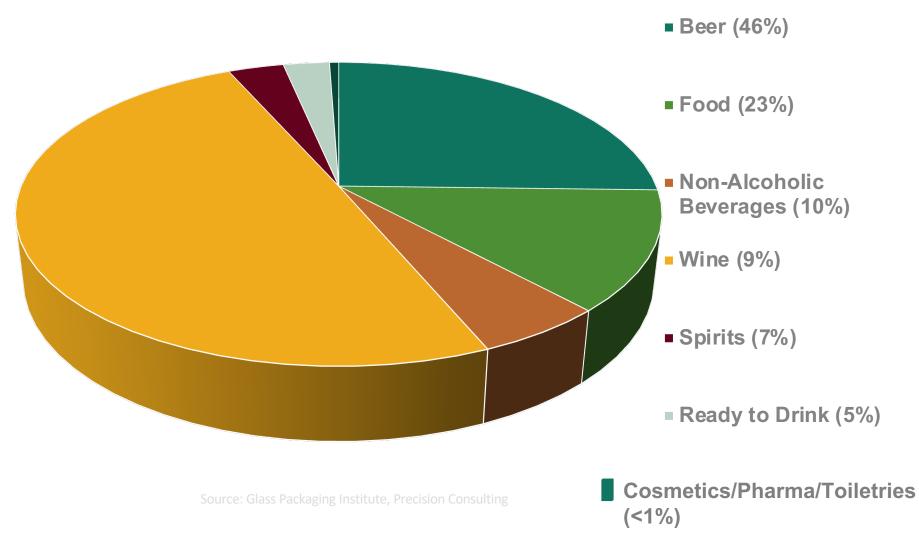
Glass Packaging Institute (GPI) Update

West Coast Protective League Meeting
November 17-18, 2023
San Diego, CA





End Market Share of U.S. Glass Container Shipments by Category (Q3 2023)



Warehouse Inventory Overview

<u>L.E.K. perspective</u>: A build up of stock throughout the value chain as a precautionary reaction to supply chain disruption is currently unwinding, with stocking behavior expected return to normal in 2024 and beyond

U.S. consumer packaging stocking trends (2019-24)



2019 - Q1 2020

Stock levels were at historical norms

Pre-COVID stock levels were at historical norms, with those norms being different according to the specific business and end market



Q2 2020

Unplanned stockpiling due to closures

With sudden closures throughout the value chain, many manufacturers found themselves with excess stock that they were not planning for



Q3 2020 - Q3 2022

Stock levels increased significantly

Supply chain disruption due to COVID, Ukraine, international shipping issues etc., prompted businesses to hoard stock to ensure security of supply



Q4 2022 - Q4 2023

Destocking occurring throughout value chain

As supply chain disruption has begun to ease, destocking has occurred in all value chain steps, decreasing packaging demand



Q1 2024 onwards

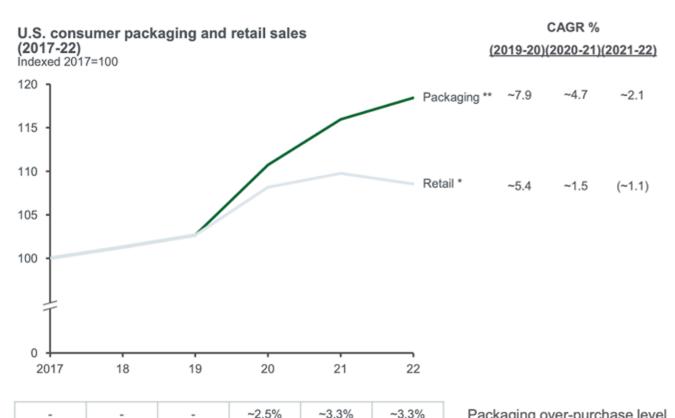
Expected stabilization of stock levels

Stabilization of stocks expected beginning in early 2024

Commentary

Inventory Status and Projections

L.E.K. perspective: As a result of stocking behavior, ~9% cumulative stock was built on average by U.S. CPG customers downstream from packaging converters



~5.8%

~2.5%

80-90% of excess inventory is expected to be consumed by the end of 2023 with the balance being exhausted early during 2024

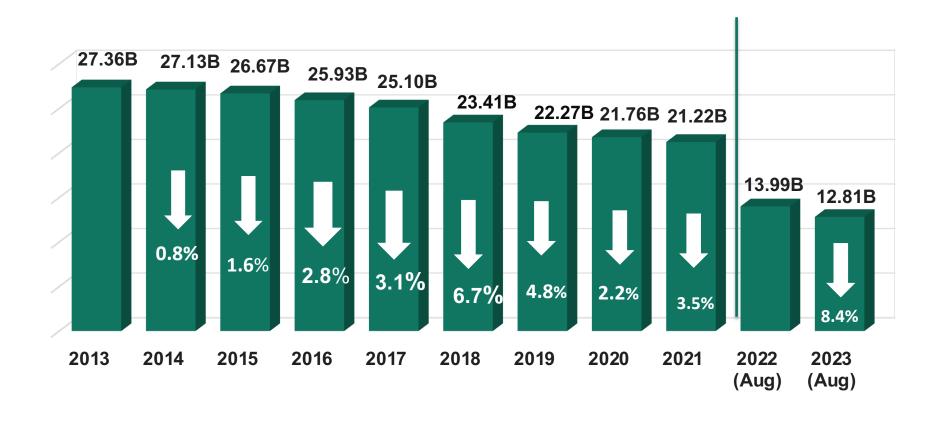
Packaging over-purchase level Cumulative over-purchase level

Note: * Retail is defined as the total volume of packaging needed to fulfil retail sales, ** Packaging is defined as the total packaging CPG companies purchased from packaging manufacturers Source: Euromonitor; L.E.K. Research, interviews and analysis

~9.0%

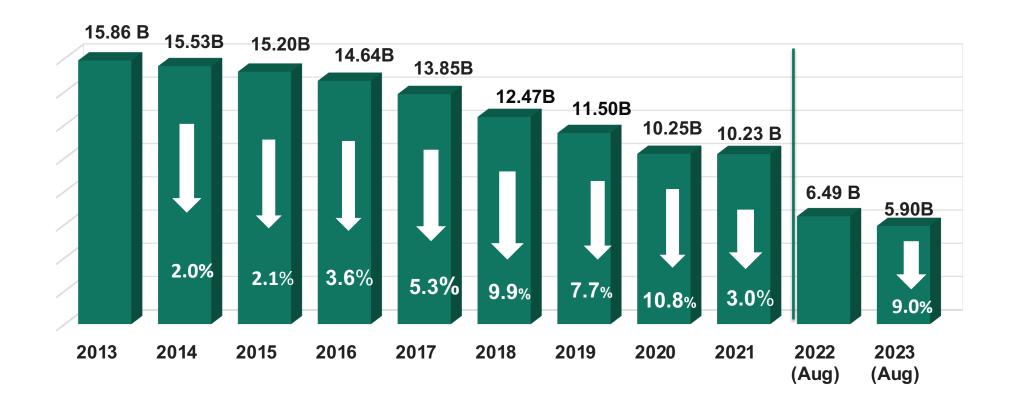
US Glass Plant Shipments to Customers

(listed in billions of bottles), 2013 - YTD 2023



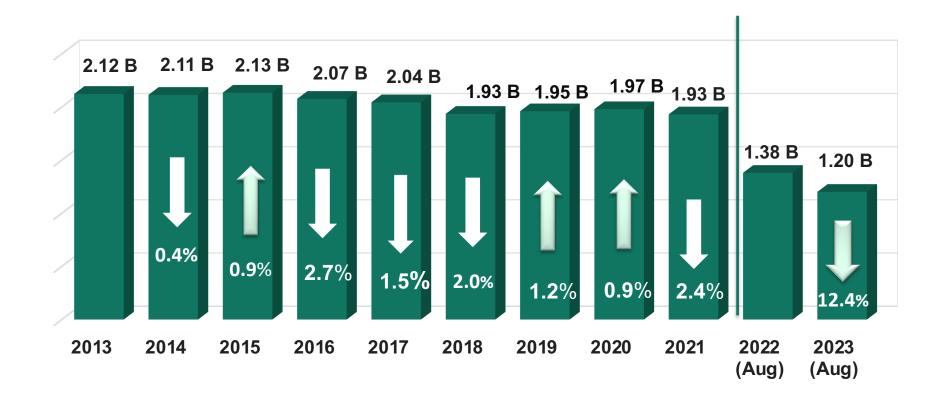
US Beer Bottle Shipments to Customers

(listed in billions of bottles), 2013 – YTD 2023



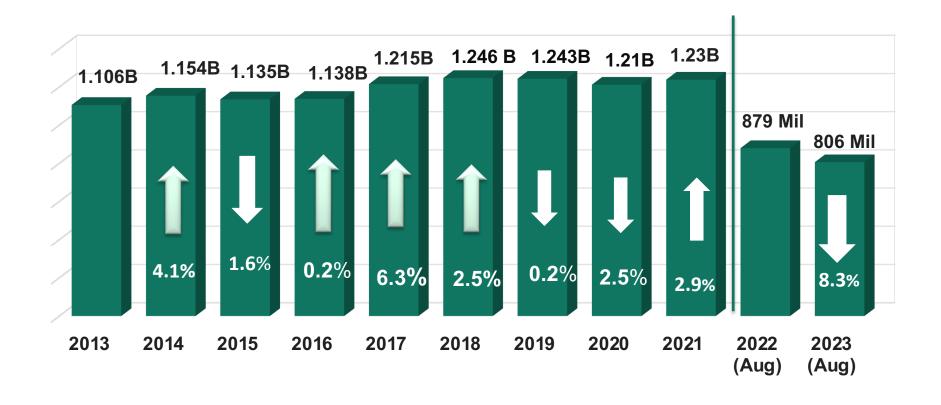
US Wine Bottle Shipments to Customers

(listed in billions of containers), 2013 – YTD 2023



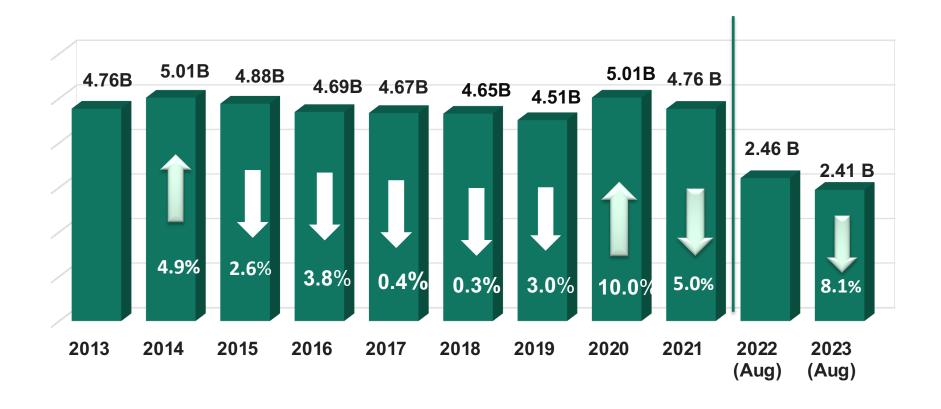
US Spirits Bottle Shipments to Customers

(listed in millions and billions of containers), 2013 – YTD 2023



US Food Container Shipments to Customers

(listed in billions of containers), 2013 – YTD 2023



Key Glass End Markets - Changes Over Time

Beer

- **2008 59%**
- **2012 58%**
- **2016 56%**
- **2019 51%**
- **2020 46%**
- **2021 47%**
- **2022 46%**
- **2023 (Q3) 46%**

Ready to Drink (RTD) Alcoholic Beverages

- **2008 7%**
- **2012 6%**
- **2016 5%**
- **2019 6%**
- **2020 5%**
- **2021-6%**
- **2022 5%**
- 2023 (Q3) 5%

Wine

- **2008 6%**
- **2012 7%**
- **2016 8%**
- **2019 9%**
- **2020 9%**
- **2021 9%**
- **2022 10%**
- 2023 (Q3) 9%

Food

- **2008 17%**
- **2**012 17%
- **2**016 18%
- **2019 20%**
- **2020 24%**
- **2021 23%**
- **2022 23%**
- 2023 (Q3) 23%

Spirits increased overall share to 7% through the third quarter, while wine reduced its overall end market share to 9%

Key Glass End Markets - Changes Over Time

Non-Alcoholic Beverages

- **2008 8%**
- **2**012 8%
- **2016 9%**
- **2019 9%**
- **2020 10%**
- **2021 10%**
- **2022 10%**
- **2023 (Q3) 10%**

Spirits

- **2008 3%**
- **2**012 4%
- **2016 4%**
- **2019 5%**
- **2020 6%**
- **2021 6%**
- **2022 6%**
- 2023 (Q3) 7%

Note – The Cosmetics/Pharma Category Registers as 0.2% of End Market Share

Social Media Highlights

- We are seeing an **uptick in follower growth** on Instagram (**12.9%**) as we are posting more frequently on the platform (**4-5x weekly**).
- GPI is engaging more glass supporters on Facebook and Instagram.





Me explaining the importance of glass in the circular economy







*as of November 14, 2023

Campaign Updates

Lifecycle of Glass - Featured in late November, January and throughout 2024

boosted posts at targeted audiences

Consumers prefer glass (Infographics) - December (LA Area target)

BevNet, etc.

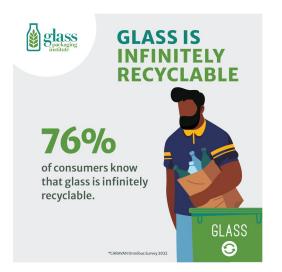
GPI Pursuing New Partnerships

Support distributors and co-packers who offer glass options

Wine (Sac Valley/Seattle)

Audience build/targeting

National Recycling Day (November 15th)







Eighty percent of recovered glass is made into new glass products. Watch the Glass Packaging Institute's video, The Lifecycle of Glass.

Watch Video

- Features: Tito's, Maine Beer Company
- Review FEVE/Friends of Glass Relationship
- "Look For The Puntmark!"
 educational campaign for
 consumers and policymakers on
 where their bottle is coming from



Beer – Package Mix Report (Jan-June 2022 – Jan-June 2023)

Volume (millions Barrels)	2022 Volume	2023 Volume	Volume Change	Percent Change	Share in 2022	Share in 2023
Domestic Tax Paid	82.1	76.8	-5.3	-6.5%	80.2%	79.2%
Imports	20.3	20.1	-0.2	-0.8%	19.8%	20.8%
Total Volume	102.4	96.9	-5.5	-5.3%	100%	100%
Package Mix						
Domestic Cans	57.3	54.2	-3.1	-5.5%	55.9%	55.9%
Import Cans	6.7	7.4	0.7	11.0%	6.5%	7.7%
Total Cans	64.0	61.6	-2.4	-3.7%	62.5%	63.5%
Domestic Bottles	16.5	14.9	-1.6	-9.6%	16.1%	15.4%
Import Bottles	12.6	11.7	-0.9	-7.3%	12.3%	12.0%
Total Bottles	29.1	26.6	-2.5	-8.6%	28.4%	27.4%
Domestic Draft	8.3	7.7	-0.6	-7.0%	8.1%	8.0%
Tax Determined	4.3	4.5	0.2	5.0%	4.2%	4.6%
Import Draft	1.0	1.1	0.0	1.5%	1.0%	1.1%
Total Draft	9.4	8.8	-0.6	-6.1%	9.1%	9.1%
Total Volume	102.4	96.9	-5.5	-5.3%	100%	100%

Outside of imported filled beer cans, the beer market across packaging substrates is down, overall volume down 5.5% through June

The Beer Package Mix Report is compiled by the National Beer Wholesalers Association (NBWA), utilizing both industry and government data sources – including GPI and CMI quarterly data

Glass Imports from All Countries – Through September 2023

Imports of glass bottles and jars (empty, unfilled) into the US from all countries are down 23%

This follows consecutive years of import increases of 3-8 percent from 2016 to 2022 (2019 being the sole exception).

A 23% overall import decrease translates to 1.01 billion fewer imported, empty and waiting to be filled bottles and jars to the US

On a volume basis, the largest country of import is Mexico, followed by China – Mexico is the only larger volume country with overall increased imports – up 2%.

Imports of 750ml sized bottles are 28%, or 366 million bottles through September. No country of significant volume has seen import increases in this size, including China, Mexico and Taiwan

Source: USITC, U.S. Commerce Dept

TTB – Size Request and Rulemaking

As part of a broader rulemaking, in July 2022 GPI submitted comments to the U.S. TTB (federal regulatory agency for the alcohol industry, housed under the Treasury Dept.), asking for specific size approvals for glass containers in the spirits and wine categories

The rulemaking was in response to the Biden Administration's Executive Order to increase competition

One of GPI's size requests (355ml for spirits) has long been approved for metal containers, based on an older statute referencing closures and container shape

TTB recently indicated the rulemaking will not be ready finalized until March of 2024 – and this may be pushed back as well.

GPI, working with glass companies, Morgan Lewis and outside counsel, has formally asked for the already approved size (355ml for spirits) to be approved in an expedited manner for glass – citing an ongoing, competitive disadvantage with cans. We are also seeking meetings with leadership at Treasury and TTB to expedite our request.



Current Marketplace Examples for 355ml (12 oz.) Mixed Spirits





Spirits in 10-ounce glass bottles "ok"





However, the more prevalent and faster growing 355ml (12-ounce) size currently approved ONLY for metal cans











355ml spirits size approval for glass would open up additional customer markets



