

State of the Industry 2018

Presented at 2019 NAPIM Convention in Coral Gables, FL



Management Information Committee

- ▶ Bryce Kristo INX, International
- ▶ Jim Leitch Braden Sutphin
- ▶ Darlene Radomski Sun Chemical
- ▶ Pat Carlisle Joules Angstrom
- ▶ Kim Stone Flint Group
- ▶ Chris Rohde Siegwerk
- ▶ Mike Ball Toyo Ink America
- ▶ Jane Krasner Toyo Ink America
- ▶ Daryl Collins Wikoff Color Corp.
- ▶ Peter Nunez Superior Printing Ink
- ▶ Knut Fenner Colorcon
- ▶ John Jilek, Jr. InkSolutions
- ▶ John Sergeant Modern Printing Colors
- ▶ Bill McDermott Ingevity
- ▶ Dave Grabacki Keim-Additec
- ▶ Penelope Holland Sun Chemical
- ▶ Saori Nguyen INX, International

Source Data for Report

- **NAPIM Bi-Annual Sales Report**
 - ▶ **Collected Semi-Annually from members**
- **NAPIM Outlook Survey**
 - ▶ **Collected once a year in January from members**
- **NAPIM Operating Ratio Survey**
- **U.S. Commerce Dept., Bureau of Labor Statistics, OSHA**
- **NAM - National Association of Manufacturers**
- **PIA- Printing Industries of America**
- **Yahoo Finance**
- **Bureau of Economic Analysis**
- **NAPIM**
- **Bureau of Labor Statistics**



**CENTER FOR PRINT
ECONOMICS
AND MANAGEMENT**

The professionals in the Center for Print Economics and Management department offer a variety of products and services that help our members enhance their growth, efficiency, and profitability through up-to-date industry information, articles, advisories, and statistics addressing important industry issues.

Report Elements

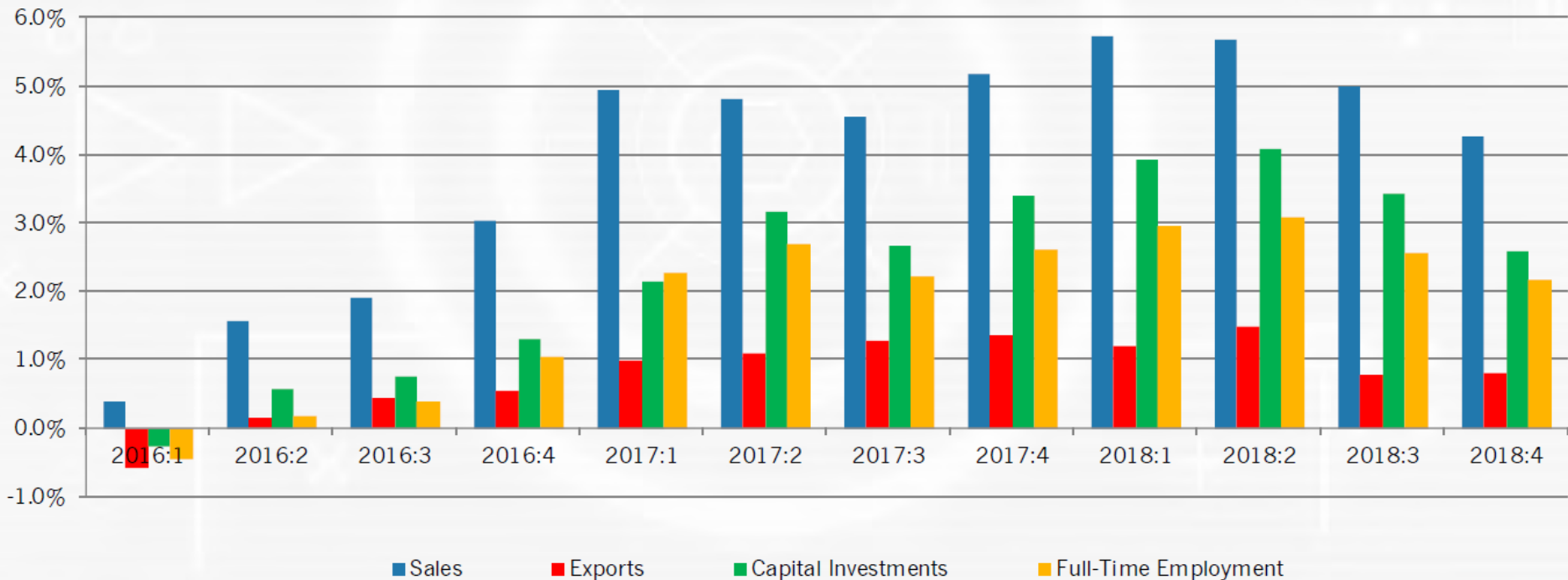
- **Global and Industry Issues**
- **Revenue and Growth**
- **Profit**
- **End Use Markets**
- **Foreign Trade**
- **Emerging Issues**
- **Government**
- **Questions and Comments**

Global and Industry Issues

IHS Markit Composite PMI and U.S. GDP



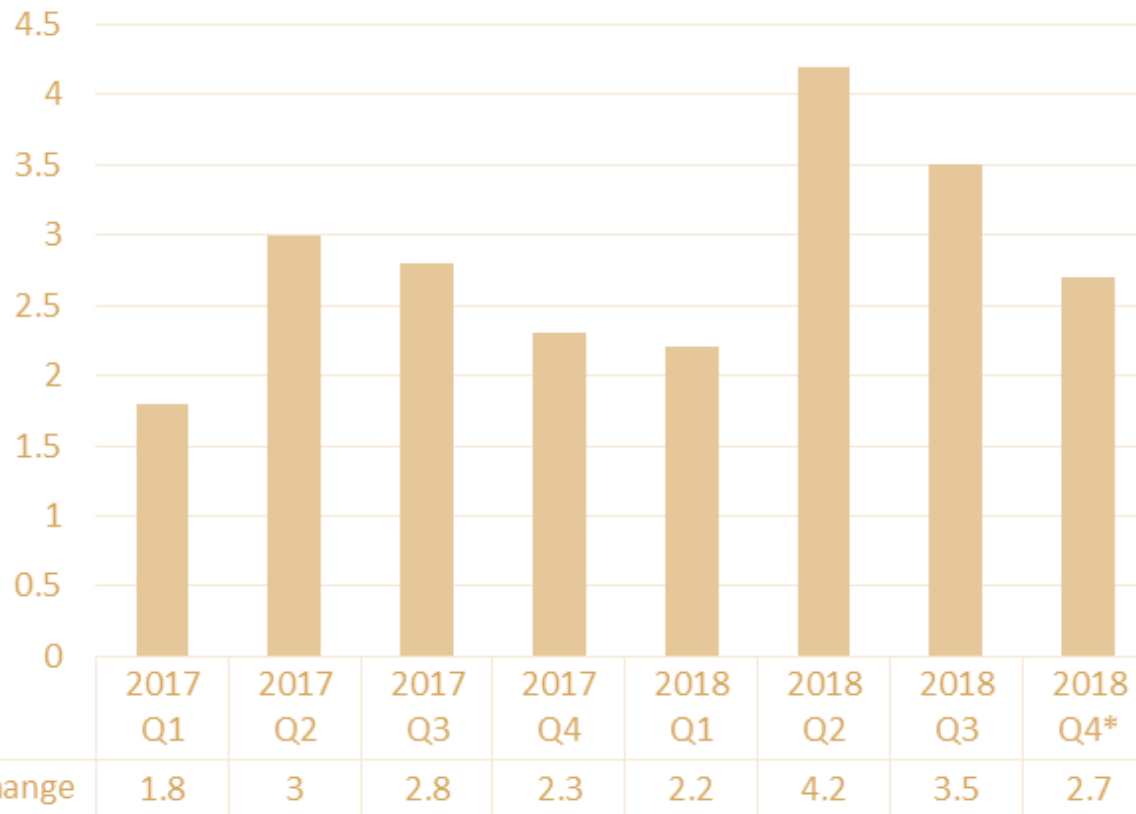
Expected Growth of Manufacturing Activity, First Quarter 2016-Fourth Quarter 2018



Avg. 12-Month Growth Rates
 Sales: ↑ 4.3%
 Exports: ↑ 0.8%
 Capital Investments: ↑ 2.6%
 Full-Time Employment: ↑ 2.2%

Real Gross Domestic Product

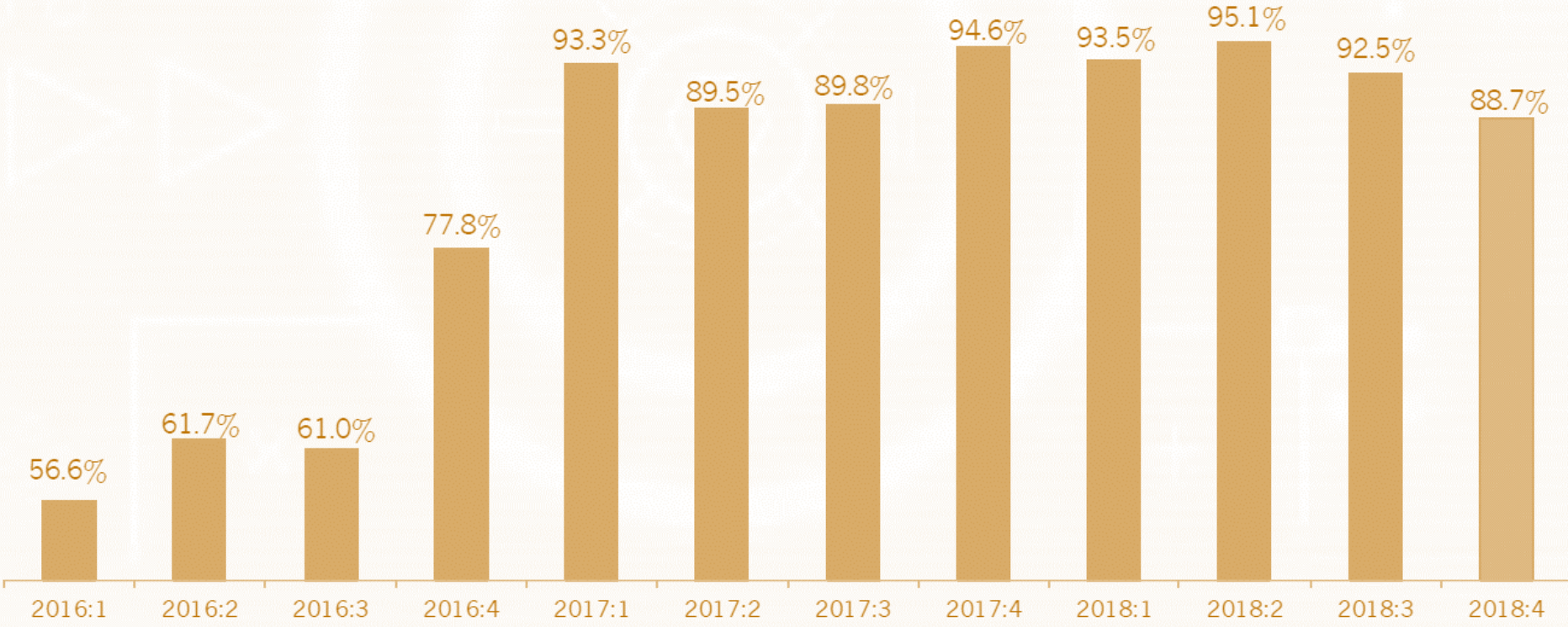
GDP by Quarter: Annual % Change



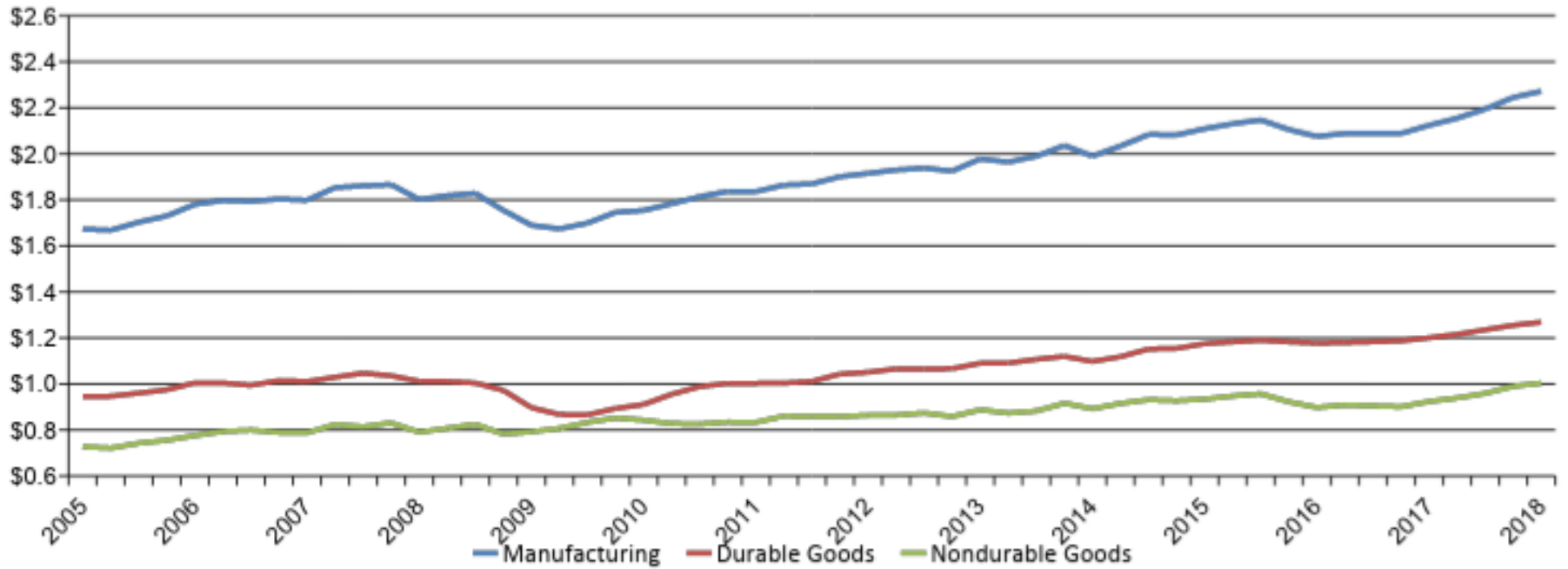
NAM MANUFACTURERS' OUTLOOK SURVEY
FOURTH QUARTER 2018
 DECEMBER 20, 2018

<p>Percentage of Respondents Positive About Their Own Company's Outlook</p> <p align="center">88.7% <i>(October: 92.5%)</i></p> <p>2018 Annual Average: 92.4% (all-time high)</p> <p>Small Manufacturers: 87.9% (Oct.: 91.3%) Medium-Sized Manufacturers: 88.6% (Oct.: 92.5%) Large Manufacturers: 89.2% (Oct.: 93.1%)</p>	<p>Overall Facts About the Survey</p> <p>Number of Responses: 539 In the Field: November 28 to December 12, 2018</p> <p>Small Manufacturers: 114 responses Medium-Sized Manufacturers: 265 responses Large Manufacturers: 160 responses</p>
	<p>NAM Manufacturing Outlook Index</p> <p align="center">59.2 <i>(October: 61.8, revised)</i></p>
<p>Expected Growth Rate for <u>SALES</u> Over the Next 12 Months ↑ 4.3% <i>(October: ↑ 5.0%)</i></p>	<p>Expected Growth Rate for <u>PRODUCTION</u> Over the Next 12 Months ↑ 4.3% <i>(October: ↑ 4.9%)</i></p>
<p>Expected Growth Rate for <u>FULL-TIME EMPLOYMENT</u> Over the Next 12 Months ↑ 2.2% <i>(October: ↑ 2.5%)</i></p>	<p>Expected Growth Rate for <u>EMPLOYEE WAGES</u> Over the Next 12 Months ↑ 2.3% <i>(October: ↑ 2.7% — the highest since 2001:1)</i></p>
<p>Expected Growth Rate for <u>CAPITAL INVESTMENTS</u> Over the Next 12 Months ↑ 2.6% <i>(October: ↑ 3.4%)</i></p>	<p>Expected Growth Rate for <u>EXPORTS</u> Over the Next 12 Months ↑ 0.8% <i>(October: ↑ 0.8%)</i></p>
<p>Expected Growth Rate for <u>PRICES OF COMPANY'S PRODUCTS</u> Over the Next 12 Months ↑ 2.8% <i>(October: ↑ 3.2% — the highest since 2011:2)</i></p>	<p>Expected Growth Rate for <u>RAW MATERIAL PRICES AND OTHER INPUT COSTS</u> Over the Next 12 Months ↑ 4.4% <i>(October: ↑ 4.8%)</i></p>
<p>Expected Growth Rate for <u>INVENTORIES</u> Over the Next 12 Months ↑ 0.3% <i>(October: ↑ 1.0%)</i></p>	<p>Expected Growth Rate for <u>HEALTH INSURANCE COSTS</u> Over the Next 12 Months ↑ 6.8% <i>(October: ↑ 7.4%)</i></p>

Manufacturing Business Outlook by Quarter, 2016-2018

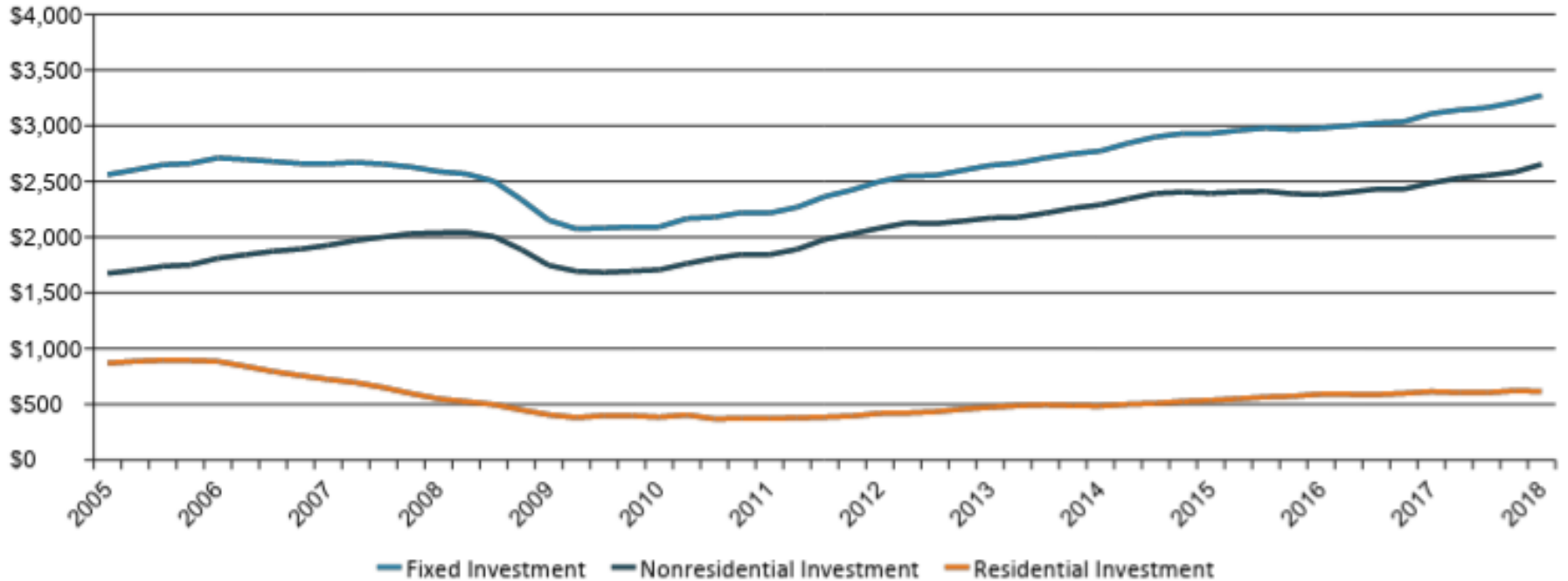


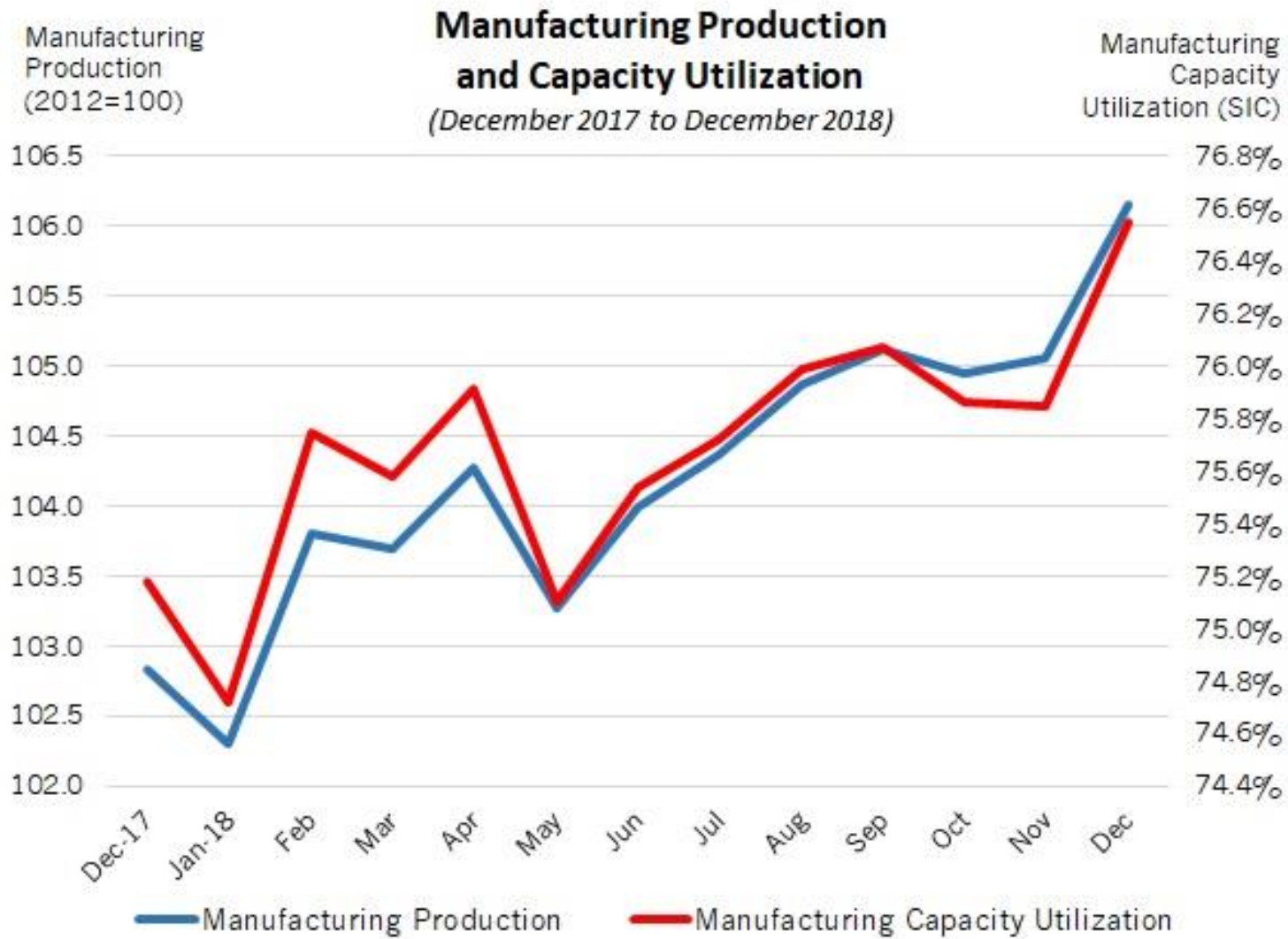
Manufacturing's Value-Added Contributions to the U.S. Economy, in Trillions of Dollars



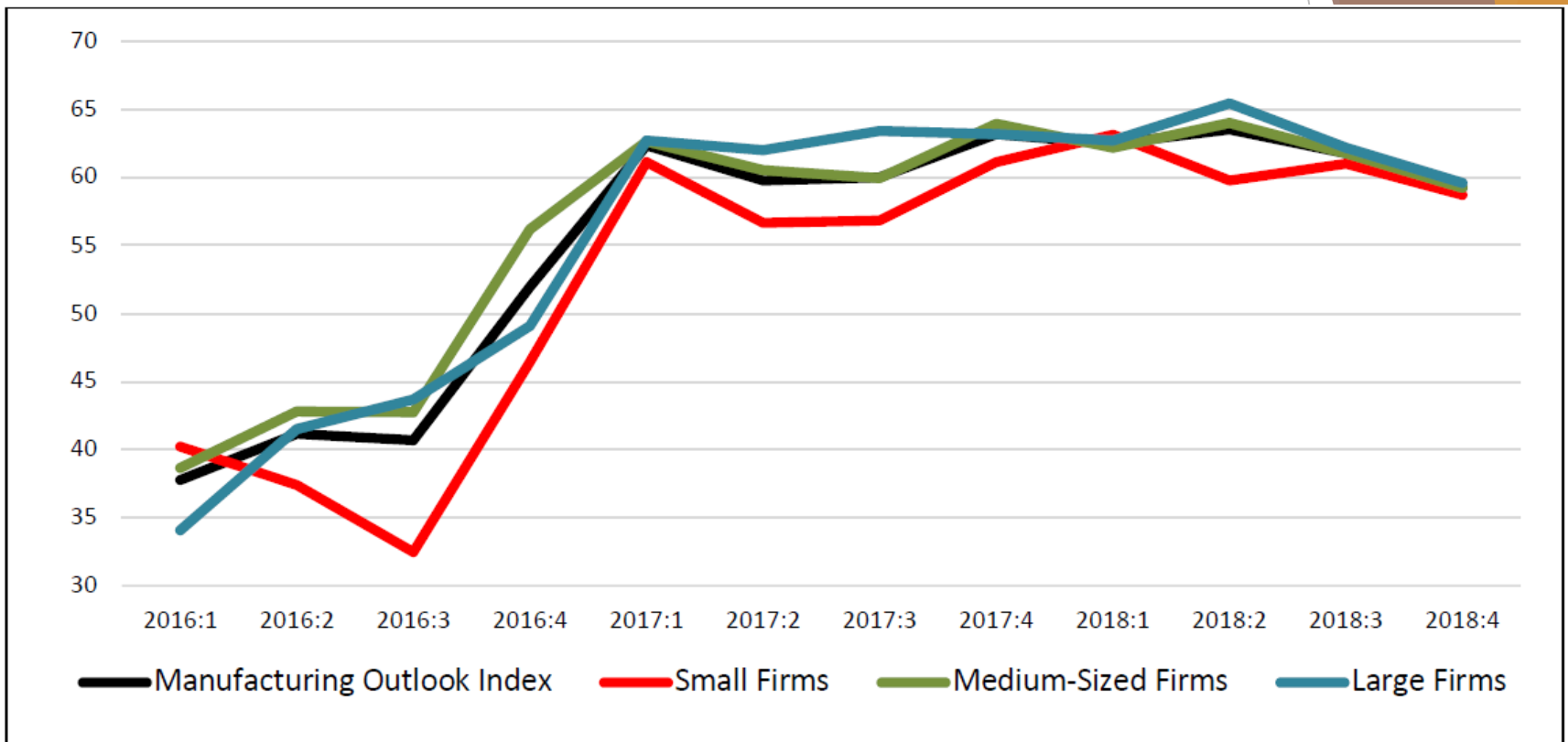
Real Business Fixed Investment, 2005–2018

(in Billions of Chained 2012 Dollars, Seasonally Adjusted)





NAM Manufacturing Optimistic Outlook Index 2016-2018

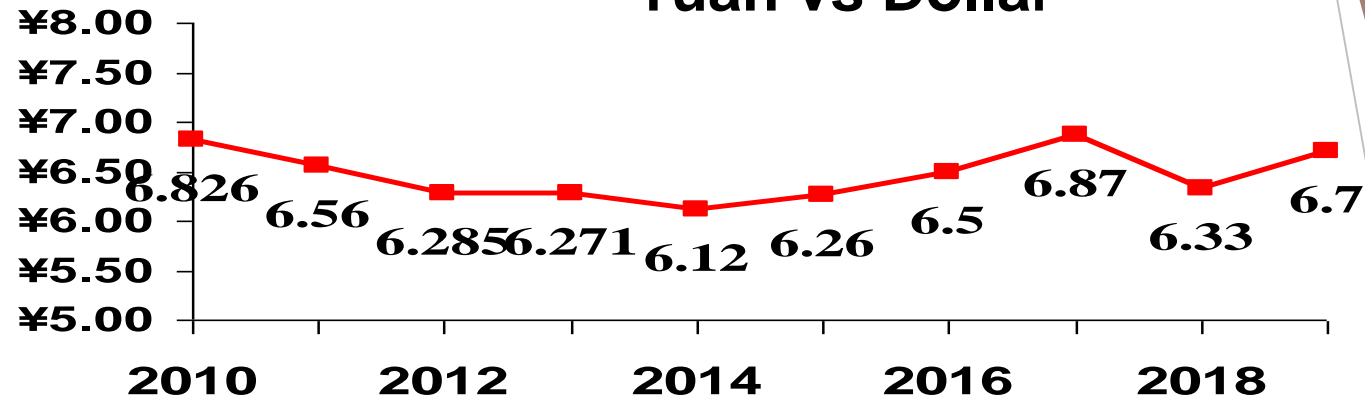


Primary Current Business Challenges, Fourth Quarter 2018



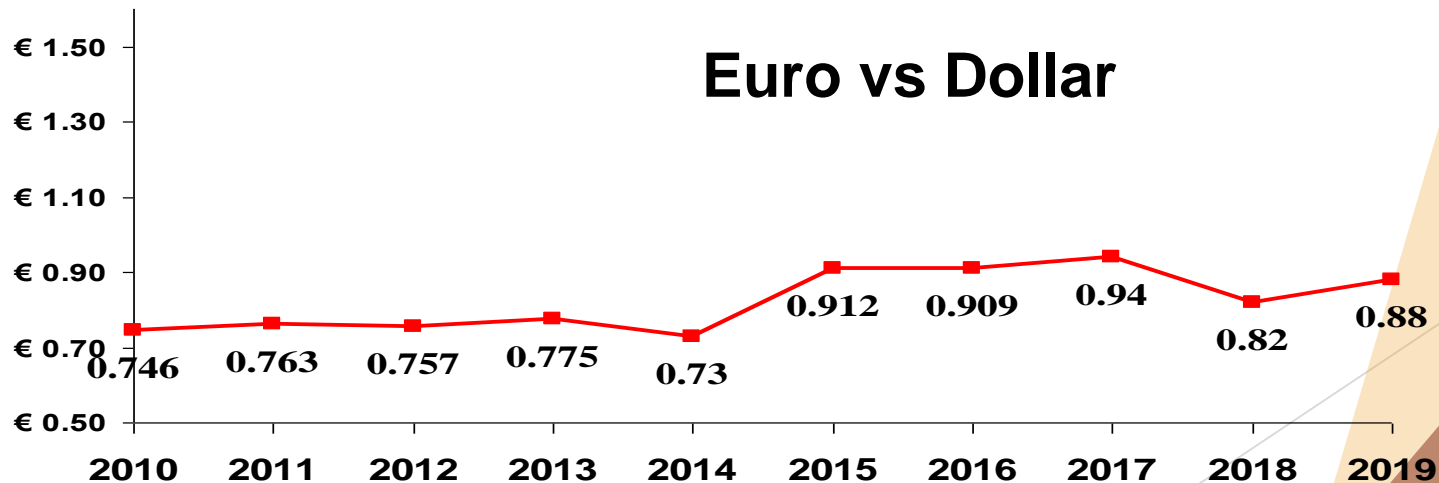
Currencies

Yuan vs Dollar



March 2019

Euro vs Dollar

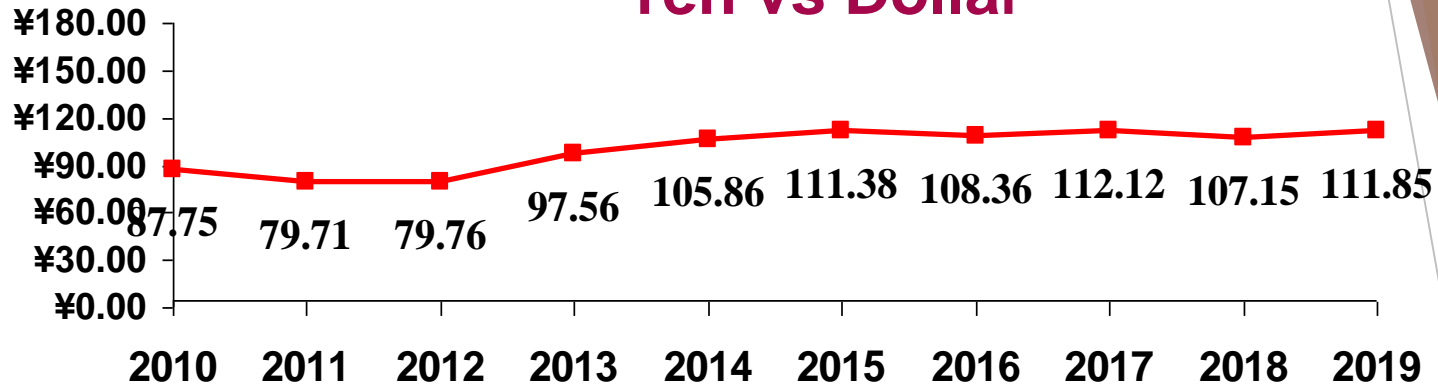


March 2019

Source: Yahoo Finance

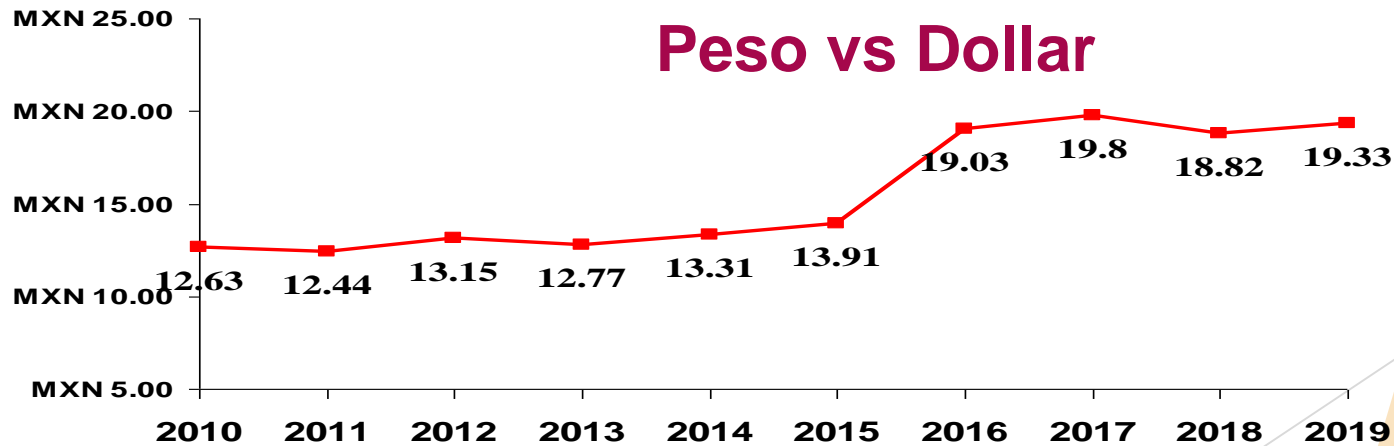
Currencies

Yen vs Dollar



March 2019

Peso vs Dollar

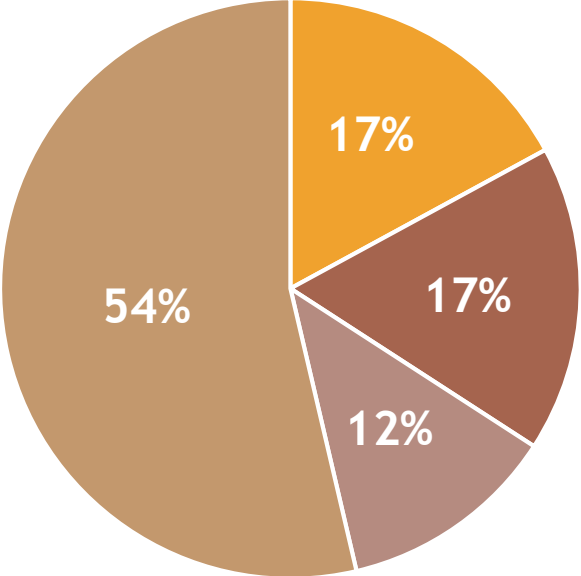


March 2019

Source: Yahoo Finance

Outlook Survey Response

Survey Response



■ General (all other) ■ Pigment ■ Resin/Varnishes ■ Ink

Top Current Concerns

- Ink Companies concerns heading into 2019:

Overall - 2019	2018
1. Overall Economic Activity	1
2. Customer Consolidations/Closings	2
3. Imports	3

Market - 2019	2018
1. Raw Material Cost	1
2. Raw Market Availability	3
3. Government Regulations	7

Internal - 2019	2018
1. Healthcare Costs	2
2. Transportation Costs	3
3. Experienced Workers	1

Top Current Concerns

- TAM Companies concerns heading into 2019:

Overall	2018
1. Overall Economic Activity	1
2. Customer Consolidations/Closings	2
3. Imports	3
Market	2018
1. Raw Material Costs	1
2. Raw Market Availability	2
3. Market Dynamics	4
Internal	2018
1. Experienced Workers	1
2. Transportation Costs	3
3. Unskilled Labor	4

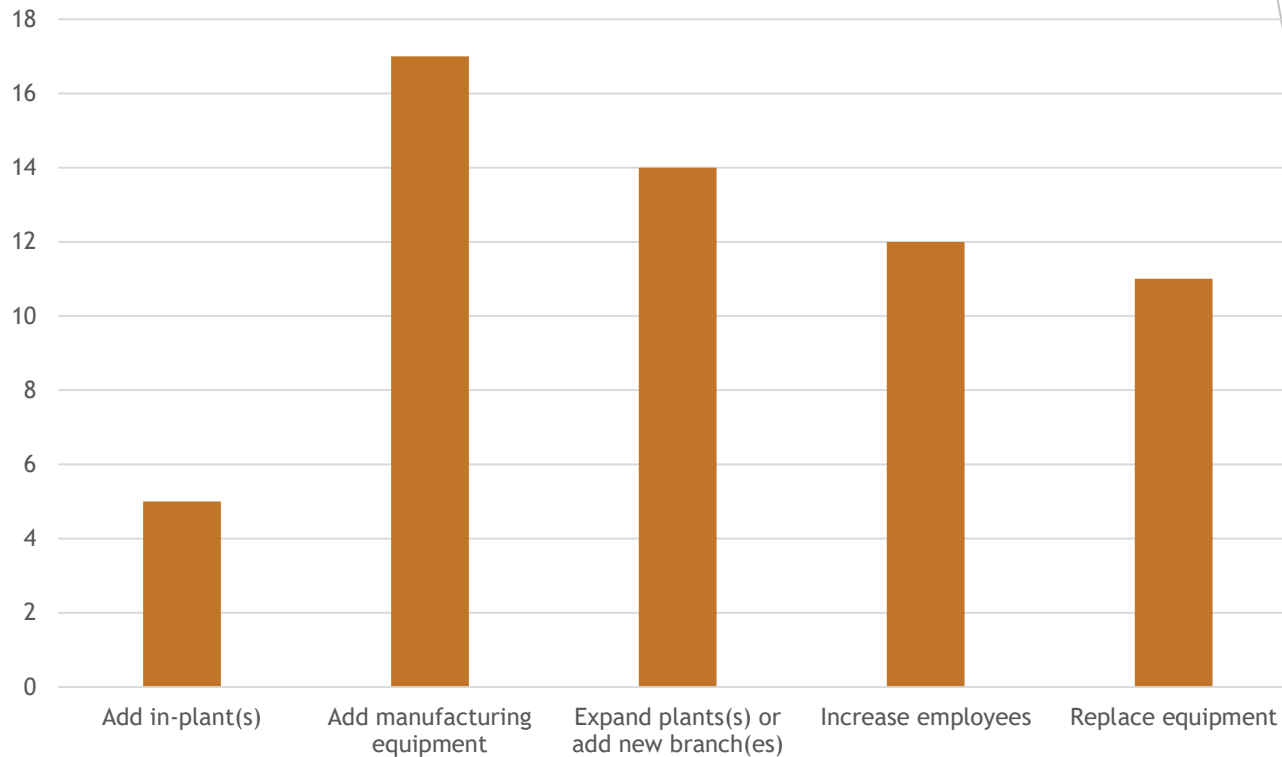
Ink Companies say Printers Value

2019	2018
1. Consistent Product Quality	1
2. Price	2
3. Technical Support	3

TAM Companies say Ink Companies Value

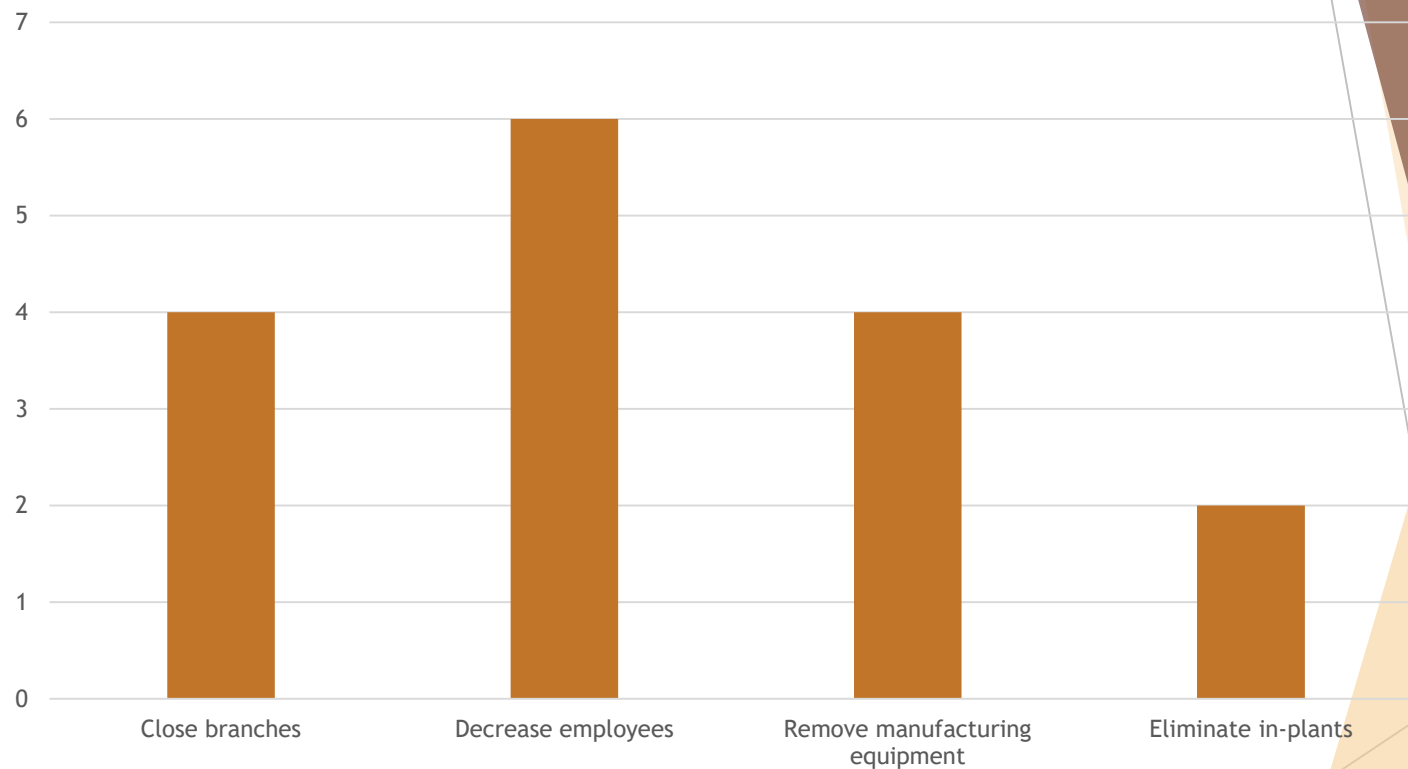
2018	2017
1. Price	1
2. Consistent Product Quality	2
3. Technical Support	3

Is your company planning to INCREASE its current capacity in 2019?



****Only NAPIM members reporting**

Is your company planning to DECREASE its current capacity in 2019?



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Profitability and Sales for both Suppliers and Ink Companies

2018 compared to 2017

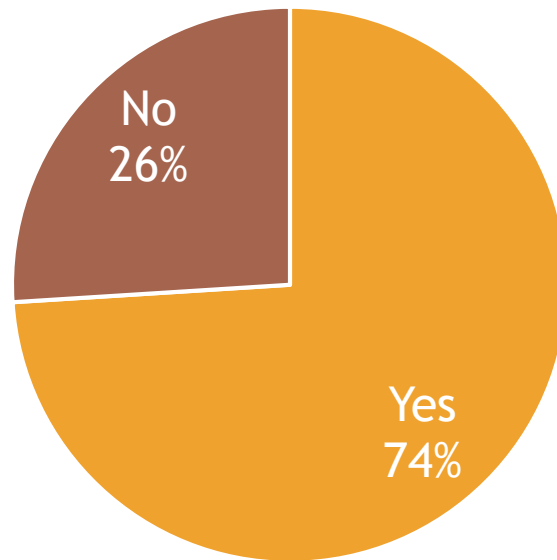
	Sales	Profitability
- 5% or more	13.9%	27.8%
- 1-5%	13.9%	13.9%
+/- 1%	11.1%	13.9%
+ 1-5%	36.1%	27.8%
+ 5% or more	25.0%	16.7%

Expectations for 2019

	Sales	Profitability
- 5% or more	5.7%	2.8%
- 1-5%	5.7%	5.6%
+/- 1%	14.3%	16.7%
+ 1-5%	42.9%	52.8%
+ 5% or more	31.4%	22.2%

Social Media

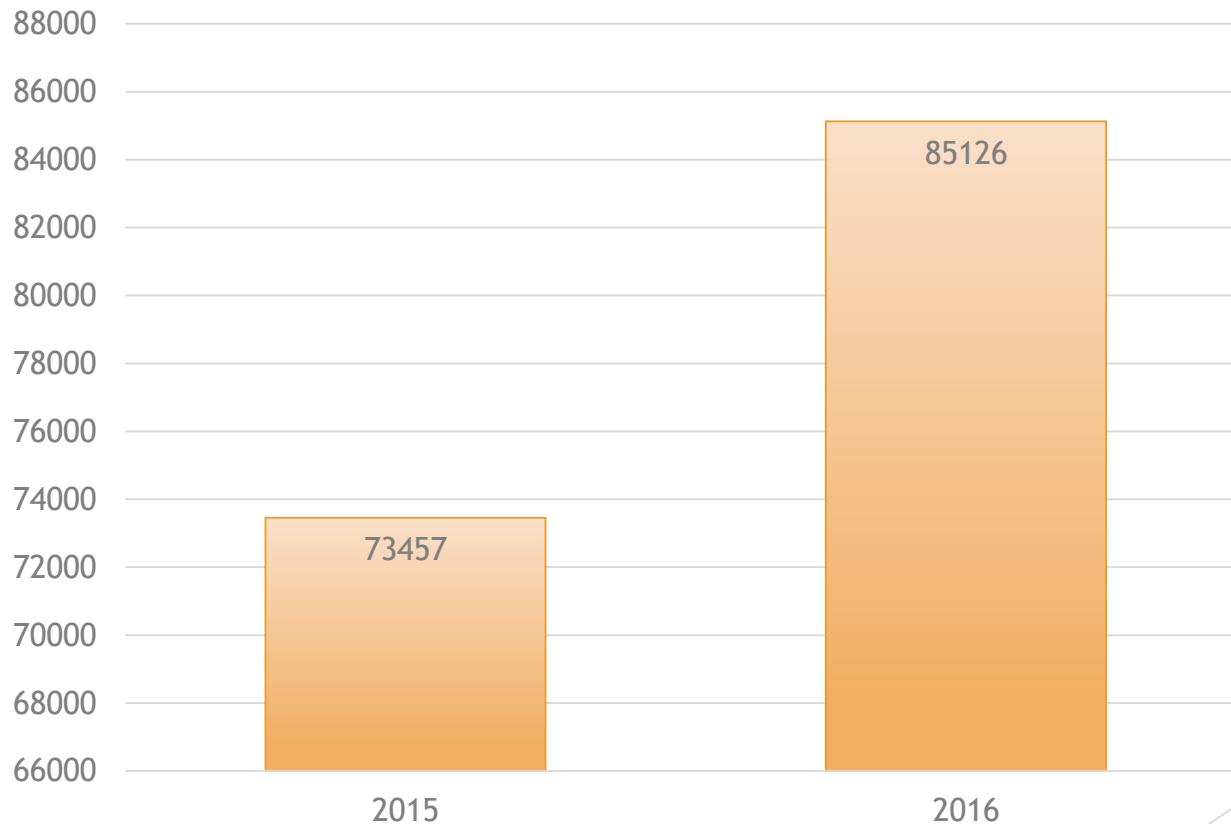
Is your company engaged in social media?



Company Paid portion of Health Care Costs

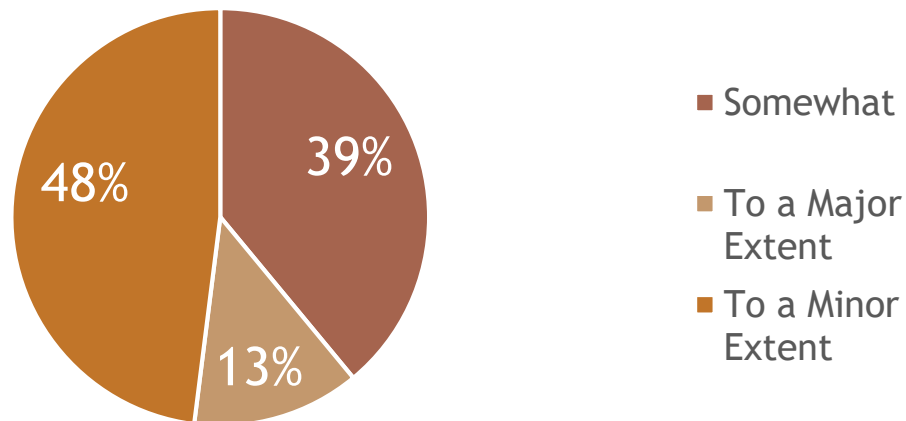
% Covered by Employer	# of Companies
100%	2
90%	2
80%	6
77%	1
75%	5
70%	8
67%	2
60%	2
50%	3
30%	2

Employer's Cost for Health Insurance (\$1000)

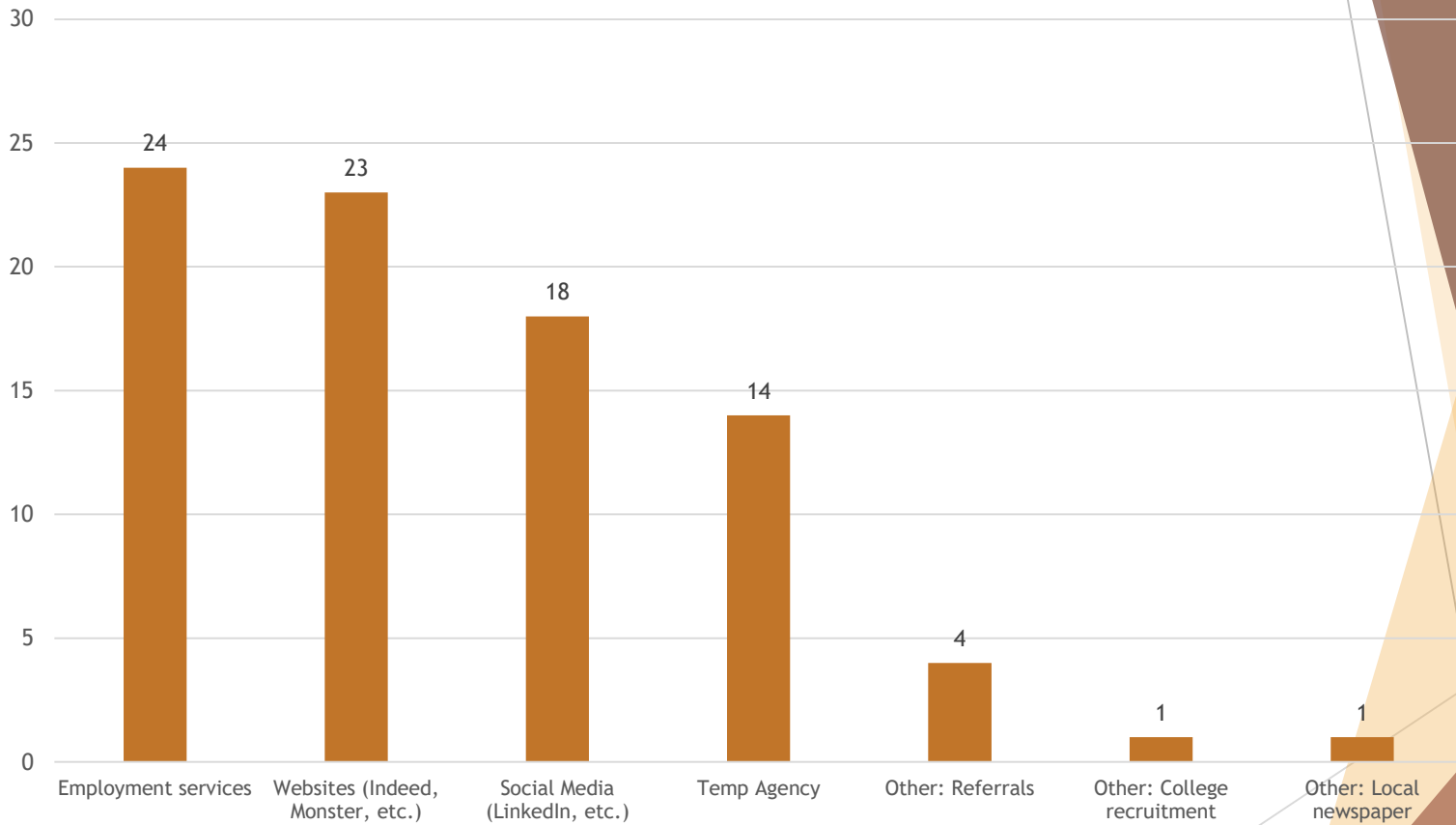


Sustainability

Has the emphasis on "sustainability" and "environmentally friendly ink" by printers and print buyers required you to re-formulate your products?



How does your company find qualified workers?



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Number of Ink Manufacturing establishments 2014-2016

2016 Survey		Firms	Num Establishments	Employees
Printing Ink Manufacturing	01: Total	192	362	10,336

2014 Survey		Firms	Num Establishments	Employees
Printing Ink Manufacturing	01: Total	212	397	11,284

Revenue and Growth

Inform & Communicate

- ▶ Magazines & Periodical
- ▶ Newspaper Printing
- ▶ Book Printing
- ▶ Financial & Legal Printing
- ▶ Business Forms Printing
- ▶ Greeting Card Printing

Product Logistics

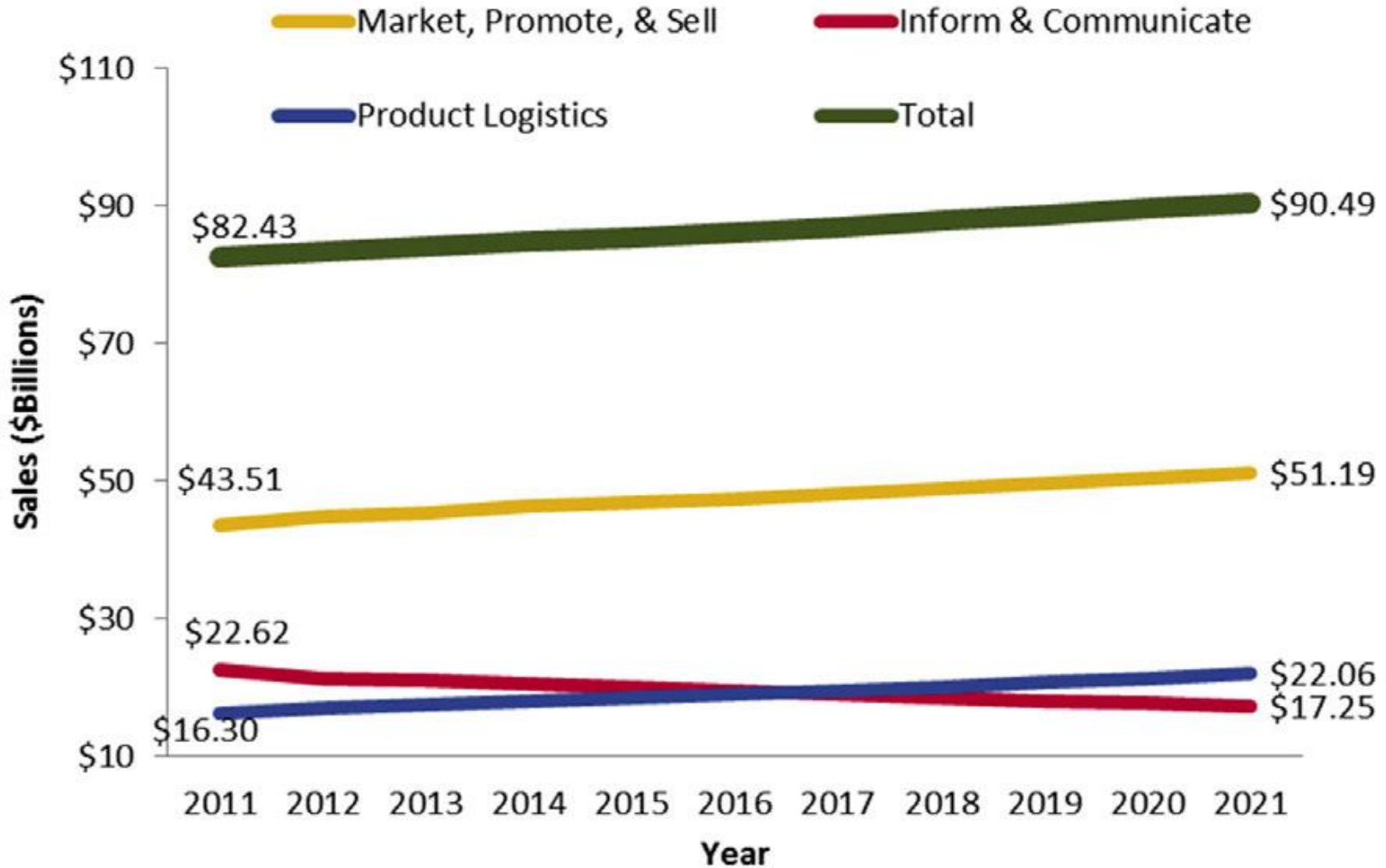
- ▶ Converters, Label, & Wrapper Printing
- ▶ Package Printing

Market & Promote

- ▶ General Commercial Printing
- ▶ Quick Printer
- ▶ Direct Mail Printer
- ▶ Signs & Signage

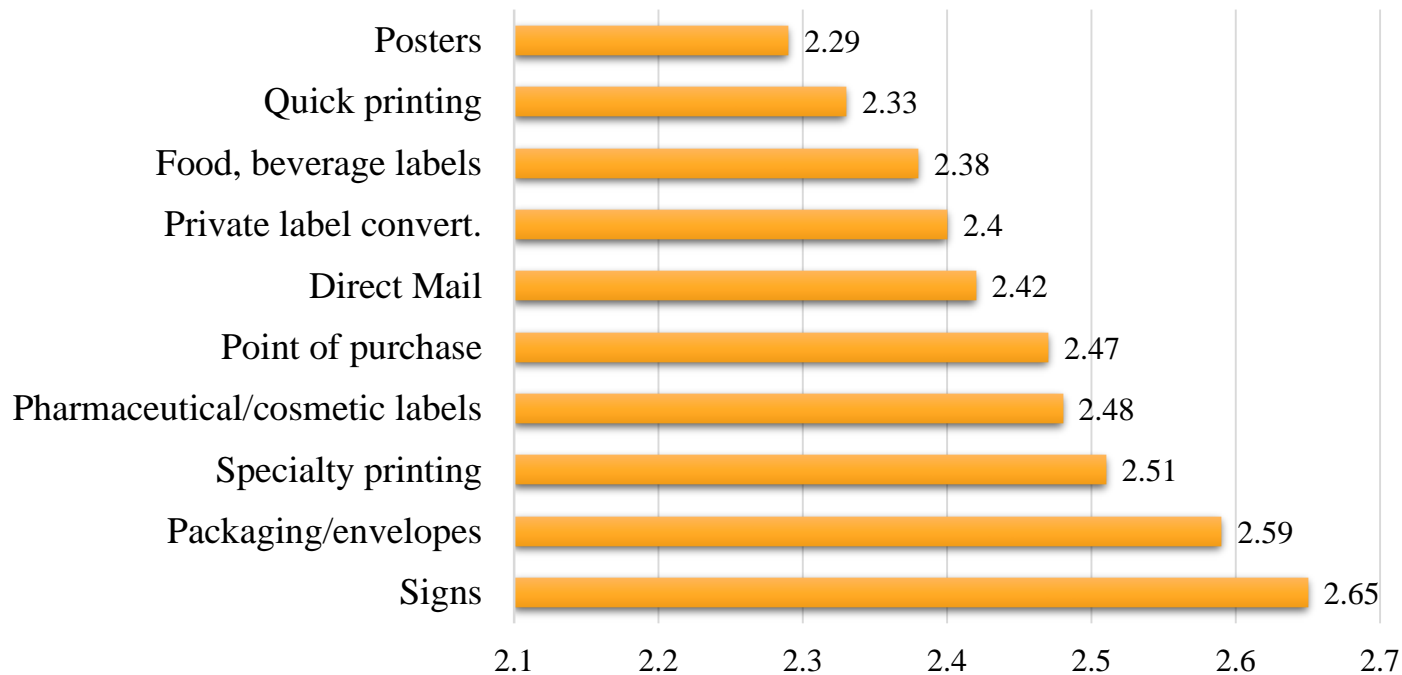
Printing Industries of America's Long-term Print Forecast

Commercial Printing & Related Support Activities (NAICS Code 323)

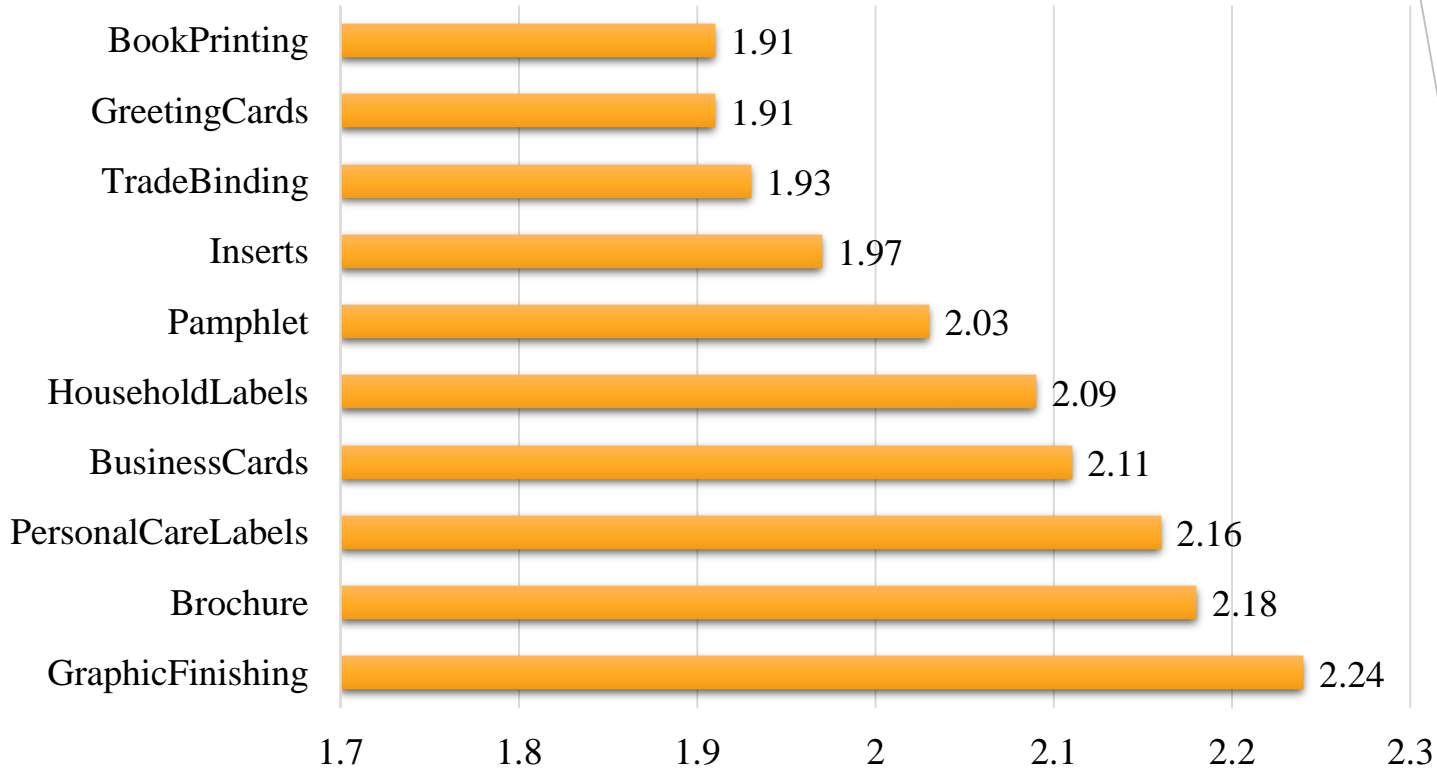


Print Markets

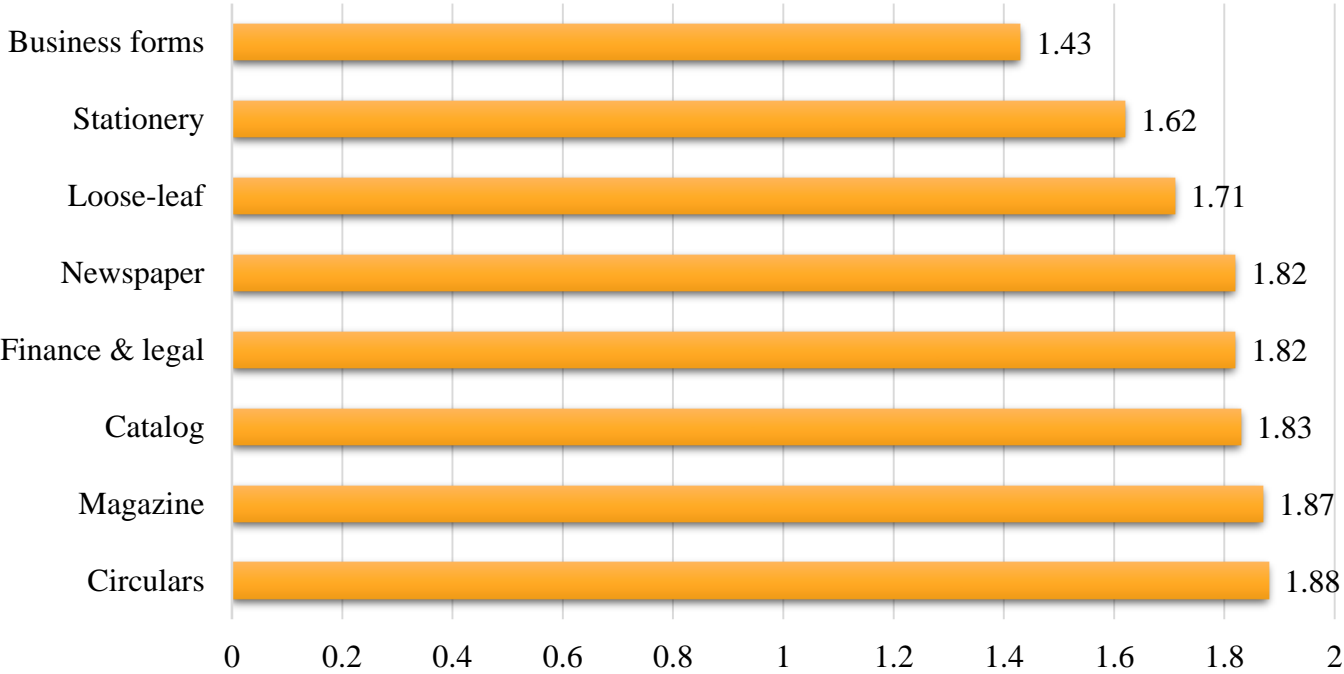
Hot Print Markets: Top 10



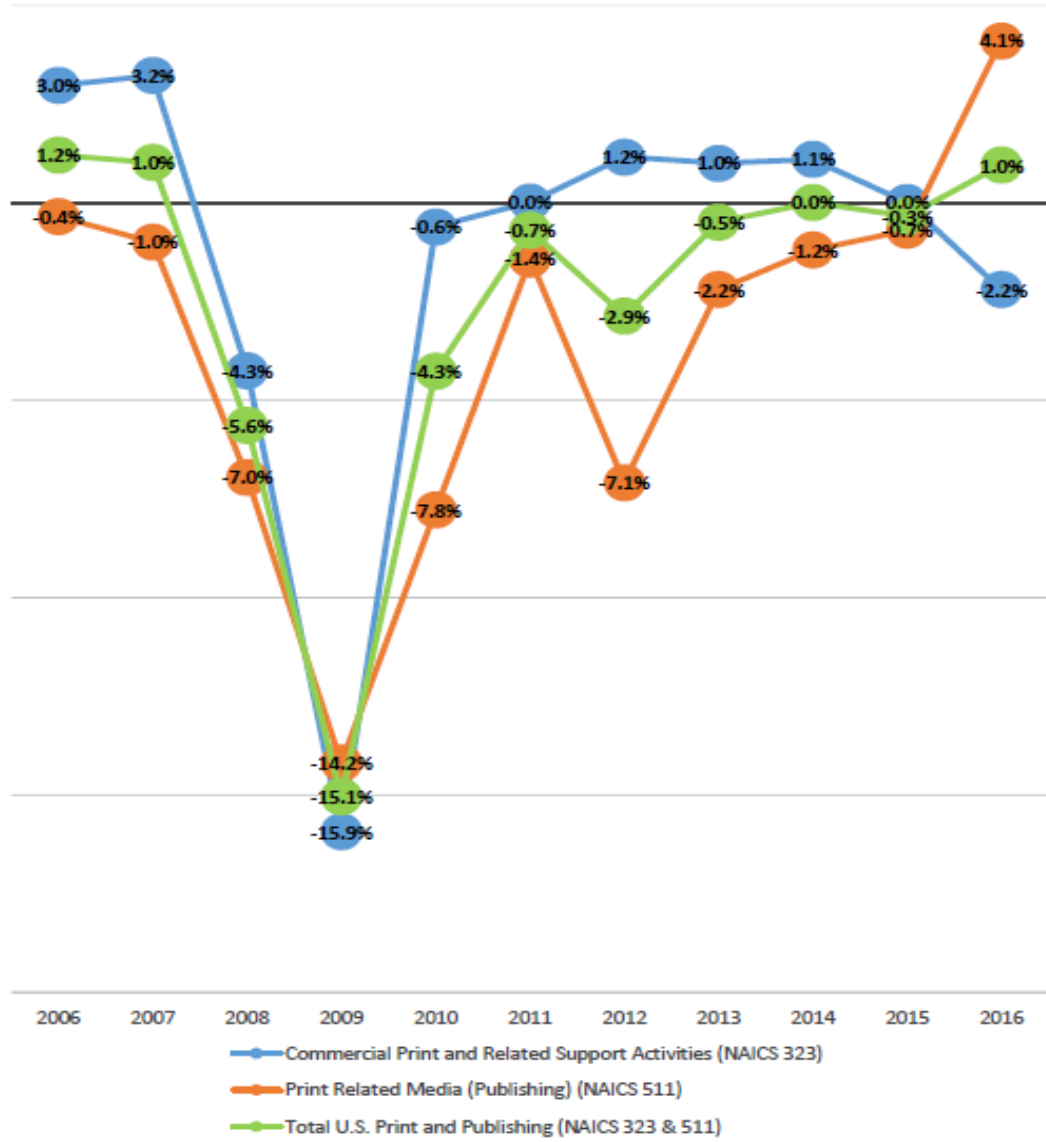
Warm Print Markets



Print Market Laggards



Commercial Print (323) & Publishing (511) Percent Change in Shipments



2012 COMMERCIAL PRINTING AND RELATED SUPPORT ACTIVITIES NAICS SEGMENTS

1. Commercial print (except commercial screen and book printing) 323111

Commercial lithographic printing

Commercial gravure printing

Commercial flexographic printing

Quick printing

Digital printing

Manifold business forms printing

Blankbook, looseleaf binders, and devices manufacturing

Other commercial printing

2. Commercial screen printing 323111

3. Commercial book printing 323117

4. Support activities for printing 323120

Tradebinding and related work

Prepress services

The categories in italics above were segments prior to 2012 but are now aggregated in either 323111 or 323120

2016 PRINT AND PUBLISHING MARKET OVERVIEW

Commercial Print and Related Support Activities (NAICS 323)

NAICS segment	Employment	Establishments	Shipments (\$1,000s)
323111 Commercial print	338,592	18,405	\$61,863,993.76
323113 Commercial screen	63,056	5,150	\$11,520,933.72
323117 Commercial book	19,886	421	\$3,633,362.22
323120 Support activities	24,555	1,545	\$4,486,433.13
Total	446,089	25,521	\$81,504,722.8

Print-Related Media (Publishing) (NAICS 511)

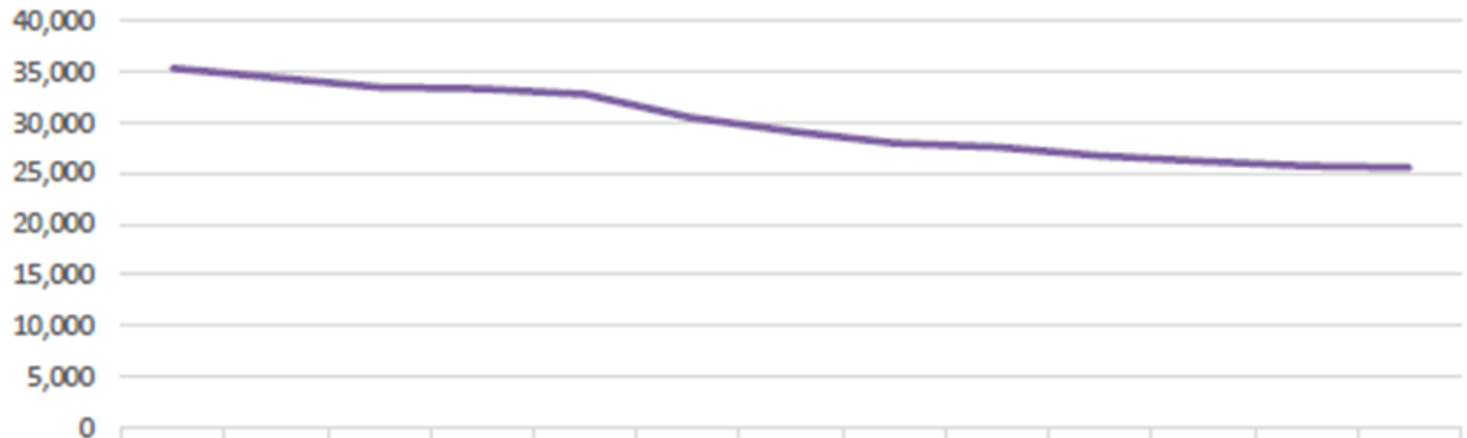
	Employment	Establishments	Shipments (\$1,000s)
511110 Newspaper	180,786	7,496	\$22,460,177.20
511120 Periodical	90,640	5,584	\$24,286,000.00
511130 Book	64,222	2,574	\$25,945,054.92
511140 Directory and mailing list	15,410	786	\$7,491,545.03
511191 Greeting card	13,076	99	\$4,576,600.00
Total	364,134	16,539	\$84,759,377.1

Commercial Print and Related Support Activities and Print-Related Media (NAICS 323 + 511)

	Employment	Establishments	Shipments (\$1,000s)
NAICS 323+511	810,223	42,060	\$166,264,100.0

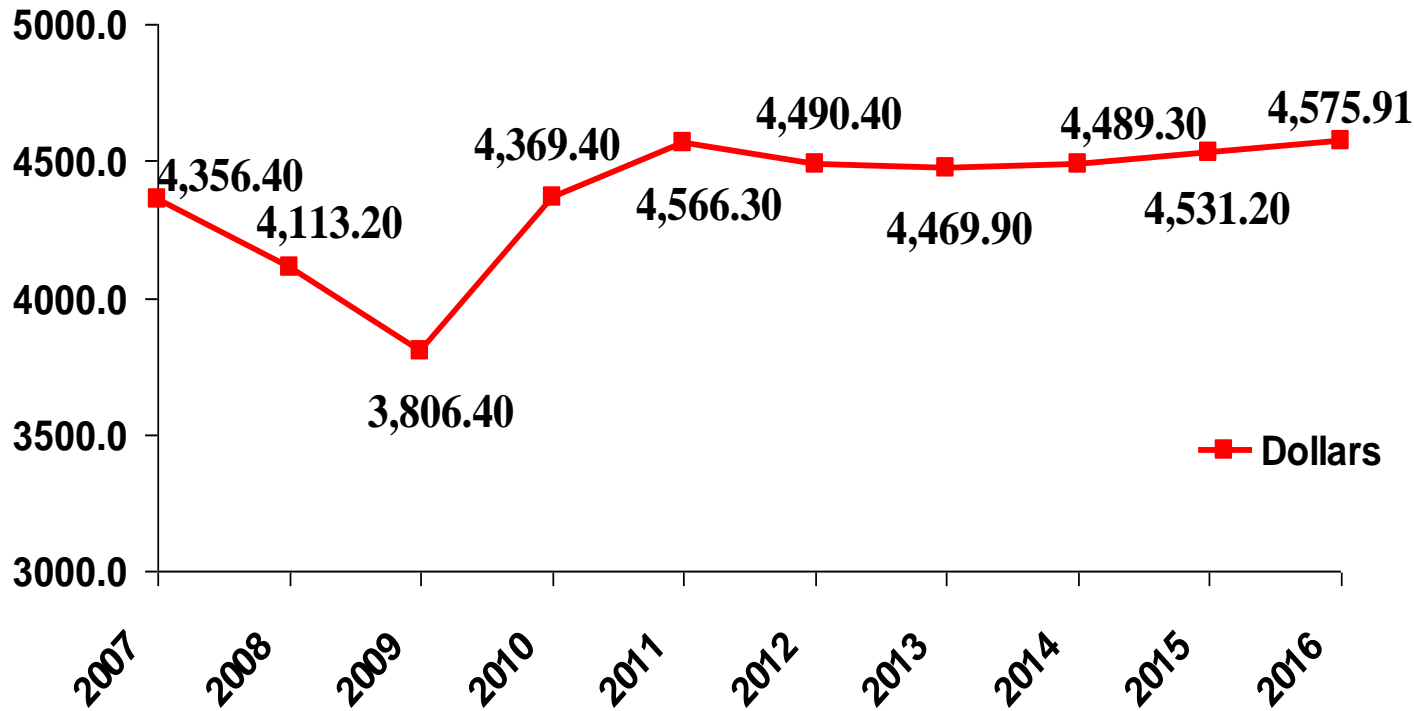
United States Commercial Printing Establishments

United States - Total 323 Establishments



Sales were up around 1-2% in each of the last 2 years. Employment and establishments are down

U.S. Printing Ink Sales

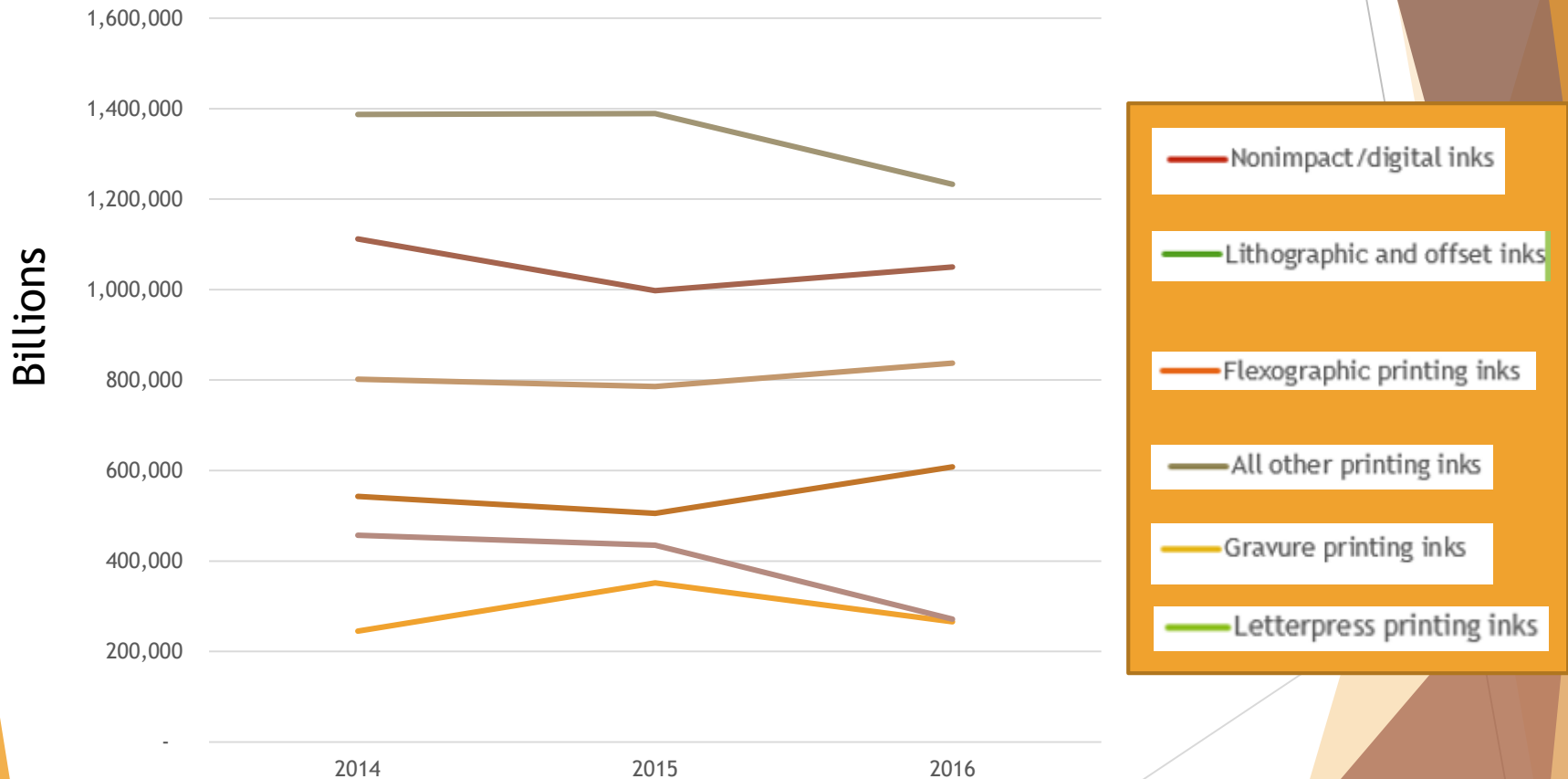


* Includes screen, textile, digital, & non impact inks.

Source – US Bureau of Census – Annual Survey of Manufacturers (ASM)

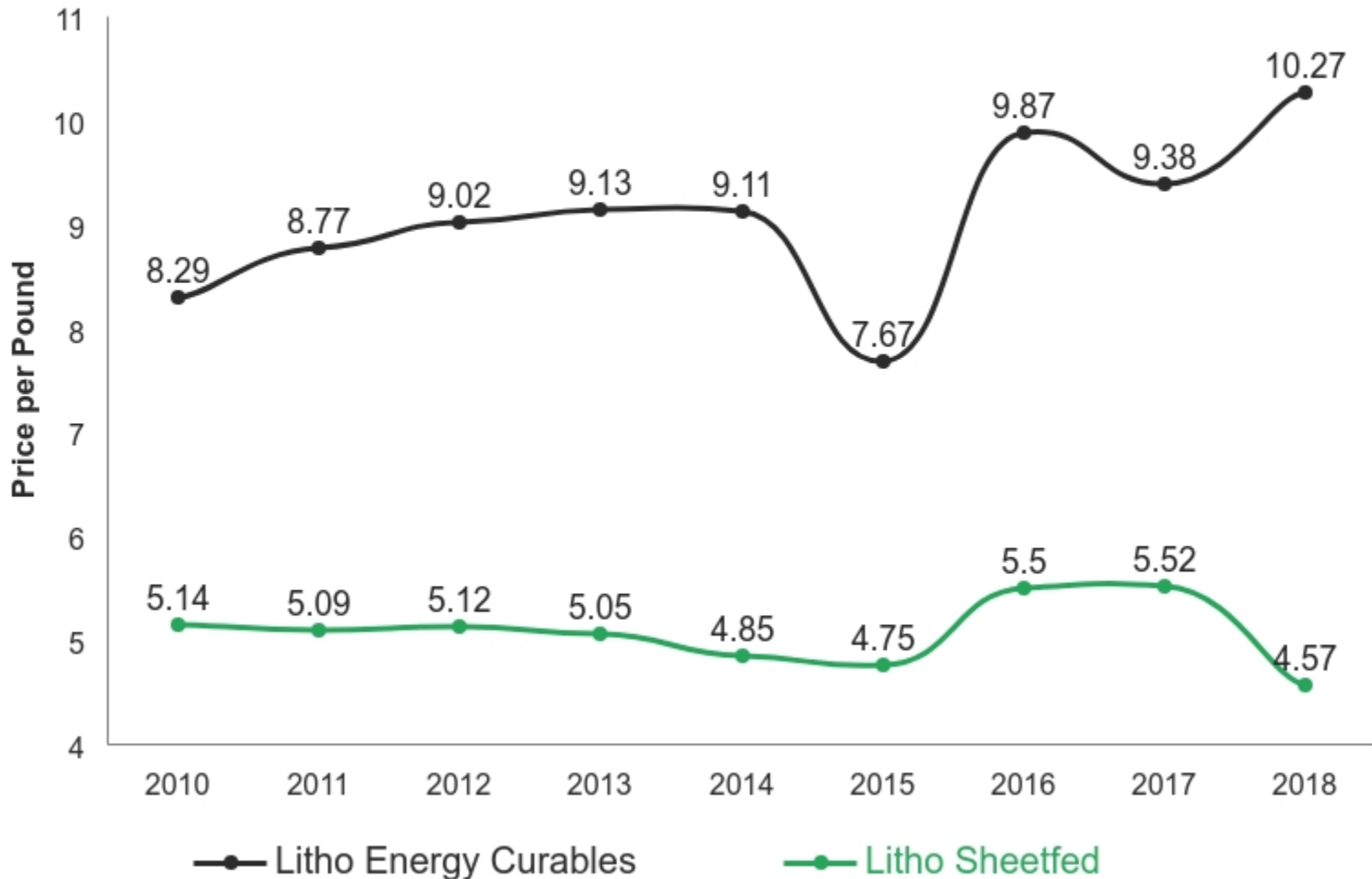
Annual Survey of Manufactures: Value of Product Shipments: NAICS 32591

Value of Product Shipment



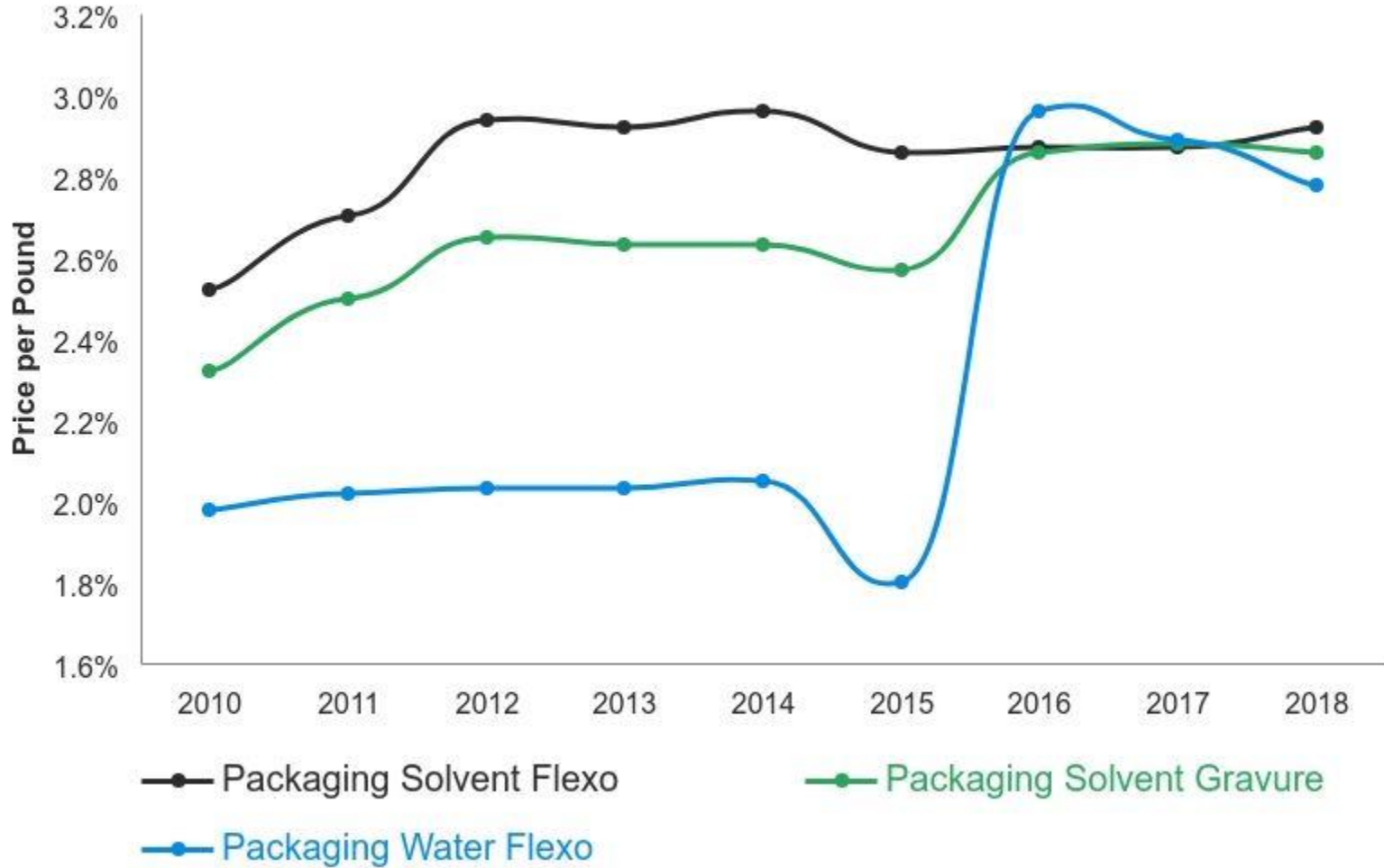
Average Selling Prices

Litho Sheetfed and Litho Energy Curables



*Based on NAPIM QSR Sample. NAPIM Respondents Data

Average Selling Prices Packaging Gravure and Flexo

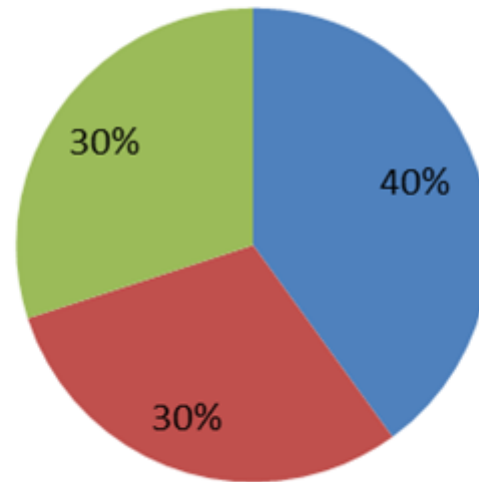


Profitability

PIA

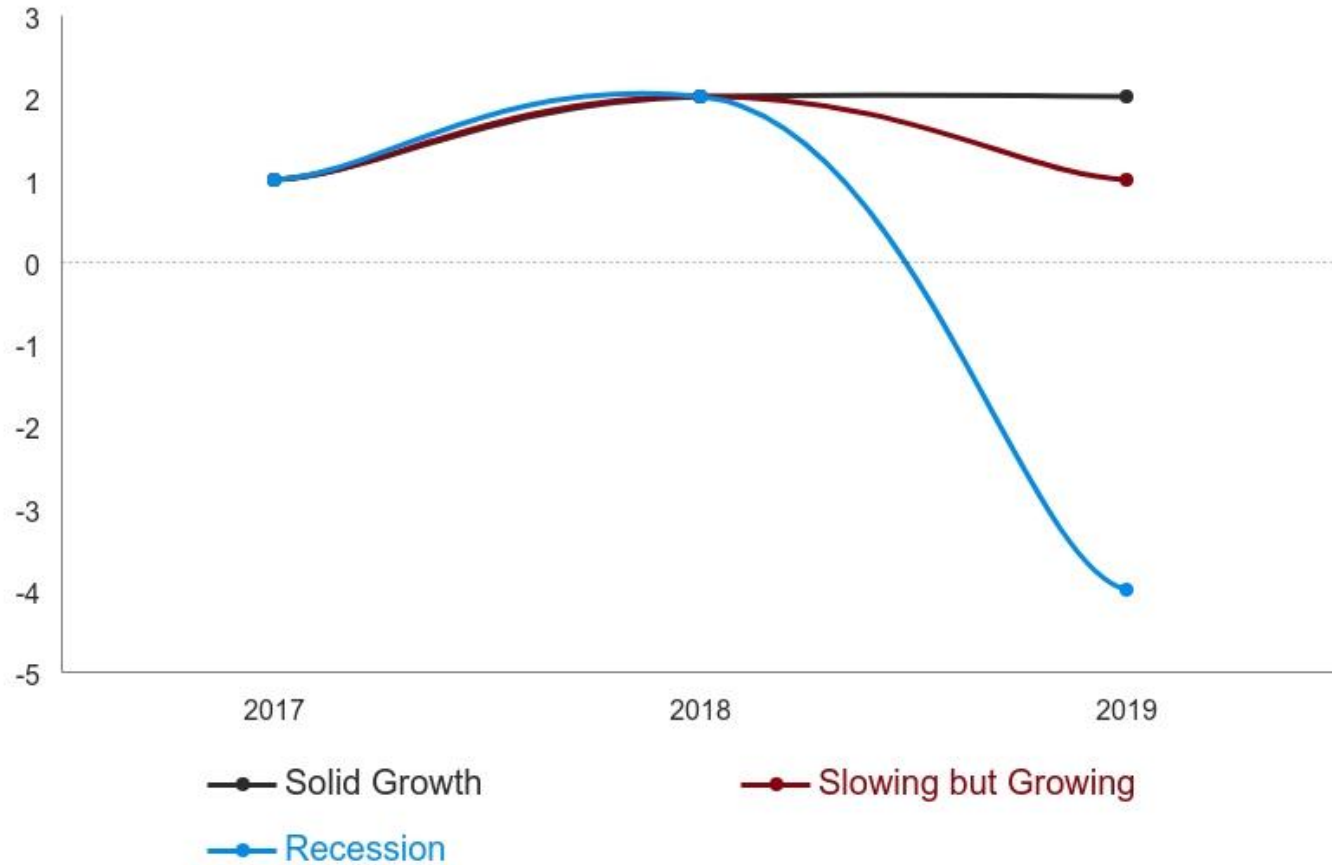
Economic Scenarios 2019

■ Solid Growth (2.5%) ■ Slow Growth (1-2%) ■ Recession



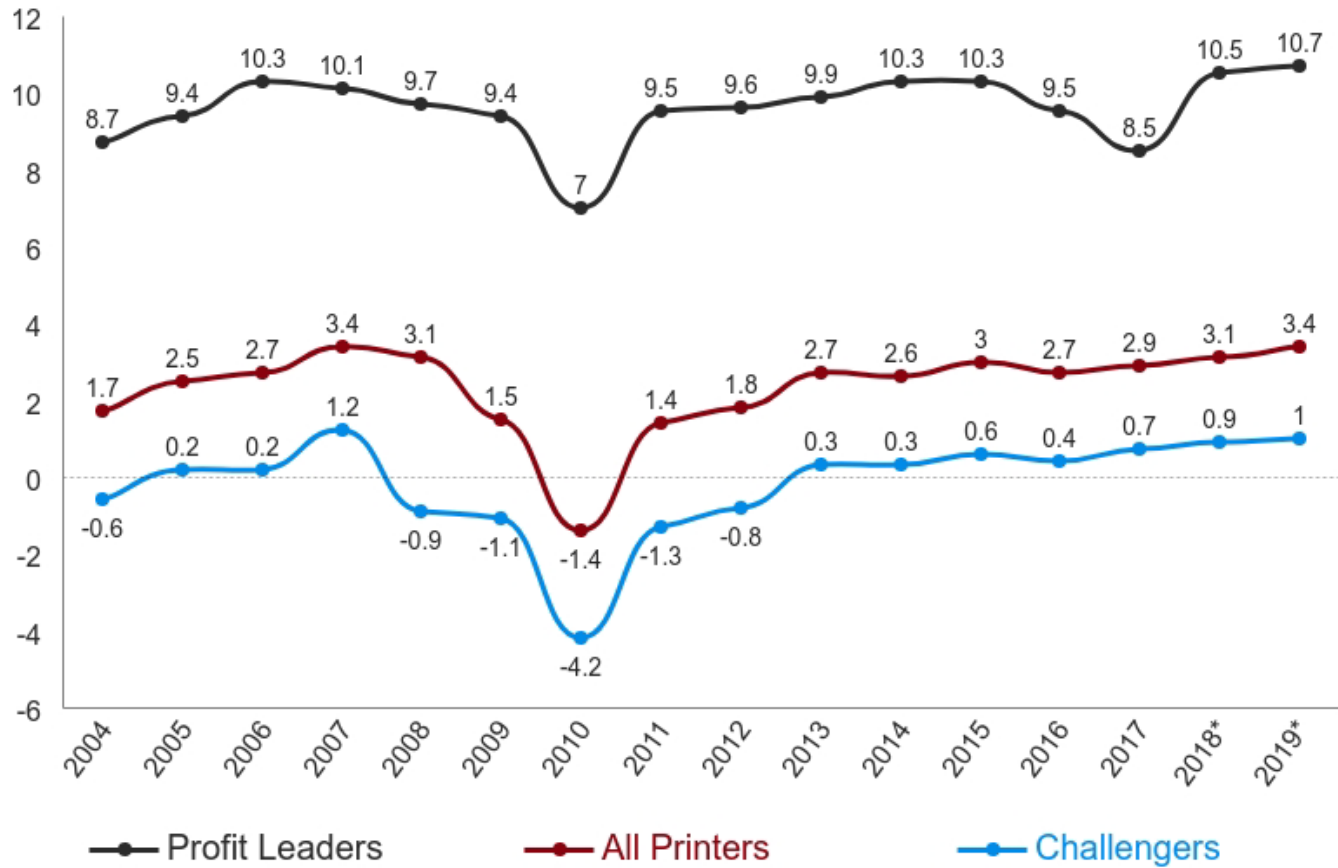
PIA

Print Scenarios 2019



PIA

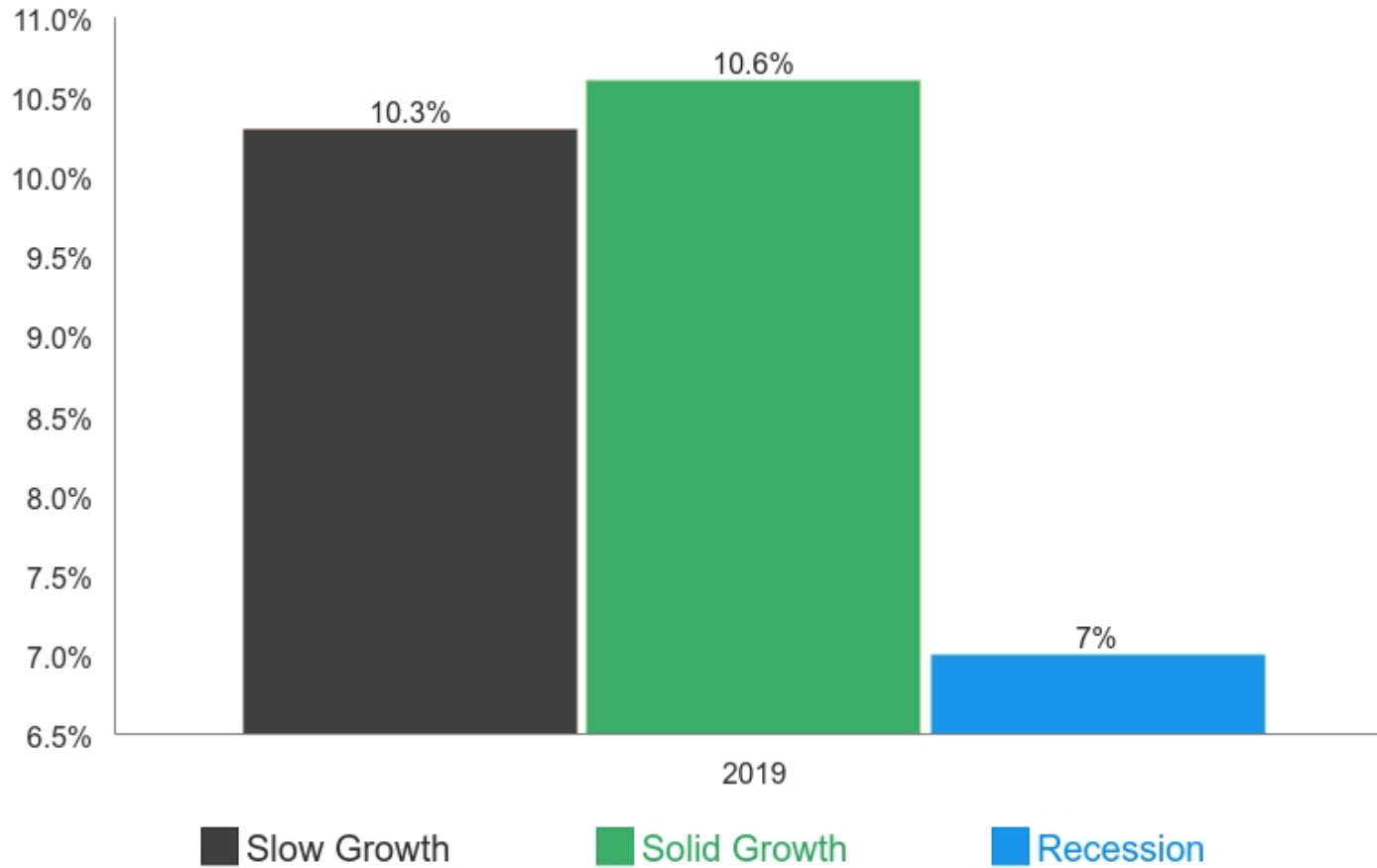
Print Scenarios 2019



PIA

Profit Scenarios: Profit Leaders

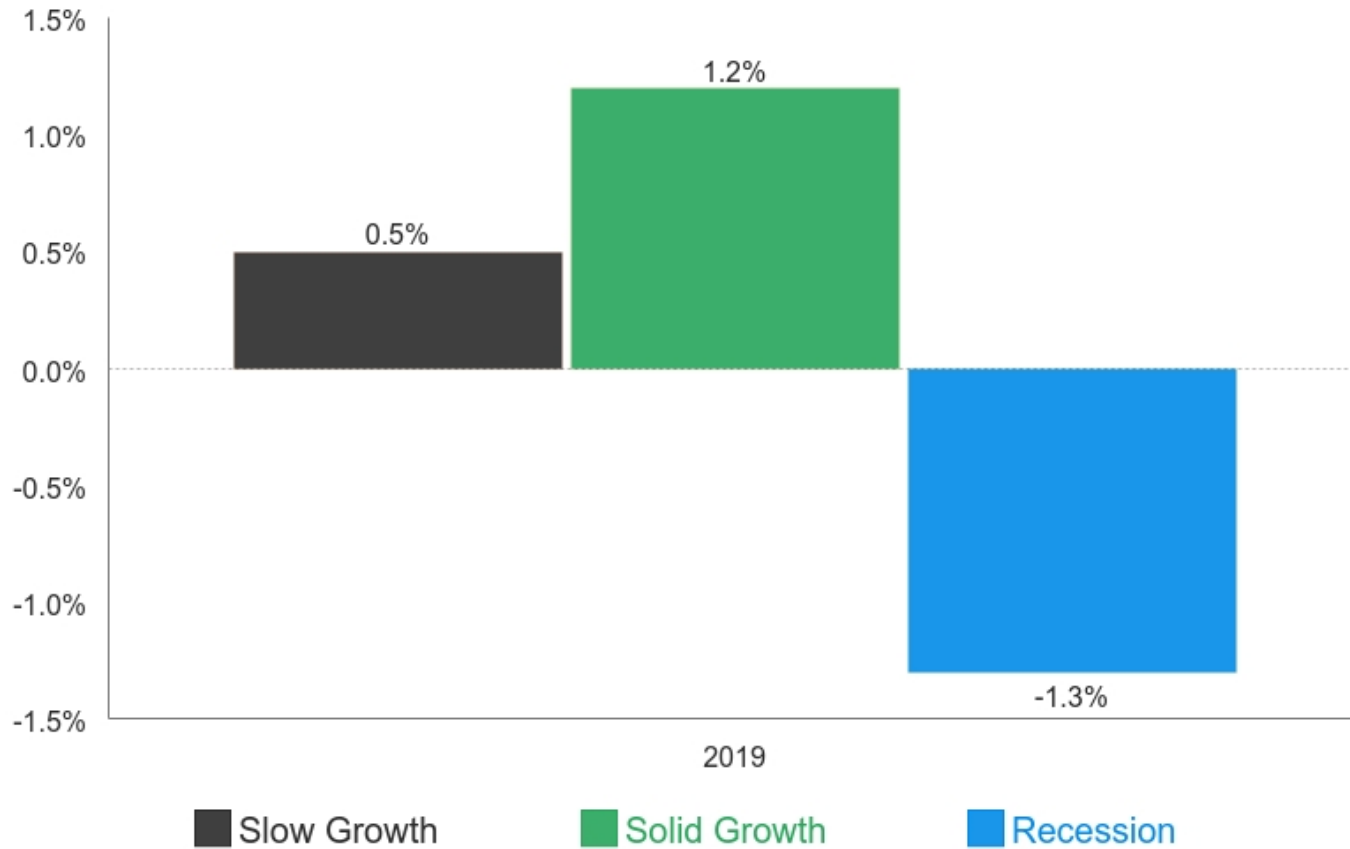
% of Sales



PIA

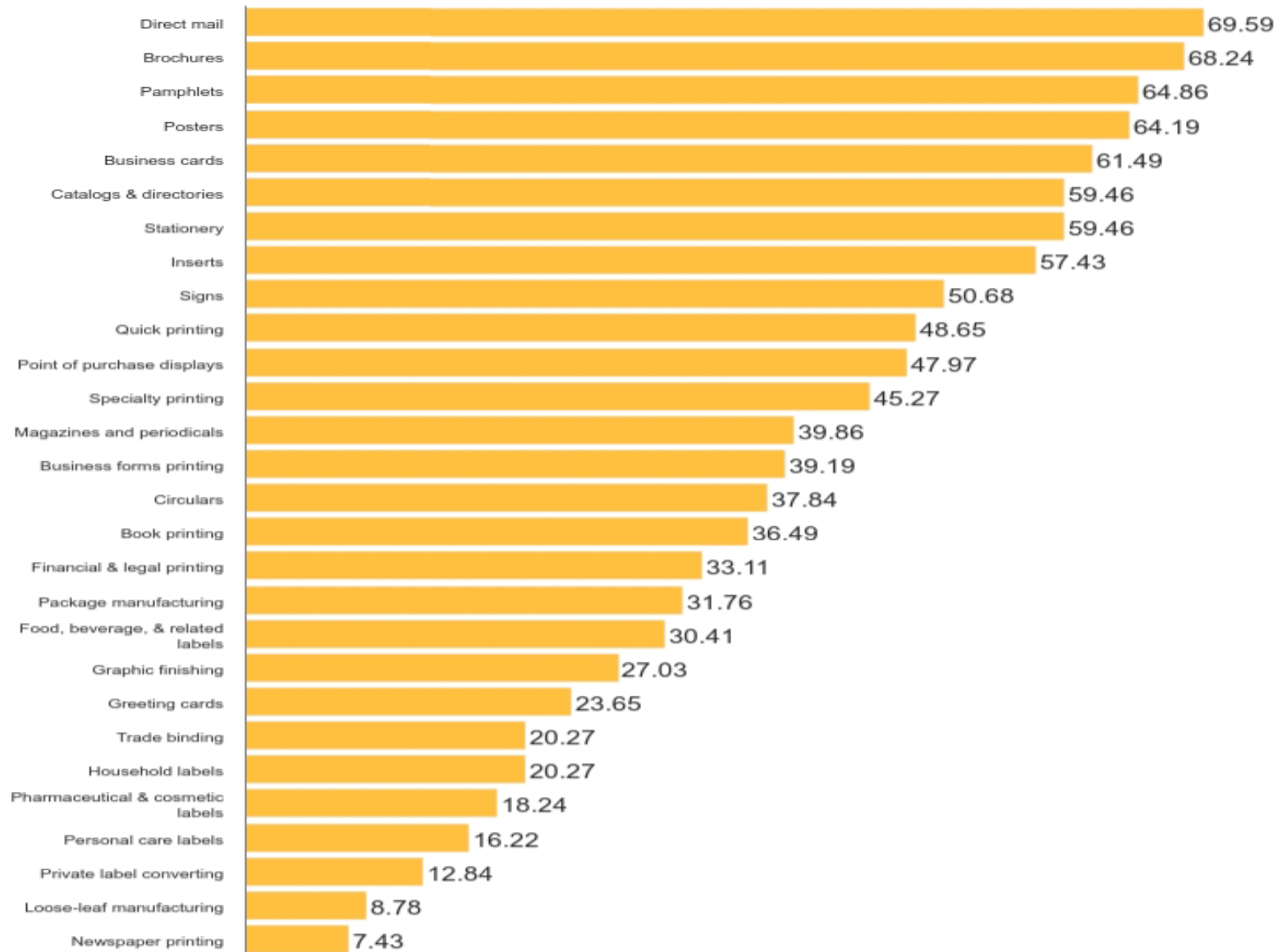
Profit Scenarios: Profit Challengers

% of Sales

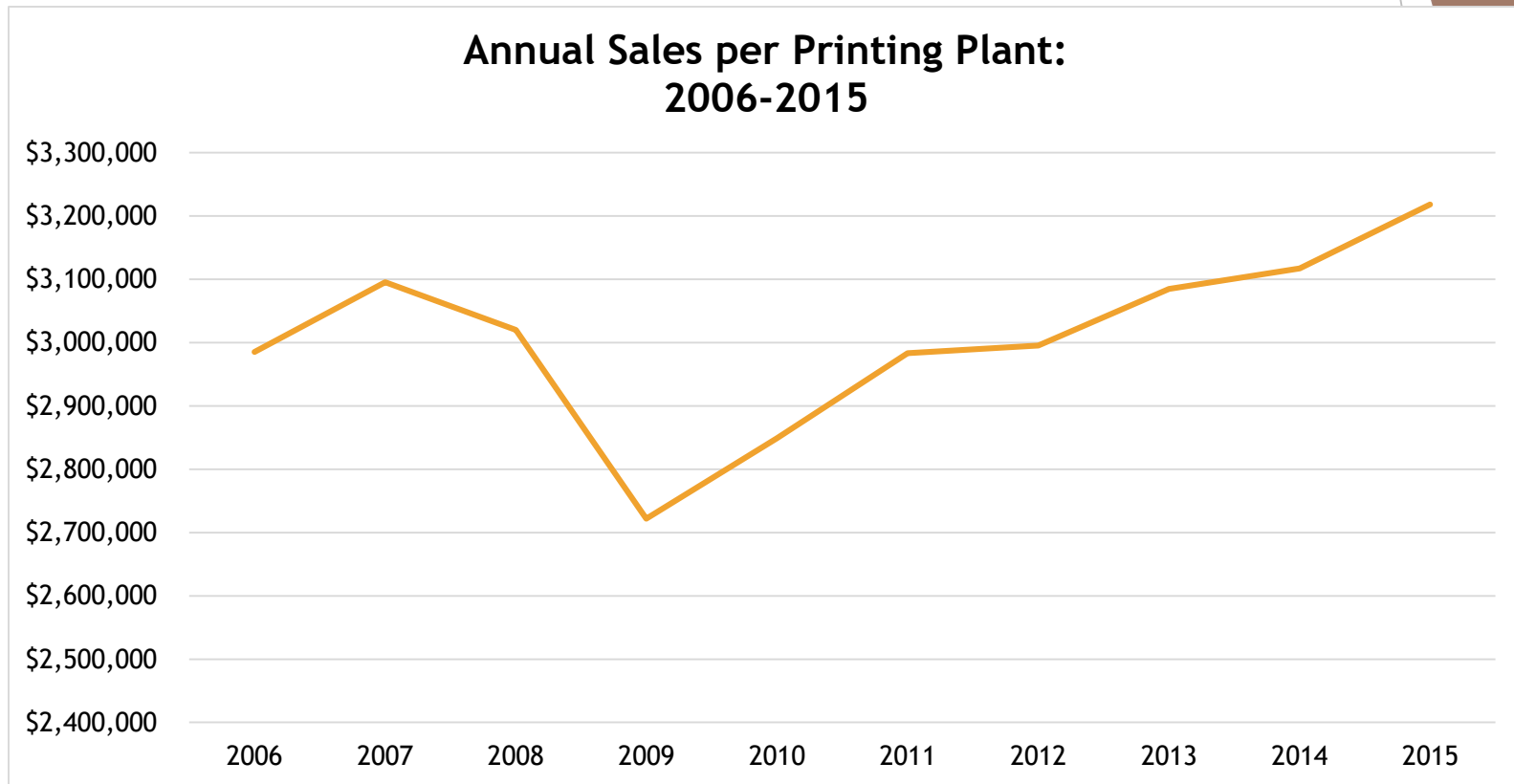


Products Provided by Printers

% of printers providing



Pattern of Recovery During the 2007-2009 Recession and Recovery:

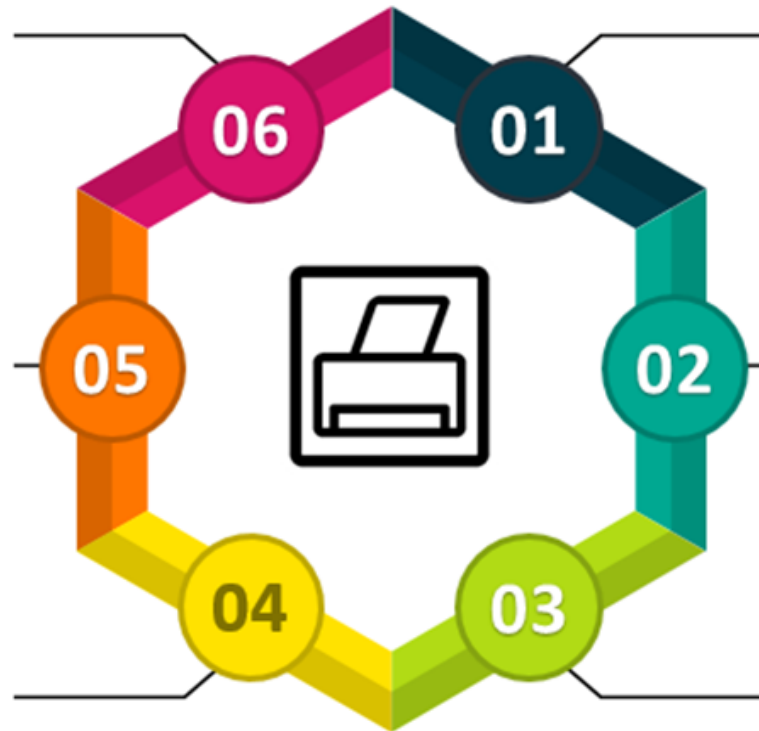


6 Reasons Behind Print's Recovery

Printers themselves have adjusted their business models to take account of new industry trends and realities.

Even the print sector most impacted by digital media, informational and editorial print (books, newspapers and magazines) has been doing relatively well.

Recently, print marketing and promotion, particularly direct mail, has demonstrated its effectiveness as a premium marketing and promotional media.



Print has hit its sweet spot in the mature recovery phase of the economy.

Most of the severe displacement of print by digital media is now behind us.

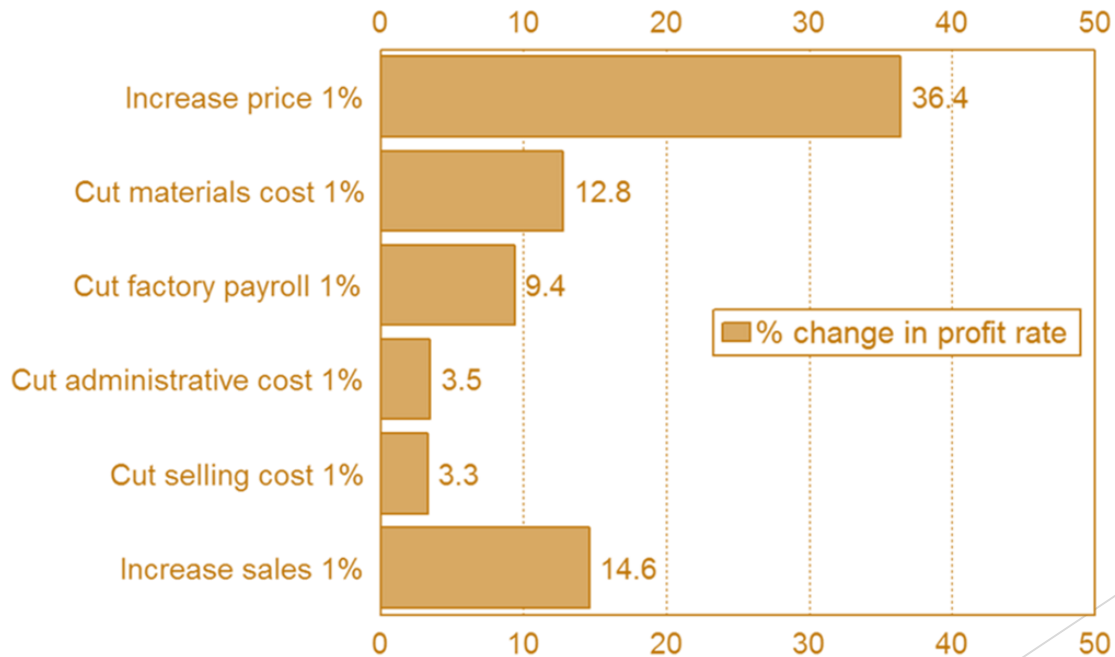
Labels, wrappers and packaging print, serves as an anchor on print sales as it generally tracks very closely with the overall economy.

Game Plan for Success

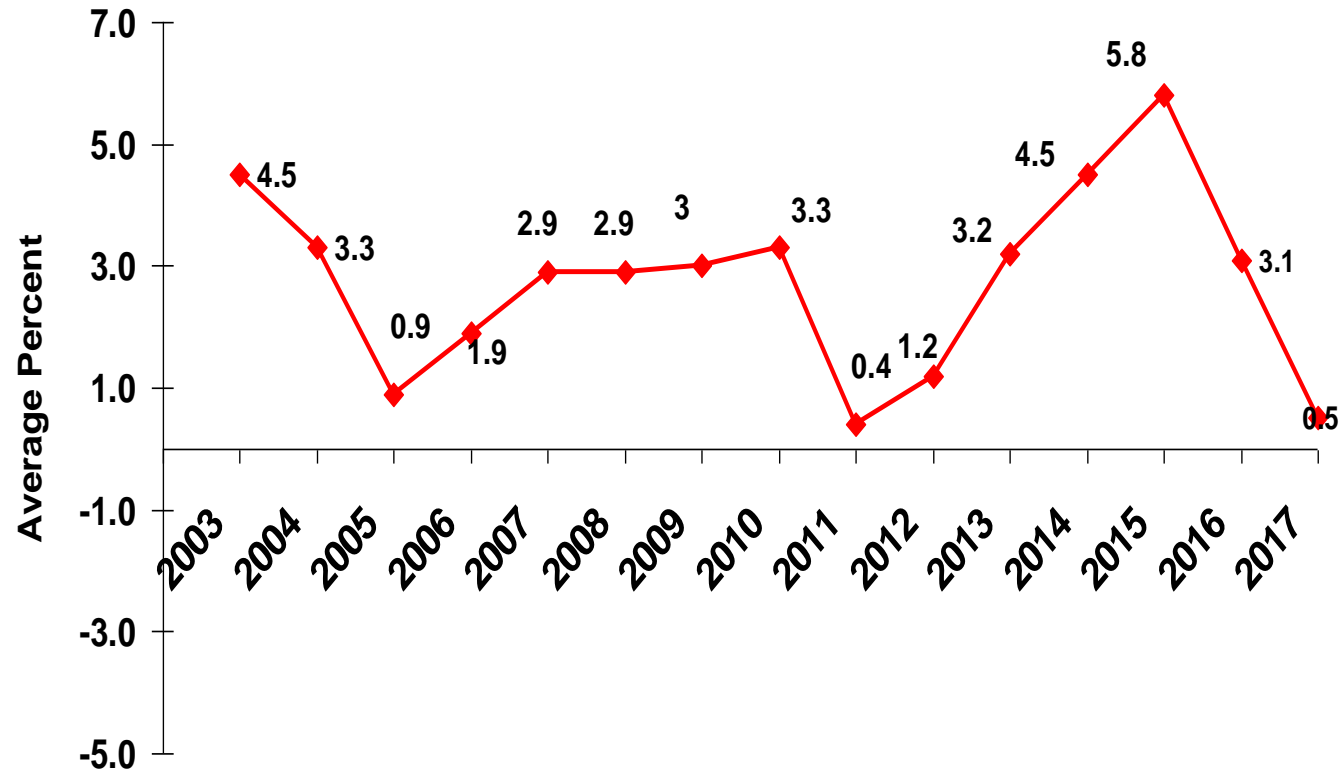
Example of a too low: A price hike can supercharge profits

Pricing Power

Compete for Price--not on Price



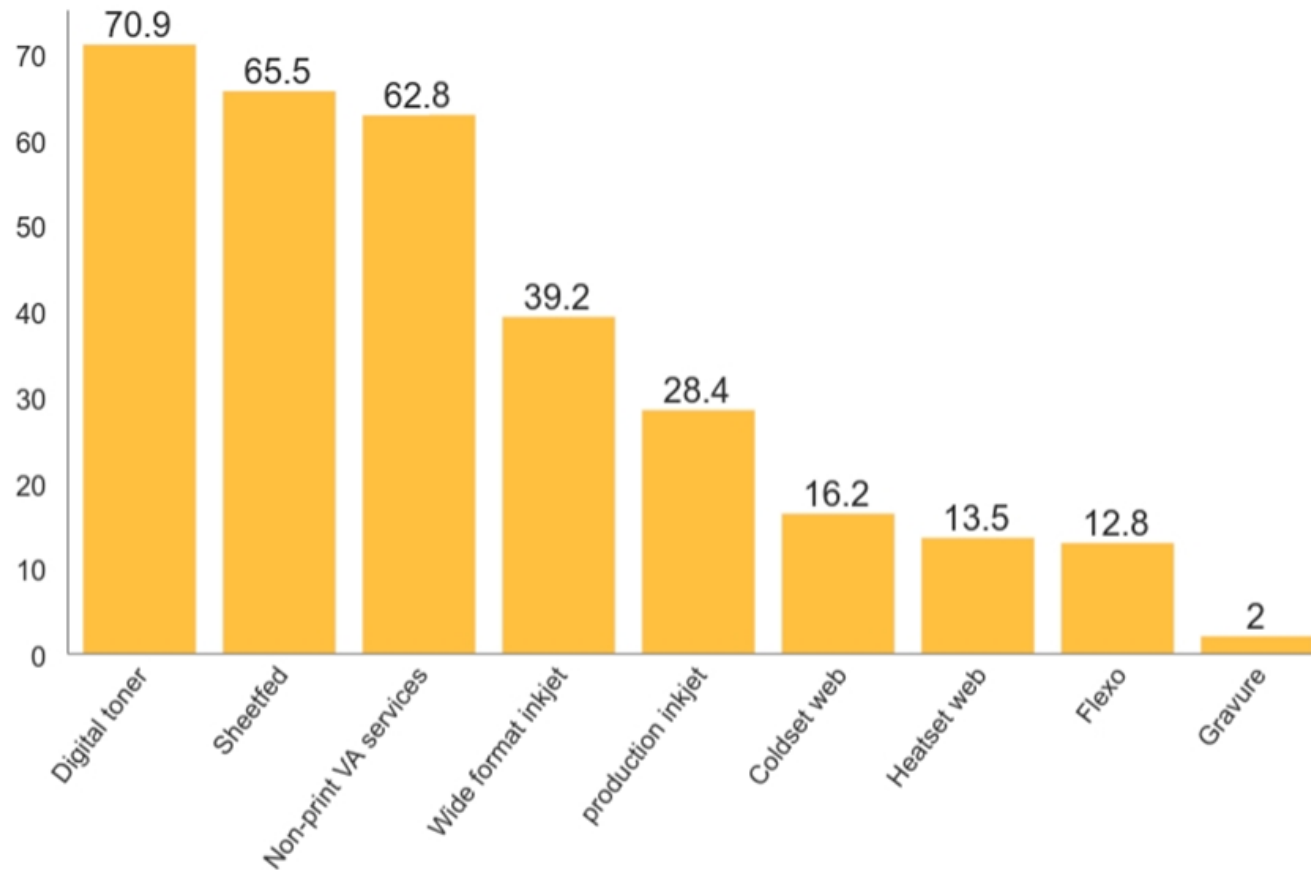
Ink Companies' Historical Earnings Before Interest & Taxes - ALL Ink



End Use Markets

Print Business and Operating Models

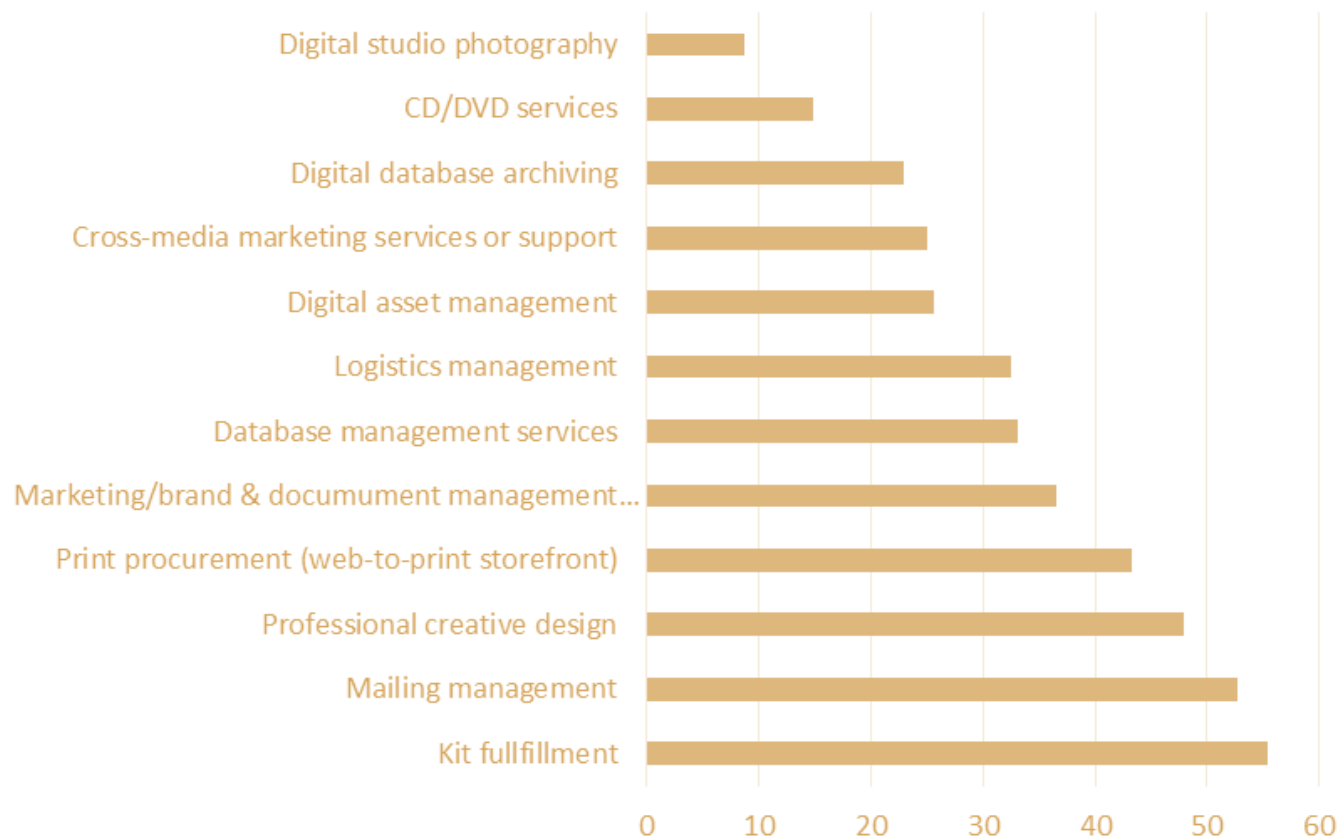
Print Processes Provided by Printers



Source: Printing Industries of America

Print Business and Operating Models

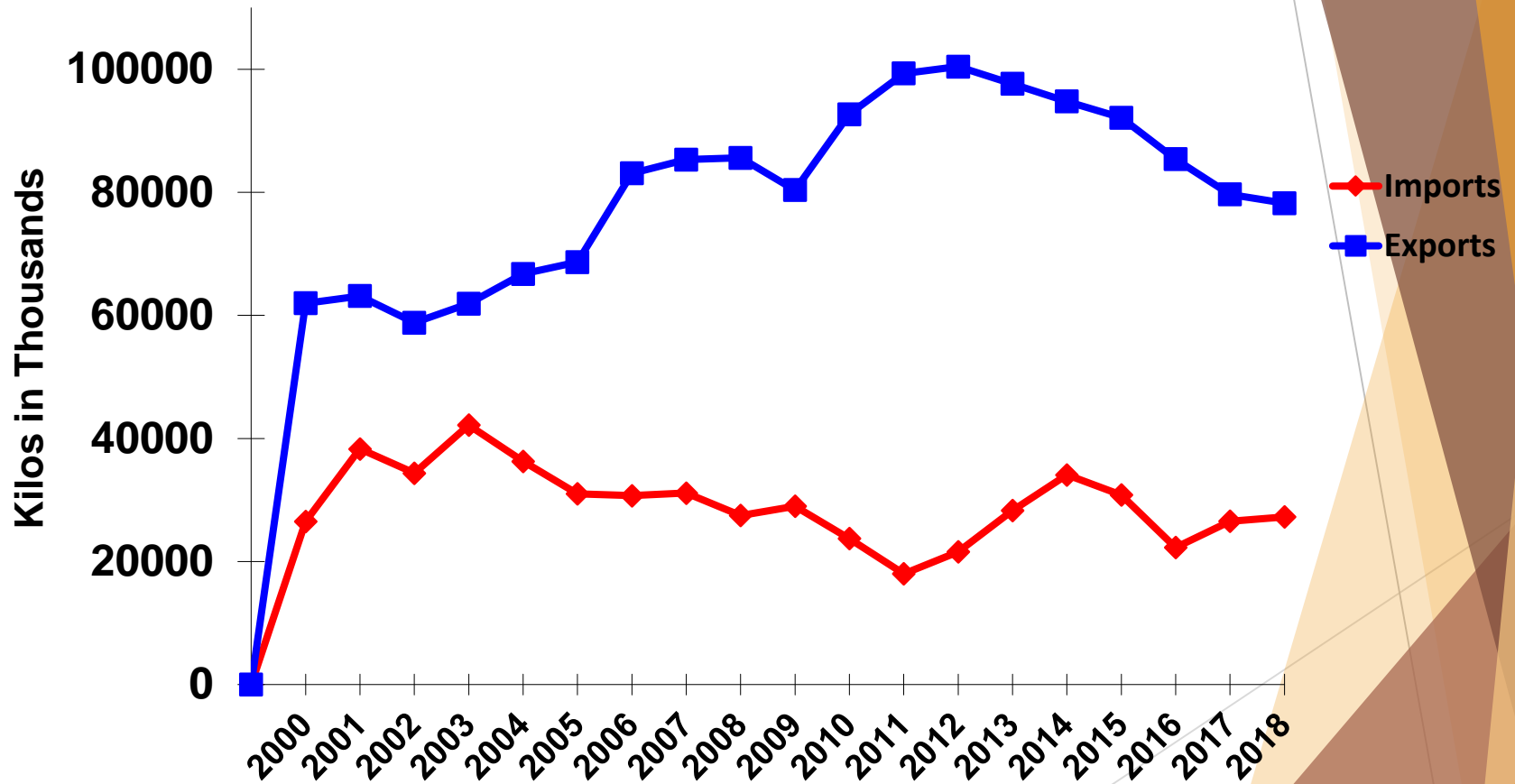
Printers' Ancillary Services (% of printers providing)



Foreign Trade

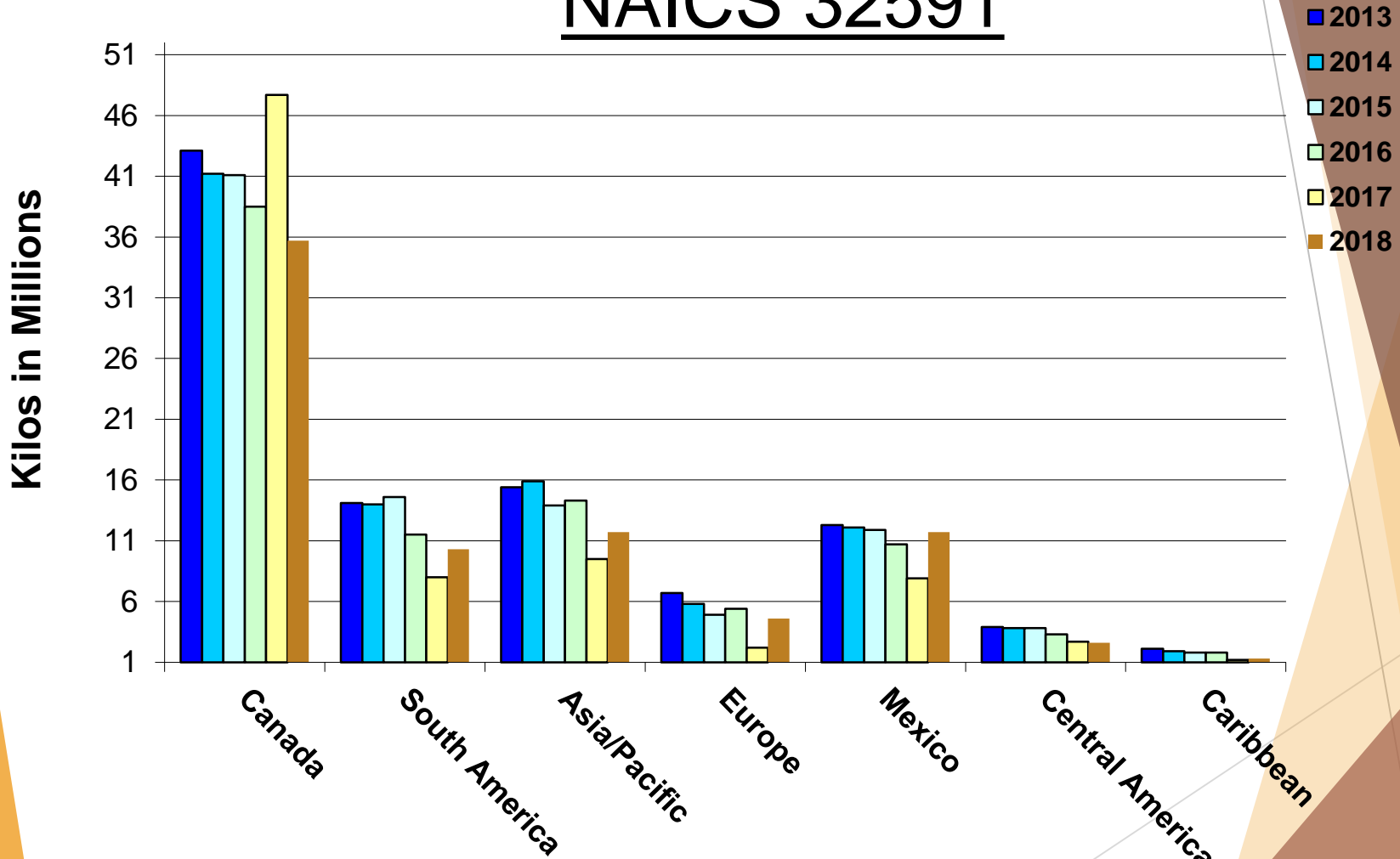
Foreign Trade

NAICS 32591



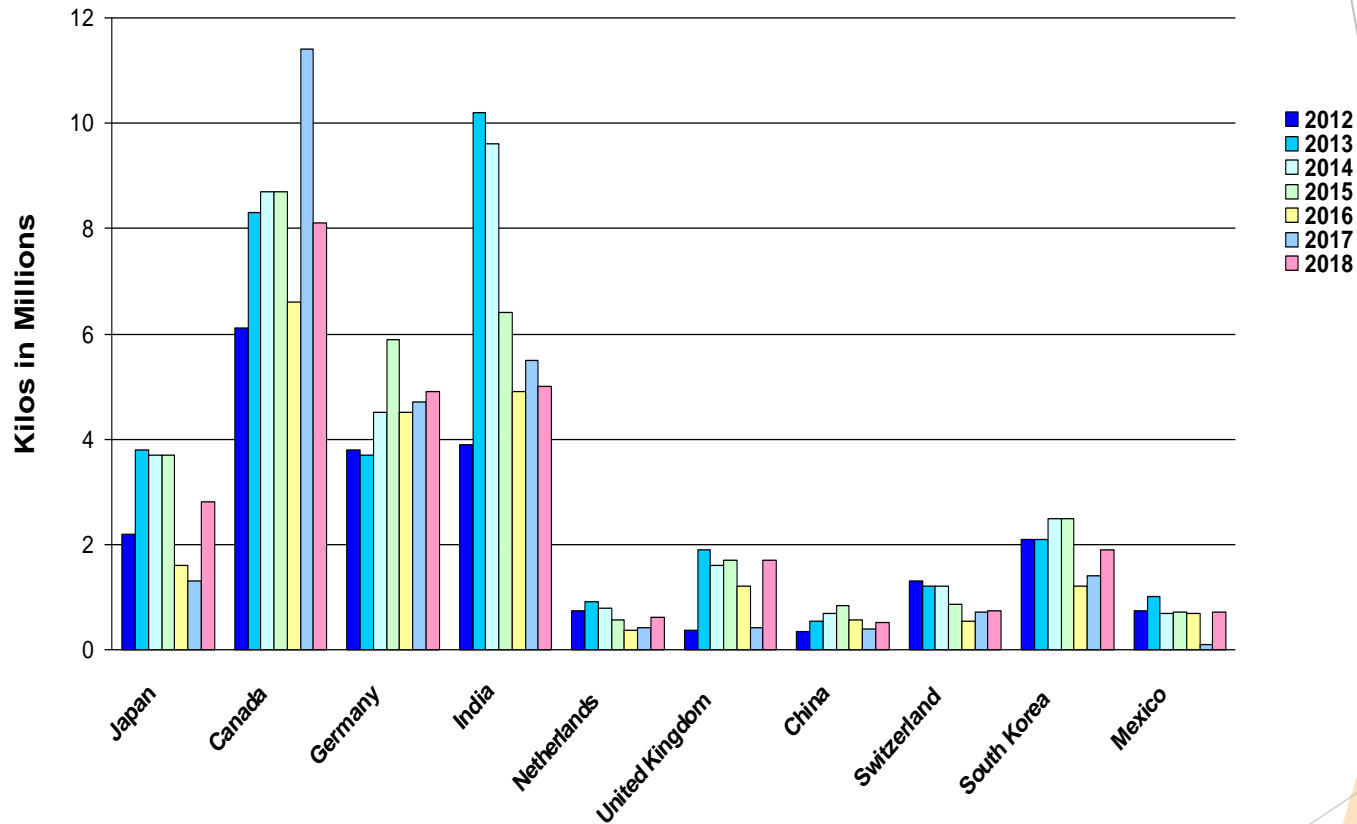
* Source – U.S. Census Bureau

Major Ink Exports NAICS 32591



* Source – U.S. Census Bureau

Major Ink Imports NAICS 32591



Emerging Issues

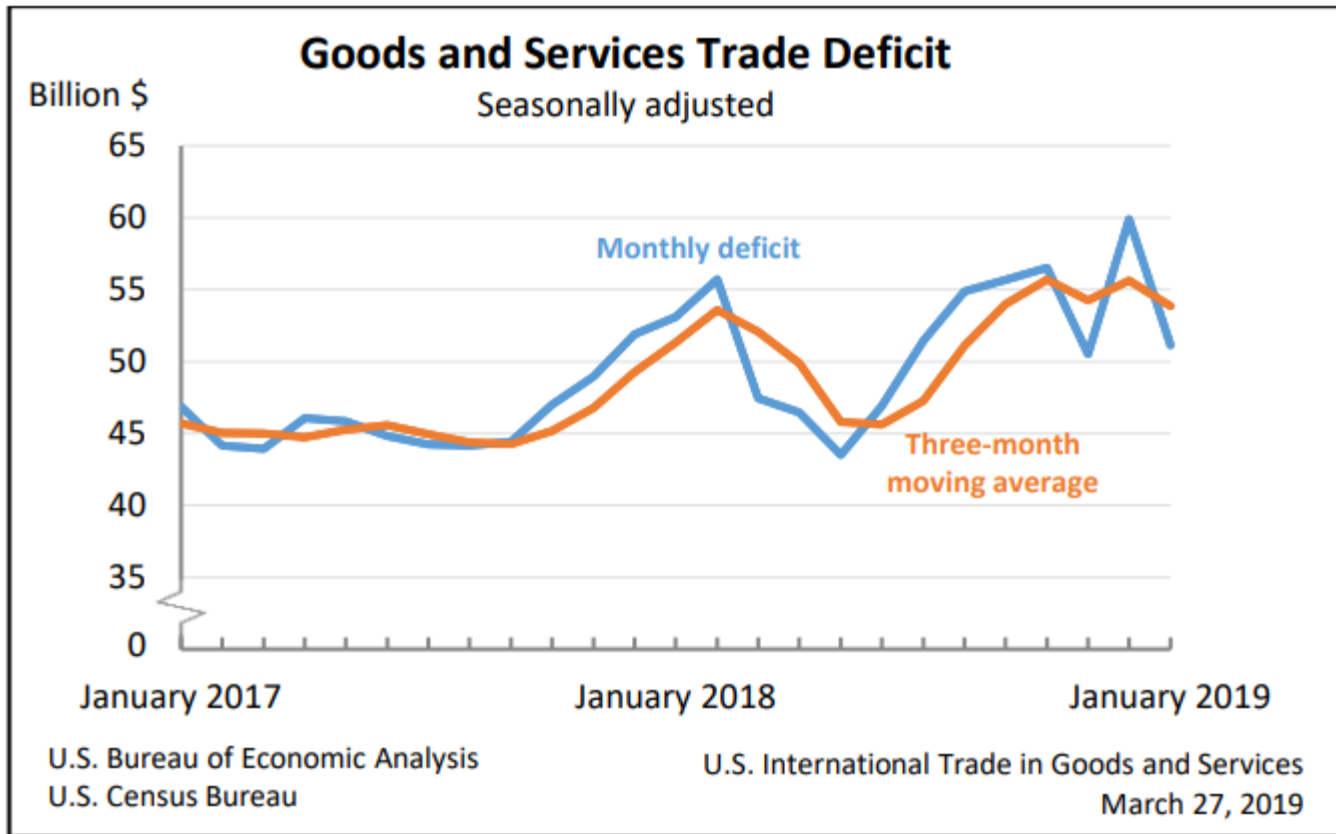
Trade Commission Review

- ▶ The USMCA is currently undergoing a congressionally mandated International Trade Commission review.
- ▶ Several congressional leaders have indicated that this will be completed around April 19th, 2019.
- ▶ After Congress receives the report it has 90 legislative days to make a decision.

Brexit

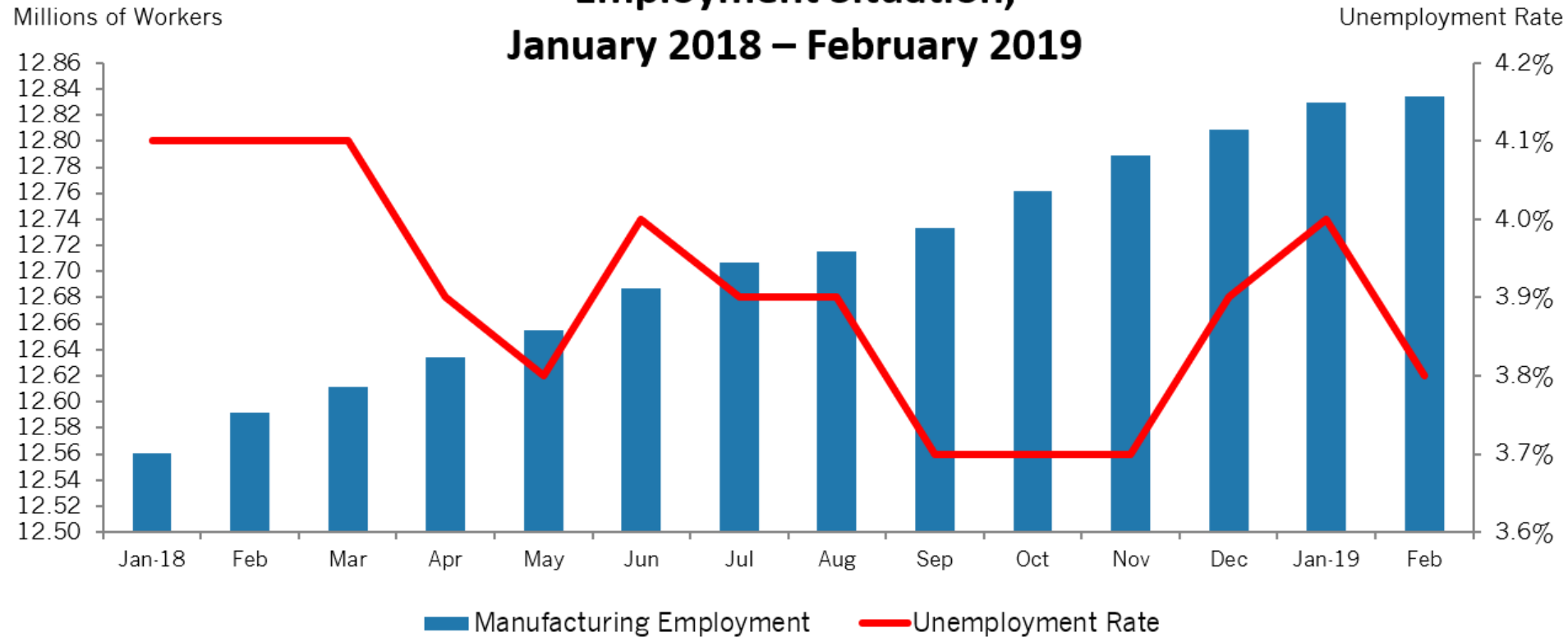
- ▶ The referendum to leave the EU was passed in 2016
- ▶ April 12th deadline
- ▶ Still now clear path for exit
- ▶ Brinkmanship between British political parties on an exit plan
- ▶ Brinkmanship between EU and Parliament as to leaving without a plan
- ▶ Three things now are likely within the British discussions
 - ▶ Try for a fourth time to pass May deal
 - ▶ Leave the block without a deal - chaos
 - ▶ Ask for a snap election within parliament
- ▶ An extension by is still a possibility by the EU

China Trade Issue

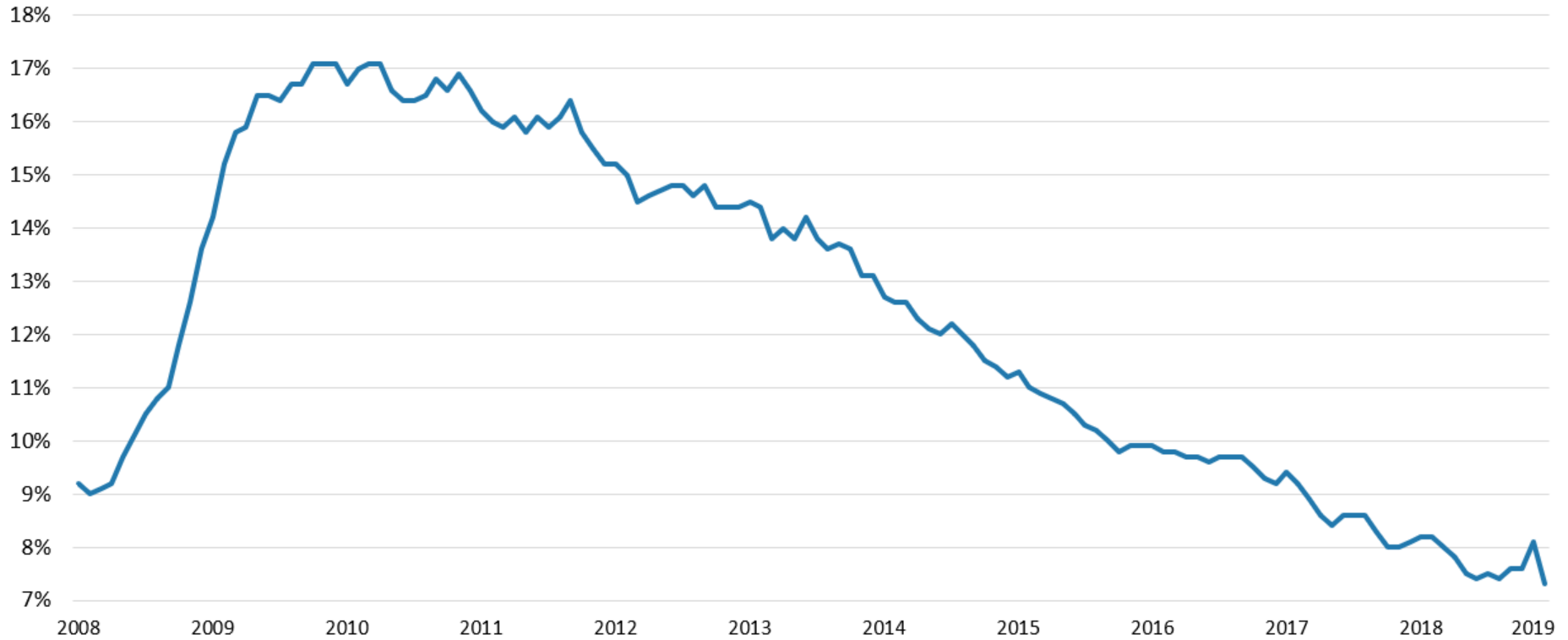


Employment Shortage

Employment Situation, January 2018 – February 2019



"Real" Unemployment Rate (U-6), 2008–2019

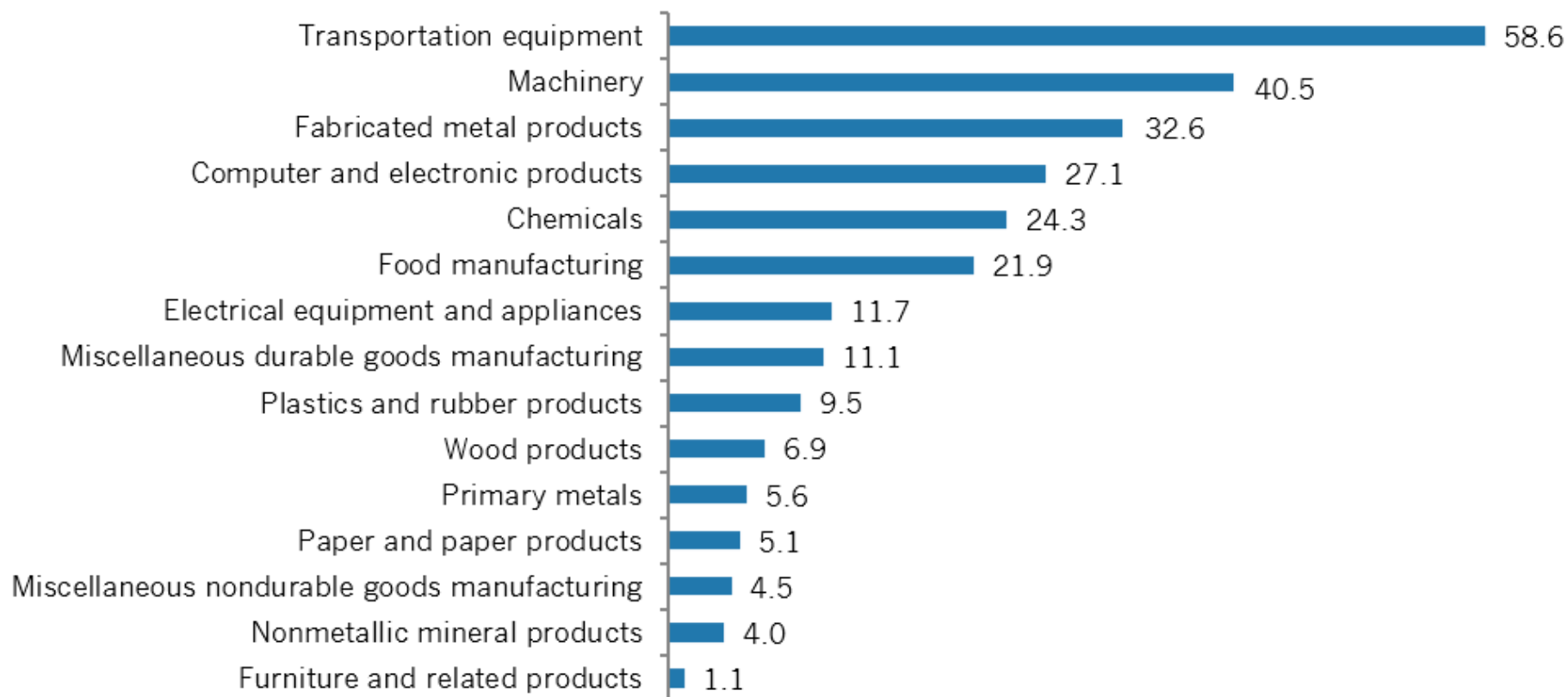


Source: Bureau of Labor Statistics

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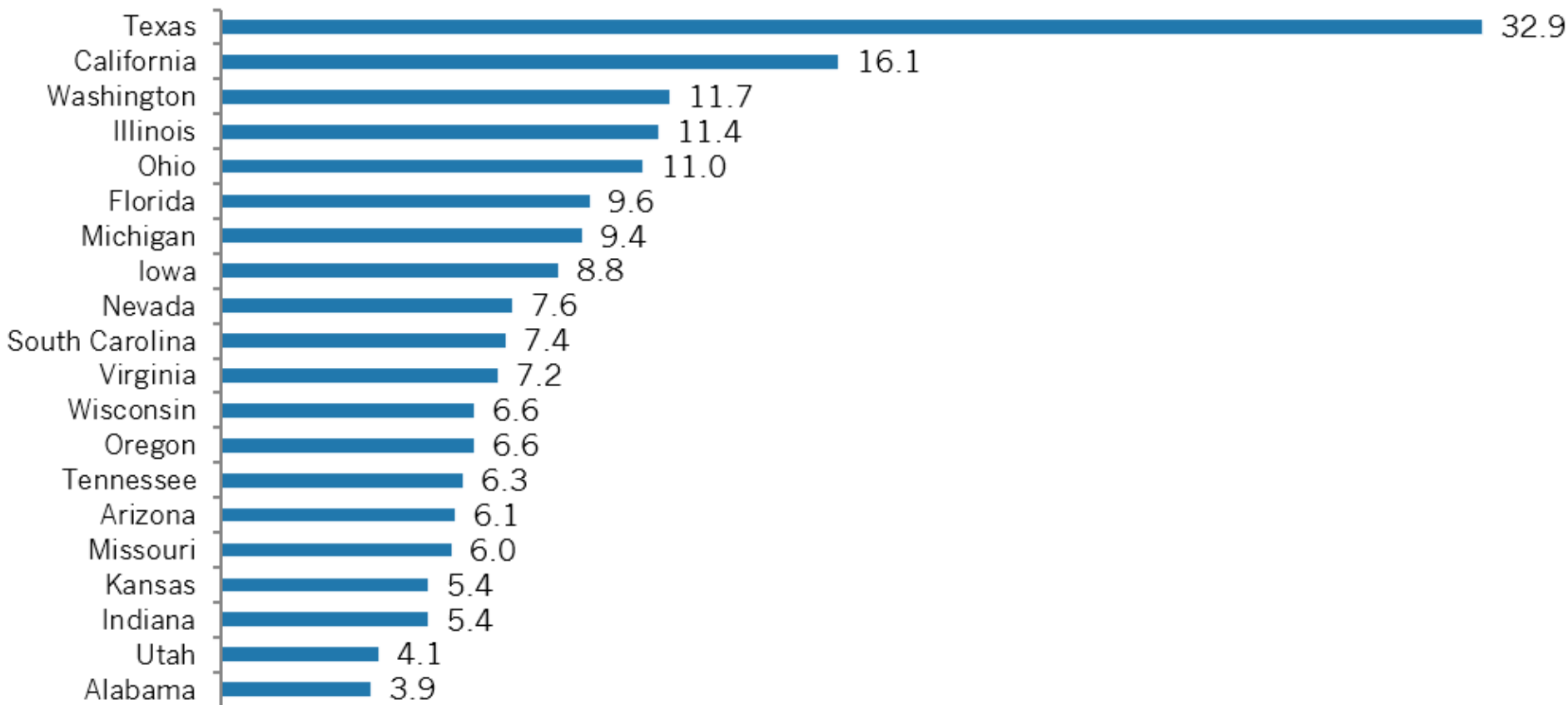
Manufacturing Sectors with the Largest Net Employment Gains

(February 2018 to February 2019, in thousands of employees)



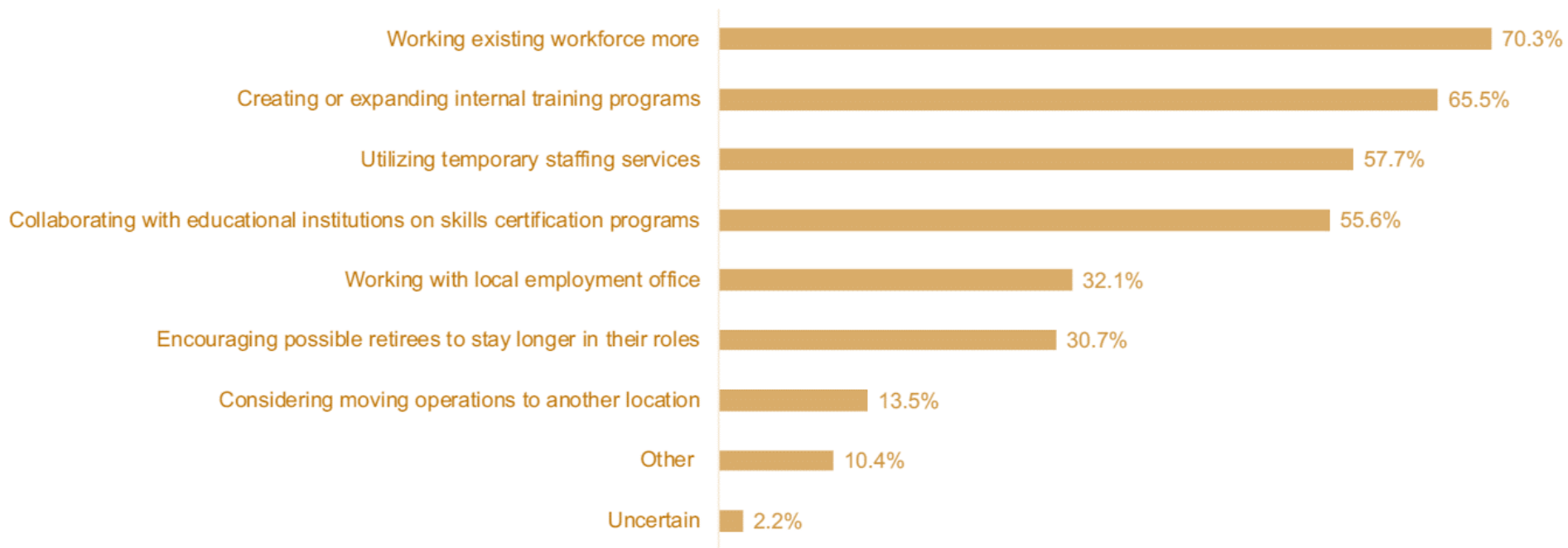
Top 20 States for Manufacturing Job Creation

(January 2018 to January 2019, in Thousands of Workers)



Government

NAM Manufacturers' Outlook Survey: How Firms Are Addressing the Skills Shortage (Fourth Quarter 2018)



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Source: National Association of Manufacturers

Legislative and Regulatory Impacts

Issue	% of companies responding
Cost of Employer-Sponsored Health Insurance	89.13%
Tariffs on Imported Raw Materials (i.e., Paper, Aluminum)	71.11%
Postal Rates	70.33%
Corporate Income Tax and Tax Complexity/Compliance	60.44%
Transportation Costs/Regulations	58.24%
Postal Reform to Modernize USPS	56.04%
USPS Operational Regulations	54.94%
Cost of Energy at Facility	54.34%
Capital Gains/Dividends Taxes	48.91%
"Do Not Mail" Initiatives (similar to "Do Not Call")	48.35%
Advertising Tax Deduction (preservation of)	48.35%
Trade Agreements (i.e., U.S.-Mexico-Canada Agreement)	46.66%
Preserving Consumer Choice for Paper Options to Government Information/Services	46.15%
Workforce Development/Retention	43.47%
Cost Recovery/Bonus Depreciation	42.86%
Minimum Wage Increase	42.39%
Sales Tax (Wayfair Decision on State Sales Tax Collection)	42.22%
S-Corp Tax Issues	40.66%
Combating Fees/Penalties on Consumers Choosing Paper Bill Presentment	40.21%

PRINT & PACKAGING LEGISLATIVE SUMMIT

June 19–20, 2018 • Washington DC



The Print & Packaging Legislative Summit was an opportunity for our industry to address our country's legislators as one industry with one voice. This government affairs event brought together printers, packagers, converters, suppliers, and allied interest for a powerful program of public policy and political education. Points discussed include:

- Environment Regulations
- Recycling
- Postal Reform
- Paper & Steel/Aluminum Tariffs
- Workforce Development
- Additional Tax Reform
- Pro-growth, pro-jobs policies
- Promotion of the print and packaging industry

Here were the policy briefs that were delivered to the members of the Senate and Congress:

- ▶ Health Care Reform
- ▶ International Trade, Modernize NAFTA, Extension of the TPA (Trade Promotion Authority)
- ▶ Paper use Advocacy-Congress should ensure the choice of and access to paper-based delivery of essential government, financial and medical information. Example would be receiving your Social Security Statements
- ▶ Postal Modernization & Reform-Congress should pass legislation to ensure the future viability of the U.S. Postal Service (USPS) and the mailing economy
- ▶ Aluminum Tariff relief
- ▶ Tariffs on Canadian Imports of Uncoated Ground wood Paper relief

Questions or Comments?

Thank you