.4	48.8	47.8	45.6	46.7	48.0	47.4	48.2	42.4	
Sweden	52.1	51.6	52.4	50.6	52.7	51.2	51.2	51.8	46.4	46.5	46.3	47.9	52.0	52.7	43.2	
Belgium	49.3	49.2	49.7	48.4	48.2	47.6	47.5	47.1	47.2	47.9	47.7	48.3	47.6	50.0	46.2	
Thailand	50.2	49.9	50.3	51.0	50.7	50.6	50.3	50.0	50.6	50.0	49.3	50.1	49.9	49.5	46.7	
PMI in expansion	16	14	15	16	12	10	8	9	10	9	7	11	10	13	4	0
% expansion	64%	56%	60%	64%	48%	40%	32%	36%	40%	36%	28%	44%	40%	52%	16%	0%

U.S. Weekly Total Meat Production



Protein is ~10% of box demand.

Recent CPG Commentary

“Foodservice sales are at risk in the near term, and we expect Q2 foodservice sales could decline 30% to 50% versus prior year.”

– *Paulo Luiz Araujo Basilio, CFO of Kraft Heinz*

“Organic net sales growth will slow in the second half. The question is how much and whether it slows enough to offset the unusually strong growth of the first half.”

- *Amit Banati, CFO of Kellogg*

“If we look at our April month-to-date trends, we are seeing volumes down globally approximately 25%, driven by the sharp declines in our away-from-home businesses.

- *James Quincey, CEO of The Coca-Cola Company*

We expect containerboard supply growth to continue to outpace demand growth.

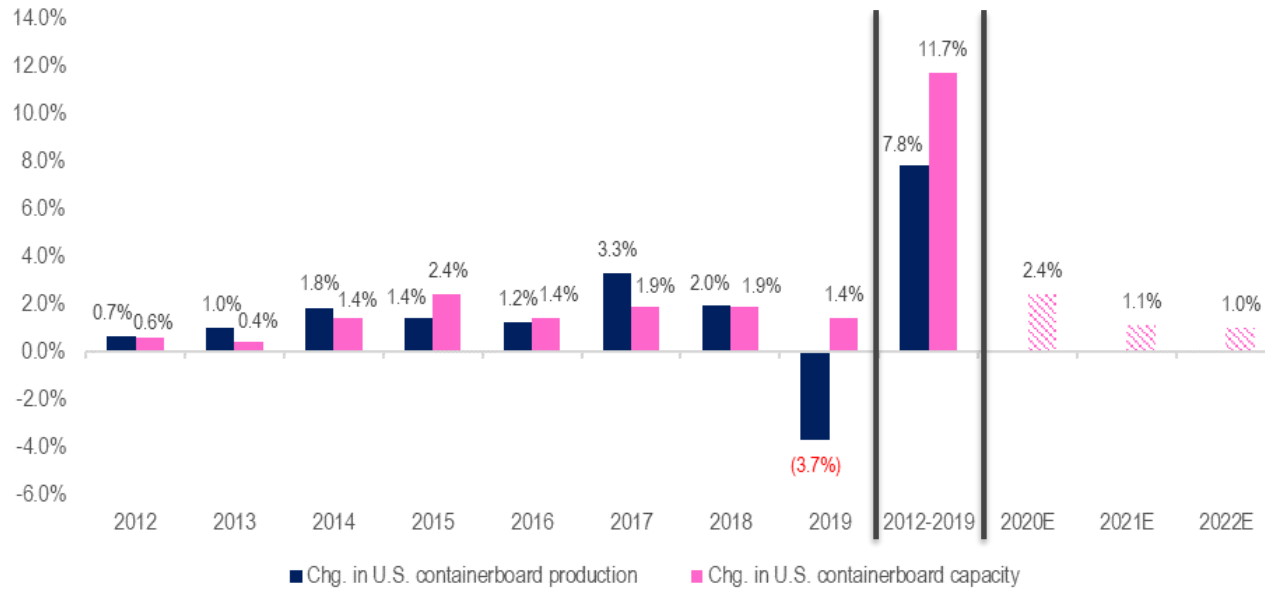
U.S. Containerboard Capacity Additions/Reductions (thousand tons)

Announced Projects	Grade	2019E	2020E	2021E	2022E
Pratt Industries' Wapakoneta, OH mill	RCB	400			
Nine Dragons' Biron, WI conversion	RCB	255			
NorPac's Longview, WA conversion	RCB	110			
WestRock's North Charleston, SC reduction	KL	(288)			
McKinley Paper's Port Angeles, WA conversion	RCB		180		
IP's Riverdale mill conversion	WT/CTB		450		
Verso's Duluth, MN mill conversion	RCB		95		
WestRock's Florence, SC project	KL		30		
Nine Dragons' Rumford, ME conversion	WT/CTB		120		
New-Indy's Catawba, SC mill conversion	KL		400		
Graphic Packaging's West Monroe, LA closure	CTB		(120)		
Sonoco's Hartsville, SC conversion	RCB		(185)		
Green Bay Packaging's Green Bay, WI mill	RCB			445	
Cascades' Bear Island, VA mill conversion	RCB				400
Total net capacity additions					2,292

Possible Projects

Domtar's Ashdown, AR project	KL		400		
Pratt Industries	RCB		800		

Chg. in U.S. Containerboard Production vs. Chg. in U.S. Containerboard Capacity





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Sector Weight (SW) – We expect the stock to perform in line with the analyst's coverage sector over the coming 6-12 months.

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