Flexible Packaging Association

Connecting. Advancing. Leading.

FPA 2019 Annual Meeting
March 7, 2019
Scottsdale, AZ

Curt Begle
President Health, Hygiene & Specialties
Berry Global
Chairman, Flexible Packaging Association

Focused on Growing the Flexible Packaging Industry

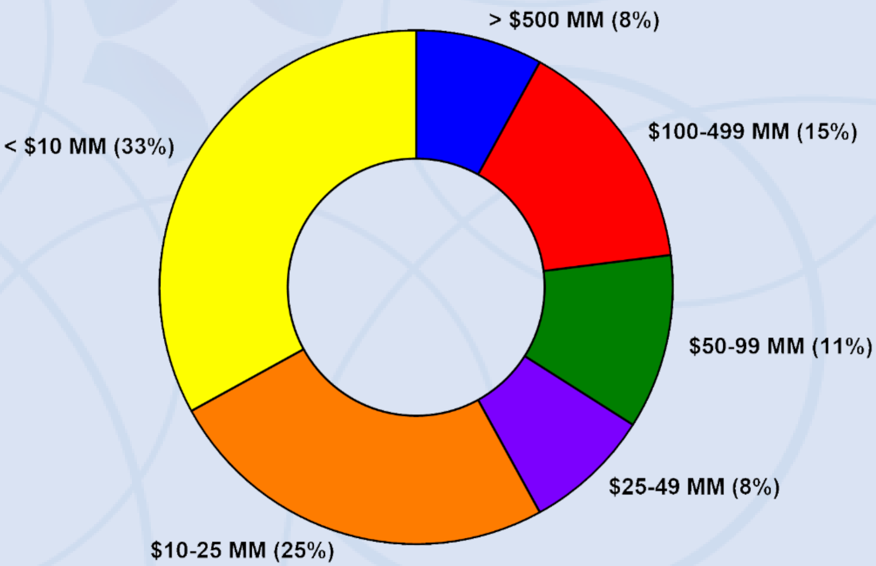
The Flexible Packaging Association

- Connecting
- Advancing
- Leading
- Growing

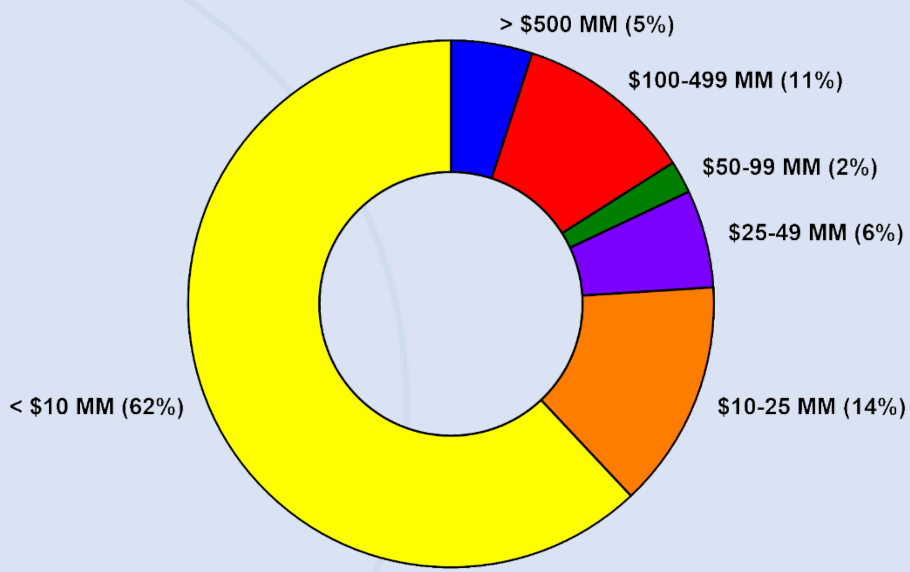
U.S. Flexible Packaging Association Membership

Represents approximately 68% of U.S. Flexible Packaging Value Added Revenue

Converter Members



Associate Members



FPA Programs

- Promote and Protect the Flexible Packaging Industry
  - Advocate & Participate in Legislative and Regulatory Processes
- Communicate to members, brand owners, consumers, and policy makers
  - Highlight Sustainability Benefits of Flexible Packaging
- Develop Industry Data
- Provide Networking and Educational Opportunities

Promoting & Protecting

- Advocacy
  - Federal
    - Introducing the Industry to the New Congress
    - Trade Wars
    - Infrastructure for Recovery of Packaging, including Flexibles
    - Save our Seas Act
  - State
    - California Packaging Reform Workshop
    - Rhode Island's "Tackle Plastics Taskforce"
    - Washington and Indiana's Extended Producer Responsibility 2019 Bills

Promoting & Protecting

- Materials Recovery for the Future Partnership
  - Demonstration in 2019 – Philadelphia, PA
  - Using existing mechanical recycling infrastructure to sort flexibles from municipal solid waste
  - Investigating outlets (value) for baled material
- Hefty® EnergyBag® Program
  - 4^{th} Program in Cobb County, GA
  - Largest metropolitan program to date
  - Collection along side other recyclables curbside
  - Energy Recovery as end-use

Communications

- eBook and Infographics for the *2018 Consumer and Brand Owner Perceptions of the Sustainability of Flexible Packaging Report*

FPA Flexible Packaging Association
Connecting. Advancing. Leading.

Communications

FPA Flexible Packaging Association
Connecting. Advancing. Leading.

- In 2019 FPA will Expand Social Media
  - Currently only Twitter
    - Adding Facebook, Instagram, and LinkedIn
- Leverage www.perfectpackaging.org
- Create additional content/sound bites and crisis communications plan
- Create a platform for discussion
  - Influencer Program
  - Satellite Media Tour

Industry Data

- *Flexible Packaging State of the Industry Report*
- *Pulse of Industry Report*
- *Flexible Packaging Industry Compensation Study*
  - Converter members who voluntarily participate
- *Flexible Packaging Industry Operating Ratios & Earnings Reports*
  - Converter members who voluntarily participate

World Flexible Packaging Market 2018 Total est. $90 Billion

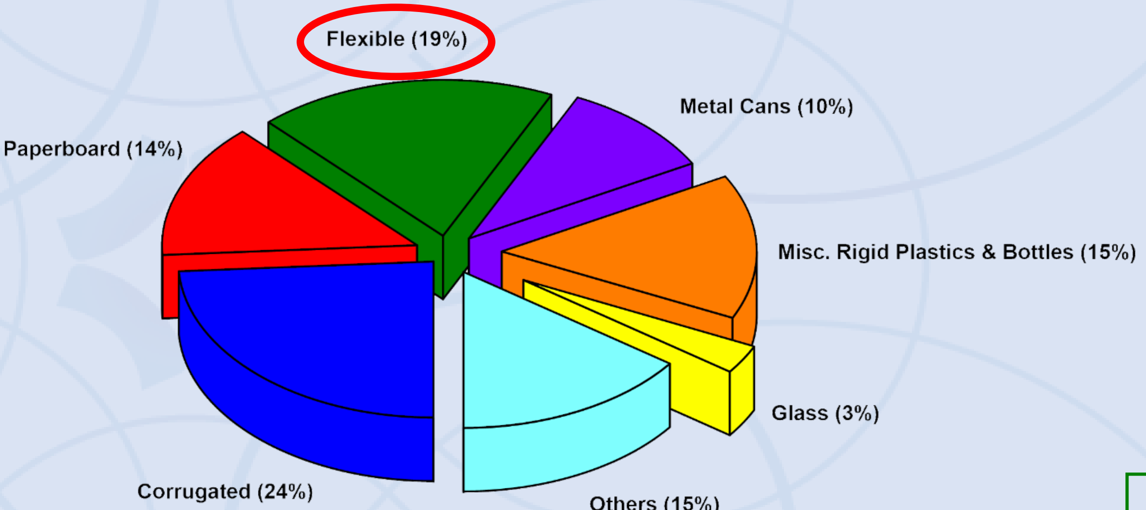
FPA Flexible Packaging Association
Connecting. Advancing. Leading.

Country/Region	% Flexible Packaging Market	Population in Millions	% World Population	Per Capita Consumption in U.S. $
Europe	17	743	10	20.73
N. America	29	366	5	71.58
Total-Developed Countries	46	1109	15	37.51
C & S America	6	658	9	8.21
Asia Pacific	43	4585	60	8.46
Africa / Middle East	5	1320	16	3.41
Total-Developing Countries	54	6563	85	7.42

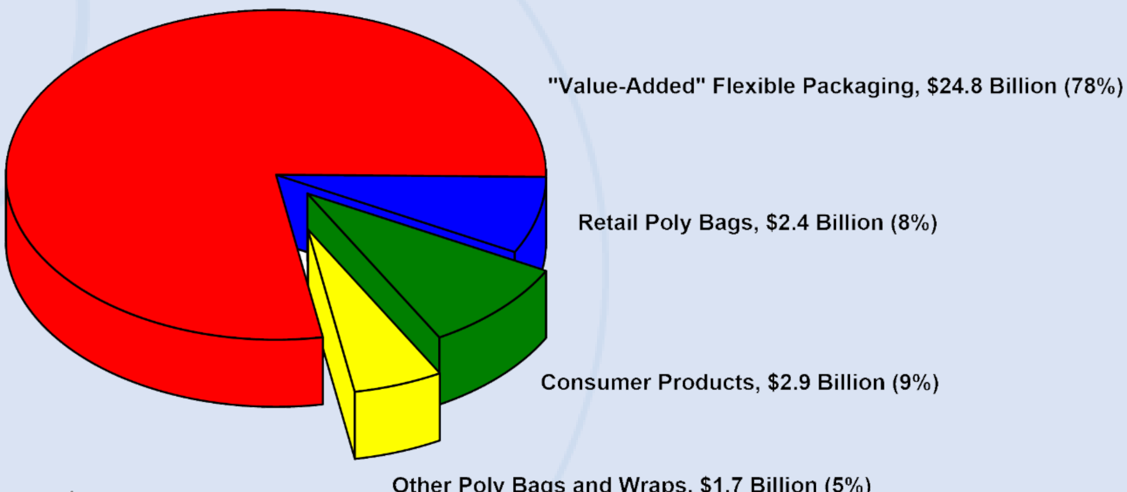
Source: Wood Mackenzie Chemicals estimates per Flexible Packaging Europe Presentation at 2019 FPA Annual Meeting, Population Reference Bureau and Flexible Packaging Association

U.S. Packaging Industry

Total U.S. Packaging $170 Billion



Total Flexible Packaging: $31.8 Billion



Source: U.S. Census Bureau 2016 ASM Census and FPA estimates for 2018 total revenue

U.S. Flexible Packaging Overview

FPA Flexible Packaging Association
Connecting. Advancing. Leading.

Metric	2000	2009	2018
Number Companies	665	410	408
Manufacturing Facilities	1010	970	948
Employees	89 Thousand	<80 Thousand	79 Thousand
Sales per Employee	$221K	$290K	$402K

Source: U.S. Census Bureau and Flexible Packaging Association 2001 and 2010 *State of the Industry Reports* and 2018 State of the Industry Survey preliminary data

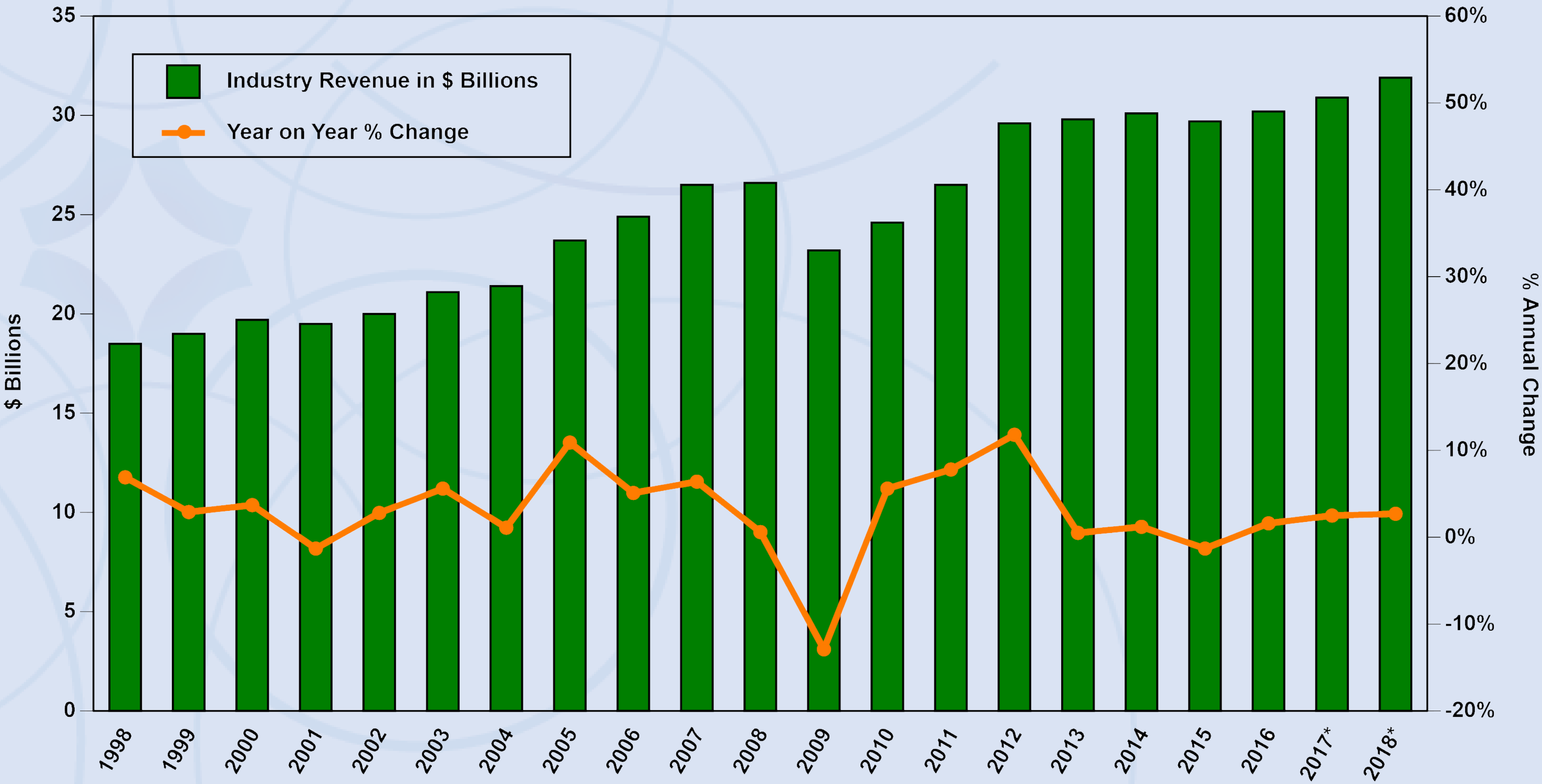
U.S. Flexible Packaging Industry Growth

FPA Flexible Packaging Association
Connecting. Advancing. Leading.

Growth	2000	2009	2018
Total Flexible Packaging Industry	$19.0 B	$23.2 B	$31.8B
Compound Annual Growth Rate (CAGR) last 10 years	4.2%	2.0%	2.0%
Profit over previous year	Up	Down	Flat
Volume		Down	Up Slightly
$ Growth	2.1%	-12.9%	2.7%
Benchmark GDP	1.1%	-4.0%	2.8%

Source: U.S. Census Bureau and Flexible Packaging Association 2001 and 2010 *State of the Industry Reports* and 2018 State of the Industry Surveys preliminary data

FPA Industry Revenue



Source: U.S. Census Bureau and Flexible Packaging Association

* FPA Estimate

U.S. Flexible Packaging Industry Expenses & Profitability (2016-2018)

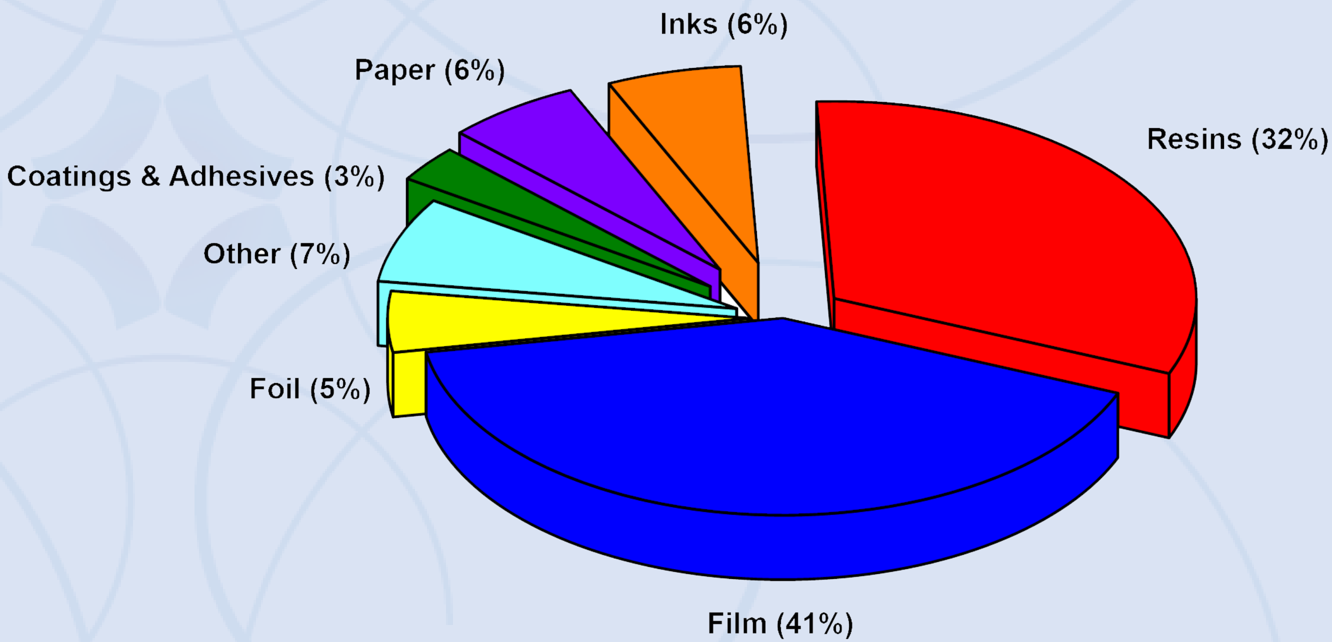
% of NET SALES			
	FPA (2016)	FPA (2017)	FPA (2018)
Materials	55	53	52
Direct Labor	10	12	12
Sales, Marketing, Research & Development, and Administrative	11	10	12
All Other Manufacturing	17	19	18
Profit Before Tax (EBIT)	7	6	6

Source: 2016 and 2017 *State of the Industry Reports*, 2018 preliminary data from 2018 SOI Surveys

Converters Material Purchases

Flexible Packaging Association
Connecting. Advancing. Leading.

Total Industry Material Purchases Estimated Value is $16.5 Billion



Film

- Polyethylene: 50%
- Polypropylene: 26%
- Polystyrene: <1%
- Polyester: 18%
- Nylon: 4%

Resin

- Polyethylene: 85%
- Polypropylene: 10%
- Polystyrene: <1%
- Polyester: 2%
- Nylon: 3%

Source: FPA 2018 State of the Industry Survey preliminary data

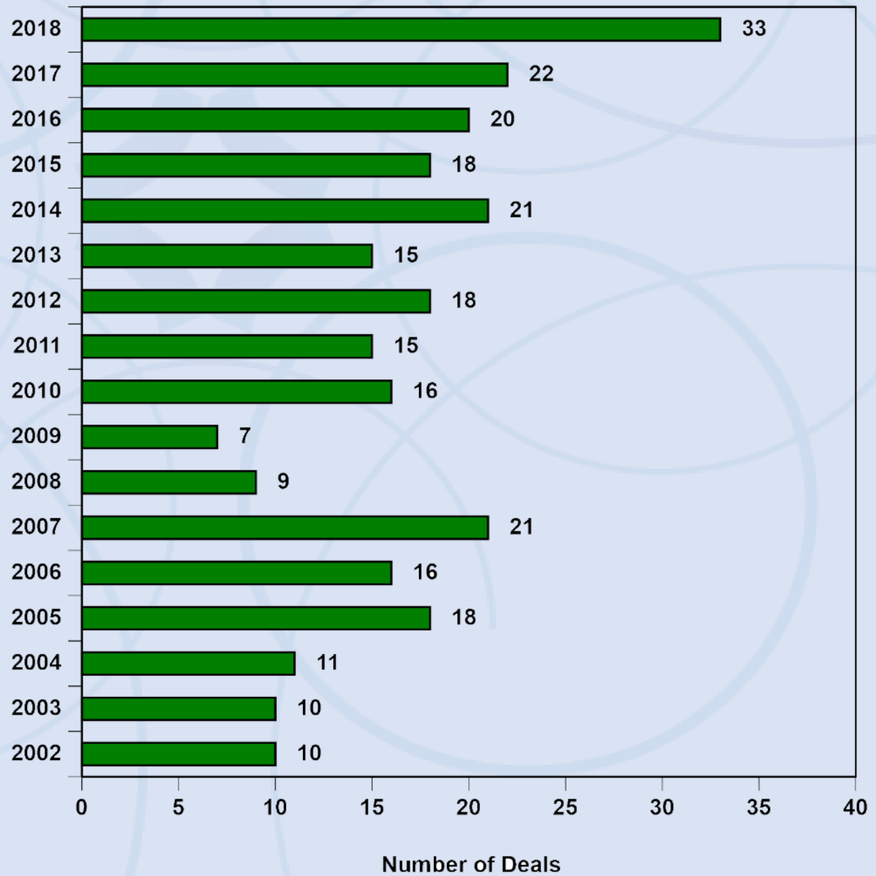
Converters Printing Comparison % of Shipments

Print Type	2012	2015	2018
Flexo	64%	67%	75%
Gravure	10%	14%	9%
Offset & Other	2%	4%	3%
Digital	<1%	<1%	<1%
Unprinted	24%	15%	13%

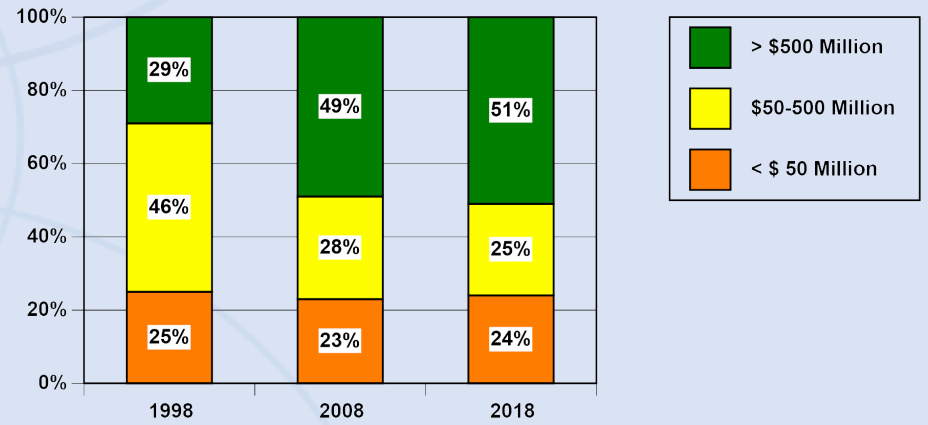
Source: FPA 2013-2015 *State of the Industry Reports* & FPA 2018 State of the Industry Survey preliminary data

U.S. Flexible Packaging M&A Activity

2002-2018



U.S. Flexible Packaging Industry by Company Size 1998-2018



% of Total U.S. Flexible Packaging Industry Revenue

- Top 5 Converters account for 40%
- Top 10 Converters account for 55%
- Top 50 Converters account for 73%
- Top 100 Converters account for 80%

Source: FPA *State of the Industry Reports*, FPA Master Converter Company List, and FPA accumulated M&A data for 1998-2018

U.S. Flexible Packaging (33) Mergers and Acquisitions 2018

FPA Flexible Packaging Association
Connecting. Advancing. Leading.

Purchasing Company	Company Acquired
Mondi Group	Powerflute Group Holdings Oy
Fort Dearborn Company	NCL Graphic Specialties
ProAmpac	Bonita Pioneer Packaging Products
Platinum Equity	WS Packaging Group
Berry Global Group, Inc.	Clopay Plastic Products Company, Inc.
M&Q Holdings, LLC	Flavorseal LLC
Pregis LLC	Rex Performance Products
Transcontinental Inc.	Multifilm Packaging Corporation
ProAmpac	Pactech Packaging
Sonoco Products Company	Highland Packaging Solutions
ProAmpac	Gateway Packaging Company

Source: FPA accumulated M&A data for calendar year 2018

Mergers and Acquisitions cont.

Purchasing Company	Company Acquired
Transcontinental Inc.	Coveris Americas
Crawford Packaging	Celplast Packaging Systems Ltd.
Sonoco Products Company	Conitex Sonoco Joint Venture
Sigma Plastics Group	Poly Pak America
Tekni-Plex, Inc.	Oracle Packaging's Healthcare, Performance Lidstock, Induction Seal and Specialty Lamination Businesses
CCL Industries	Treofan Americas
Fortis Solutions Group	Lewis Label Products Corporation
Pregis LLC	Free-Flow Packaging International, Inc.
Intertape Polymer Group	Polyair Inter Pack
Inovar Packaging Group	Topp Labels
Resource Label Group	Ingenious Packaging

Source: FPA accumulated M&A data for calendar year 2018

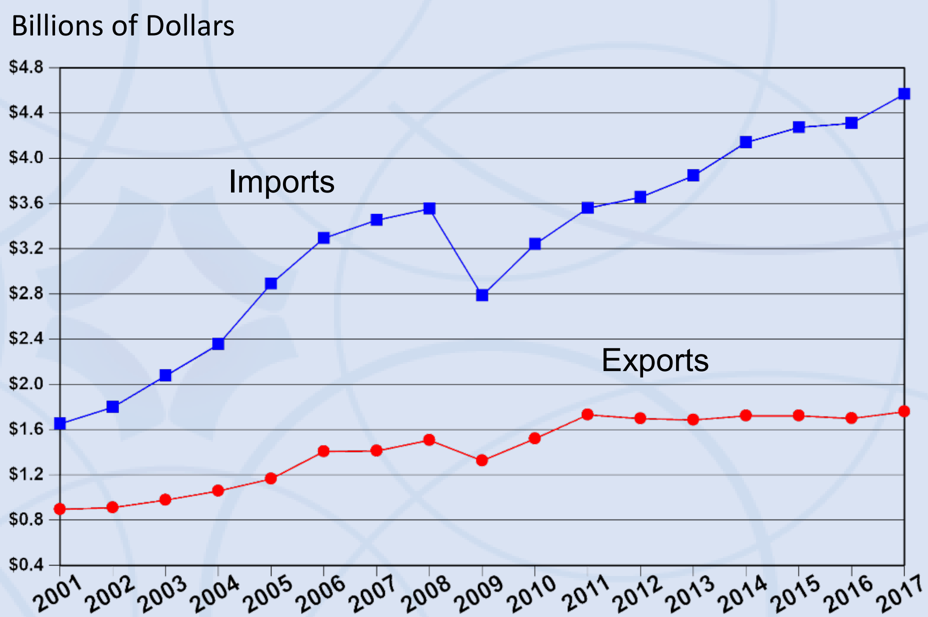
Mergers and Acquisitions cont.

FPA Flexible Packaging Association
Connecting. Advancing. Leading.

Purchasing Company	Company Acquired
Sealed Air Corporation	AFP, Inc
Transcendia	Precision Poly LLC
Amcor Limited	Bemis Company
GRAHAM PARTNERS	Advanced Barrier Extrusions, LLC
AWT Labels and Packaging	Citation Healthcare Labels, LLC
Berry Global Group, Inc.	Laddawn, Inc.
PAXXUS	Rollprint Packaging Products, Inc., Alliantz Flexible Packaging Pte Ltd & EuroFoil Teo
Fortis Solutions Group	Premier Georgia Printing and Labels, and Austin Label
PPC Flexible Packaging, LLC	Temkin International
Orora	Pollock Packaging
Intertape Polymer Group	Maiweave LLC

Source: FPA accumulated M&A data for calendar year 2018

Flexible Packaging Imports And Exports



- 84% of FPA members export
- 5.7% of U.S. flexible packaging production is exported
- 12.8% of U.S. flexible packaging consumption is imported
- U.S. flexible packaging trade deficit is about $2.8 billion

	Import	Export
• Bags: Plastic, Laminated and Coated	73%	63%
• Bags: Paper	5%	5%
• Foil and Leaf: Flexible Packaging	22%	32%

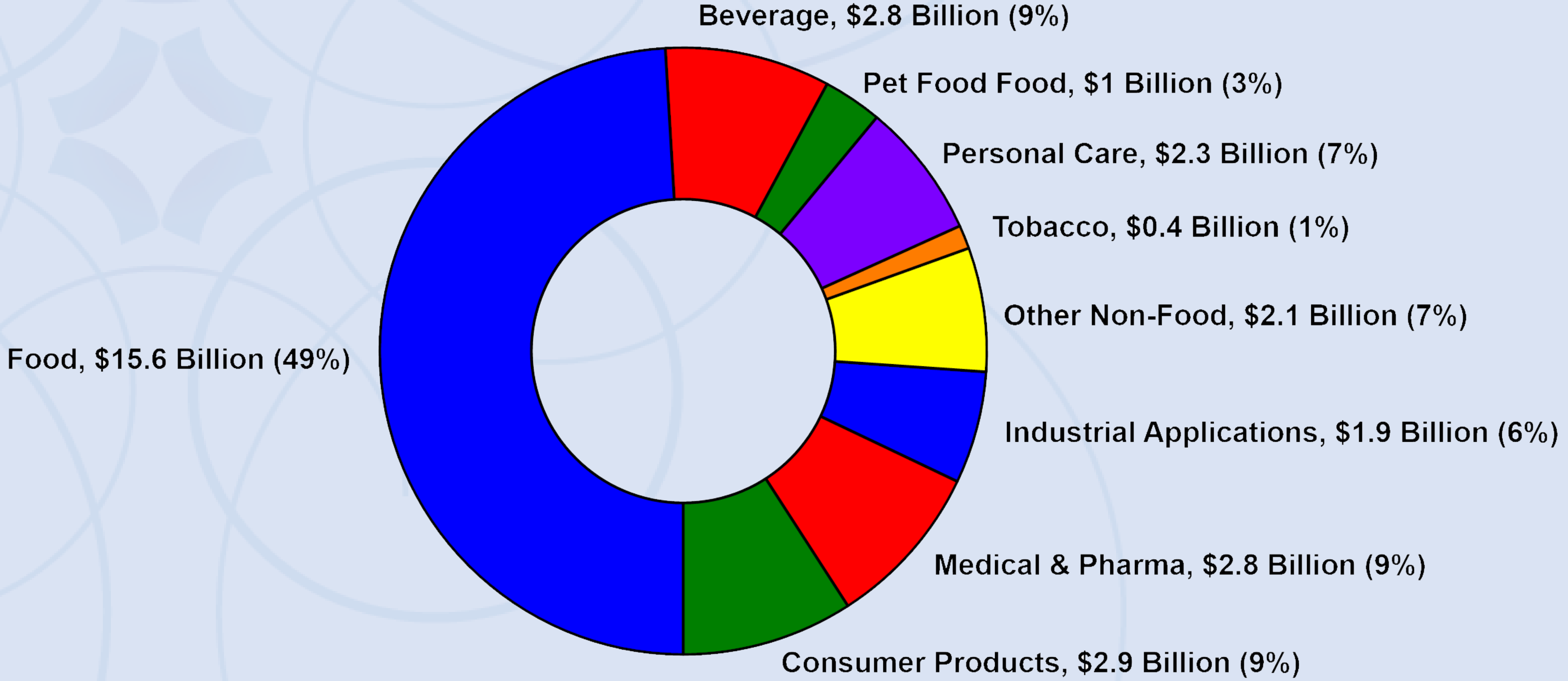
$1.8 Billion Exports to:		$4.6 Billion Imports from:	
Canada	35%	China	43%
Mexico	35%	Canada	16%
United Kingdom	4%	Mexico	7%
Japan	2%	Thailand	4%
Dominican Republic	2%	Germany	3%

Source: U.S. Census Bureau, Foreign Trade Division. Calculations by the Flexible Packaging Association

U.S. Packaging End-Use Markets

Flexible Packaging Association
Connecting. Advancing. Leading.

Flexible Packaging Sales by End-Use Market: $31.8 Billion



Source: FPA 2018 State of the Industry Survey preliminary data

U.S. Total and Flexible Packaging (Retail)

Package Type	2018 Package Volume in Billions	2018 % Total	2013 – 2018 CAGR	2018 – 2023 CAGR
Flexible Packaging	124	27%	0.4%	1%
Total Packaging	466	100%	1%	-1.3%

Source: Euromonitor International Passport Data – the number of units of packaging sold to consumers through all retail channels.

Specific End-Use Comparison of FPA Survey Data vs. Euromonitor Data

FPA Flexible Packaging Association
Connecting. Advancing. Leading.

End-Use	FPA $ Rev in Billions % of Total	Euromonitor Volume in "pack units" % of Total
Food	70%	46%
Beauty & Personal Care	11%	3%
Beverages	13%	46%
Dog & Cat Food	4%	3%
Tobacco/Home Care	2%	2%
Total	100%	100%

Note: FPA End-Uses Other Non-Food, Industrial, Medical & Pharma, and Consumer Products not included in comparison as Euromonitor does not track this data

Source: FPA 2018 Survey preliminary survey data and Euromonitor International Passport Data - the number of packaging units sold to consumers through all retail channels.

Percent of Total U.S. Packaging & Flexible Packaging by End-Use

Market	% of Total Packaging	% of Flexible Packaging	2018-2023 Flexible CAGR
Beauty & Personal Care	3%	2%	-0.2%
Beverages	46%	5%	-0.8%
Dog & Cat Food	3%	2%	3.1%
Food	46%	69%	1.0%
Home Care	2%	1%	2.2%
Tobacco	N/A	N/A	N/A
Total Packaging	100%	100%	-1.3%

Source: Euromonitor International Passport Data - based on the number of packaging units sold to consumers through all retail channels.

Note: Tobacco is no longer tracked in Euromonitor Database

U.S. Flexible Packaging Unit Volume Growth Potential (Food)

FPA Flexible Packaging Association
Connecting. Advancing. Leading.

Market	2013-2018 CAGR	2018-2023 CAGR
Baby Food	+5.7%	+1.4%
Dairy Packaging	0.3%	+0.8%
Processed Fruits & Vegetables	+4.5%	+4.6%
Processed Fruits & Vegetables	+4.5%	+4.6%
Ready Meals	+2.1%	+1.7%
Savory Snacks Packaging	+2.1%	+1.6%
Sweet Spreads Packaging	+19.0%	+3.5%
Soup Packaging	-3.1%	+1.0%

Source: Euromonitor International Passport Data - based on the number of packaging units sold to consumers through all retail channels.

U.S. Flexible Packaging Industry: The Road Ahead

FPA Flexible Packaging Association
Connecting. Advancing. Leading.

- The future for flexible packaging is bright
- The transition to flexibles will continue
  - Use of flexibles is projected to grow in every segment but tobacco and in every category of the food segment
- We must continue to educate on its sustainability aspects
- We must continue to solve for the end-of-life management
  - It will take the entire supply chain
- While the challenges are great – the opportunities are greater
- FPA's advocacy efforts to policymakers, and now consumers, will help members capitalize on opportunities and mitigate any potential barriers to growth

WWW.FLEXPACK.ORG

FPA Flexible Packaging Association
Connecting. Advancing. Leading.

Please Contact FPA for a User Name and Password:
fpa@flexpack.org

Curt Begle
President Health, Hygiene & Specialties
Berry Global
Chairman, Flexible Packaging Association

