INDEX & TRENDS REPORT

VOLUME EIGHTEEN

JUNE 2016

TLMi®

A LETTER FROM THE CHAIRMAN OF THE BOARD

Colleagues and Friends,

One of the benefits of TLMI membership is relevant, tailored market research specific to the label industry. The TLMI Biannual Index & Trend Report is designed to give our members insight into the current state of the economy and industry as well as a thoughtful vision of what to anticipate in the months and years to come.

The Index & Trend report is a key resource for TLMI's converter and supplier members because it provides economic forecasts and industry benchmarks to assist our members with internal strategic planning and goal setting objectives. Included in this year's report are the results of the 2016 Brand Owner and Packaging Buyer Survey which provides market intelligence from the brand and packaging procurement level.

Surveying brand owners and packaging buyers annually allows TLMI to track and report on key market trends such as label procurement volume projections, perceptions of environmental policy trends, and changing expectations and requirements of label vendors. For the first time in the Index & Trends Report we asked brand owners and packaging buyers about the value of shifting artwork development and design from agencies to label converting companies. Brand owners' service level expectations are rising and converters are constantly seeking ways to add value to their business relationships and TLMI is committed to providing our converter members with valuable information to make the best business decisions going forward.

This issue also dives into brand owners' perceptions of different sustainability protocols including converter environmental certification, waste recycling, and Life Cycle Analysis (LCA) utilization. Finally, the Brand Owner and Packaging Buyer Survey asked companies was about the importance of vendor expertise in areas such as extended text/content labels, removable and all temperature adhesives, shrink, and RFID.

TLMI's proprietary research helps all of us run more profitable and efficient businesses. I trust you will find value and insight in the following pages. Hopefully, you will be able to join us at the 2016 Annual Meeting in October to discuss the industry further.
Best regards,

Dan Muenzer

VOLUME EIGHTEEN - June 2016

SECTION ONE:

Overview and Economic Outlook 1
U.S. Industrial Production to TLMI Member Sales 5
Retail Sales 6
Food Production 7
Beverage Production Index 8
Plastics Material & Resin Production 9
Pharmaceutical & Medicine Production 10
Cosmetics Consumption 11

SECTION TWO:

The Voice of the Brand Owner/ Packaging Buyer 12
Annual Label Procurement Volume Growth 2016-2018 14
Label Converters as Artwork Development/Design Source 15
Label Converter Environmental Certification Demands 16
Recycling Waste Materials 18
Utilizing LCA (Life Cycle Analysis) 19
Label Vendor Geographic Proximity Demands 20
Perceptions of Label Vendors' Value-Add Services/Products 21
Drivers in Seeking New Label Vendors 23

SECTION THREE:

TLMI Converter Quarterly Trends Report Synopsis Q1 2016 24

SECTION ONE

Overview and Economic Outlook

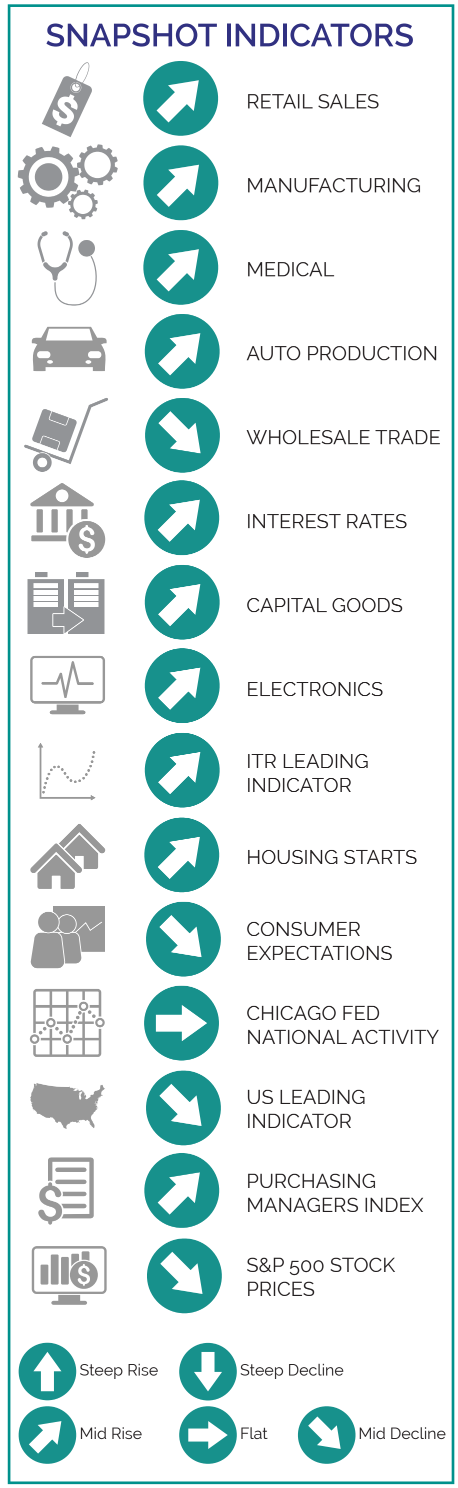
Macroeconomic Review

US total industrial production for the twelve months through April declined 0.9% compared to last year. Tentative signs of 3/12 rise, along with a recovery in the business to business economy, support expectations for 12/12 rise in production in late 2016. The US consumer is the driving force of the economy; retail sales are up 2.1%, after accounting for inflation, as wages rise and unemployment falls. Retail sales of automobiles are up 5.1% year over year and US food production is up 1.2%. Industries closely tied to consumer activity are expected to outperform their industrial counterparts in 2016 and support ongoing growth in the manufacturing segment of total industrial production. The US total industrial production forecast was extended through 2019 (along with the rest of the regional indicators), and predicts a consumer led recession in 2019.

Higher commodity prices and a weaker dollar are helping business to business activity take steps toward recovery. US machinery new orders, which accounts for approximately half of all business to business activity, is recovering. We are also seeing rate of change improvements in new orders sectors with strong ties to commodity prices and industrial activity, such as US iron and steel mills new orders (two consecutive months of rise in the annual growth rate) and US fabricated metal products new orders (most recent three months up 2.5% from one year ago).

Areas with closer ties to consumers are generally expanding. US computer and electronics products new orders is up 9.2% year over year while US furniture and related product new orders is growing at an annual rate of 6.6%. Wage growth (currently 3.2%) is out pacing inflation (currently 1.1%). Unemployment, gasoline prices, and interest rates remain low. This is putting consumers in a position to spend and save at the same time. US retail sales excluding gas stations (deflated) is rising at an annual rate of 4.2%, nearly a full percentage point above the five-year average of 3.3% that spans a period of uninterrupted US real gross domestic product growth. Meanwhile, US personal savings as a percentage of disposable income rose to 5.4 % in March. This is up one percentage point from the most recent low of 4.3% in December 2013. Consumers are in position to drive US real gross domestic product into 2018.

Despite struggles in 2016, we are confident that consumer strength will support the manufacturing sector and keep both US and Europe economies afloat. The return of balance in supply and demand in oil next year will stabilize oil prices and improve global economic conditions.



Terminology Definitions: 3/12 = the most recent three months compared to the same three months one year ago (for example February, March and April 2016 vs. February, March and April 2015). If this number gets larger, ITR sees that as a "3/12 cyclical rise" and is an indication of positive momentum for the data series. As it gets smaller, or goes negative, this is a signal of cyclical decline. 12/12 = a rolling twelve month total/average (12MMT/12MMA) compared to the same twelve months one year ago (for example: April 2015-March 2016 vs. April 2014-March 2015).

The Retail Sales Trend Is Pulling the Economy Higher

A message from Brian Beaulieu, CEO of ITR Economics

We like what we see with this April 2016 retail sales data. US retail sales are ascending to record highs and the year over year rate of growth indicates a fundamentally healthy economy. Even the soft to negative parts of the economy should take heart from this trend, particularly the US oil industry. Rising retail sales will support rising gross domestic product, which in turn means oil consumption will continue to rise. Rising oil consumption combined with declining oil production in North America will lead to pressure for higher oil prices domestically, which will help the industry. We do not expect that the supply and demand trends will lead to oil prices going so high in 2016 and 2017 that they will end up hurting the consumer trend and the broader economy.

The latest twelve month moving total for total retail sales is 2.1% higher than a year ago, after adjusting for inflation. This is unchanged from the prior two months. Total retail sales for the last three months is up 3.3% from the year prior. This is a favorable signal for where the trend in total retail sales is heading and where the overall economy is heading.

Lately, we backed out gas station retail sales when looking at retail sales in general because of the volatility in gasoline and diesel prices. Because gas station retail sales are running below year earlier levels due to pricing issues, the retail number excluding gas and diesel are even better than the total. Excluding gas stations, retail sales for the last twelve months are up 4.2% from the prior year and up 4.0% for the latest three months. These are very good numbers and indicative of a consumer that is out there spending money and keeping our economy moving upward.

Consumers have the wherewithal to keep the retail sales trend moving in the right direction at a pace that is indicative of general economic growth.

The money supply (M2 measure, deflated) is rising at a faster than normal pace. Money supply growth is presently up 5.3% (1/12 rate of change). This is an aggressive growth rate given the ten year average is 4.2% and the twenty year average is 3.9%. Ongoing money supply growth will equate to further retail sales growth in 2017.

Adding to our projection of retail sales growth supporting ongoing gross domestic product ascent is the rising trend in disposable personal income (adjusted for inflation). Disposable income is after tax income. It is up 3.1% (1/12 rate-of-change). This is well above the average annual growth rate of 1.8% for the last ten years. A 2.3% increase rate in job growth, and wages rising in excess of the consumer price index measure of inflation, are helping the disposable personal income trend. It is true that US consumers are saving more money, but it is also true that we still like to spend it. Retail sales projections are set for further growth.

Plan on good things happening to your business the more closely associated with retail sales you are. The consumer is the powerful economic engine pulling this economic train out of the commodity induced valley.

Brian Beaulieu is one of the country's most informed economists and has served as the CEO of ITR Economics™ since 1987 where he researches the use of the business cycle analysis and economic forecasts to increase profitability. Brian has been providing workshops and economic analysis seminars for the last three decades. During that time he has also been consulting with companies to provide a global perspective on forecasting, planning and increasing profits. Brian is on the Board of Directors of the Ariens Company, a global leading manufacturer of outdoor power equipment and a member of the Investment Committee for NorthStar Financial Services, CLS Investments in Omaha, Nebraska. Brian is also Chief Economist for Vistage International, a global organization of CEOs comprised of over 16,000 members. Brian's views have appeared in and on the Wall Street Journal, The New York Times, Barron's, USA Today, CNBC TV, FOX Business TV, Reuters, CBS Radio, The Washington Times, Forbes, Atlanta Journal Constitution, and numerous other outlets. He is a regular columnist and contributing economist to national trade associations and publications.

Retail Sales

US retail sales (deflated) totaled $2.266 trillion in April, 2.1% ahead of the previous year. Retail sales growth is driven by consumers enjoying rising wages (up 2.4%), high employment (up 1.7%), and rising disposable personal income (up 3.2%). Expect total retail sales to generally expand over the next three years.

Manufacturing

US total manufacturing production in the twelve months through April is up 0.6%. Production in the past three months is up 0.7% and accelerating. Upward movement in the purchasing managers index supports expectations for accelerating growth in the second half of 2016.

Medical

US medical equipment and supplies production is up 1.3% in the twelve months through April compared to the previous year. Retail sales at pharmacies and drug stores is up 5.1%, and wholesale trade of drugs and druggists' sundries is up 11.9%. Expect production for 2016 as a whole to be 5.0% above the 2015 level.

Mining Production

US mining (excluding oil and gas) production in the twelve months through April is down 9.5% on a year over year basis. Tentative signs of improvement in the Chinese economy, a major consumer of ferrous metals, suggest pricing pressures may diminish in late 2016 which will support increasing production.

Wholesale Trade

Wholesale trade of durable goods in the twelve months through March is down 1.0% compared to the previous year. Segments related to consumer activity are outperforming total durable goods, while wholesale trade of nondurable goods is down 6.6% in the face of low oil prices. Wholesale trade of petroleum products is down 33.0%.

Interest Rates

US corporate AAA bond yields fell nine (9) basis points in April to 3.63%. US Government longterm bond yields rose twenty three (23) basis points to 0.93%. Longterm interest rates are rising as inflationary pressures build and the US moves toward broad economic expansion in late 2016.

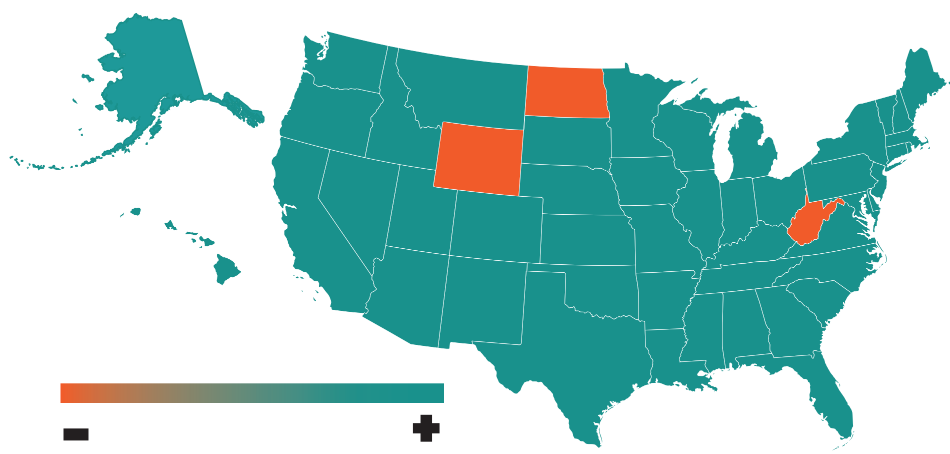
Capital Goods New Orders

Annual US non-defense capital goods new orders totaled $778.8 billion in March, 3.3% ahead of the previous year. A weaker US dollar is bolstering capital goods exports and recovery in machinery new orders is helping to drive recovery. Expect new orders to expand in late 2016, finishing the year up 2.1% over the 2015 level.

Consumer Expectations

The US average dollar trade weighted index fell to $89.38 in April, signaling that the US dollar is softening versus our major trade partners. The euro rose to 0.87 euro per US dollar, and the CAD rose to 1.26 CAD per US dollar. Expect the dollar to weaken further In 2016, making US exports more competitive in the global market.

State by State: Employment



Employment is above the level that it was just a year ago in the majority of the United States. Strong employment growth is noticeably clustered in the We and Southeast regions, which are not as reliant on total job growth stemming from mining and agricultural industries. Employment declined below its level a year ago in North Dakota, West Virginia, and Wyoming due to weak mining and oil & gas industry trends. Low energy prices have weighed on employment growth in Louisiana. Although growing, employment growth is noticeably weaker in the southern part of the Central region.

Leading Indicator Table

INDICATOR	DIRECTION	WHAT IT MEANS FOR THE US ECONOMY
ITR LEADING INDICATOR™	RISE	Three months of rise from the January 2016 cyclical low signals tht US industrial production will recover in the second half of 2016.
HOUSING STARTS (most recent twelve months compared to same twelve months one year ago)	RISE	Double digit growth in starts shows a stronger consumer which will support the economy in 2016.
CONSUMER EXPECTATIONS INDEX (most recent twelve months compared to same twelve months one year ago)	DECLINE	Contraction indicates the index will decline further and points to weaker economic conditions in the second half of the year.
CHICAGO FED NATIONAL ACTIVITY INDEX (six month average)	FLAT	The tick up in February shows tentative growth which would point to a stronger second half of 2016.
US LEADING INDICATOR (most recent month compared to the same month one year ago)	DECLINE	Generally decline in the indicator suggests that the cyclical downturn in the US industrial production could persist into late 2016.
PURCHASING MANAGERS INDEX (most recent month compared to the same month one year ago)	RISE	General rise points to a stronger US economy in the second halfof 2016.
S&P 500 STOCK PRICES (raw data)	MILD DECLINE	April growth shows a potential trend reversal for the economy in the coming months.

LONG TERM VIEW:

2016: slower growth **2017:** robust economic activity **2018:** ongoing strength

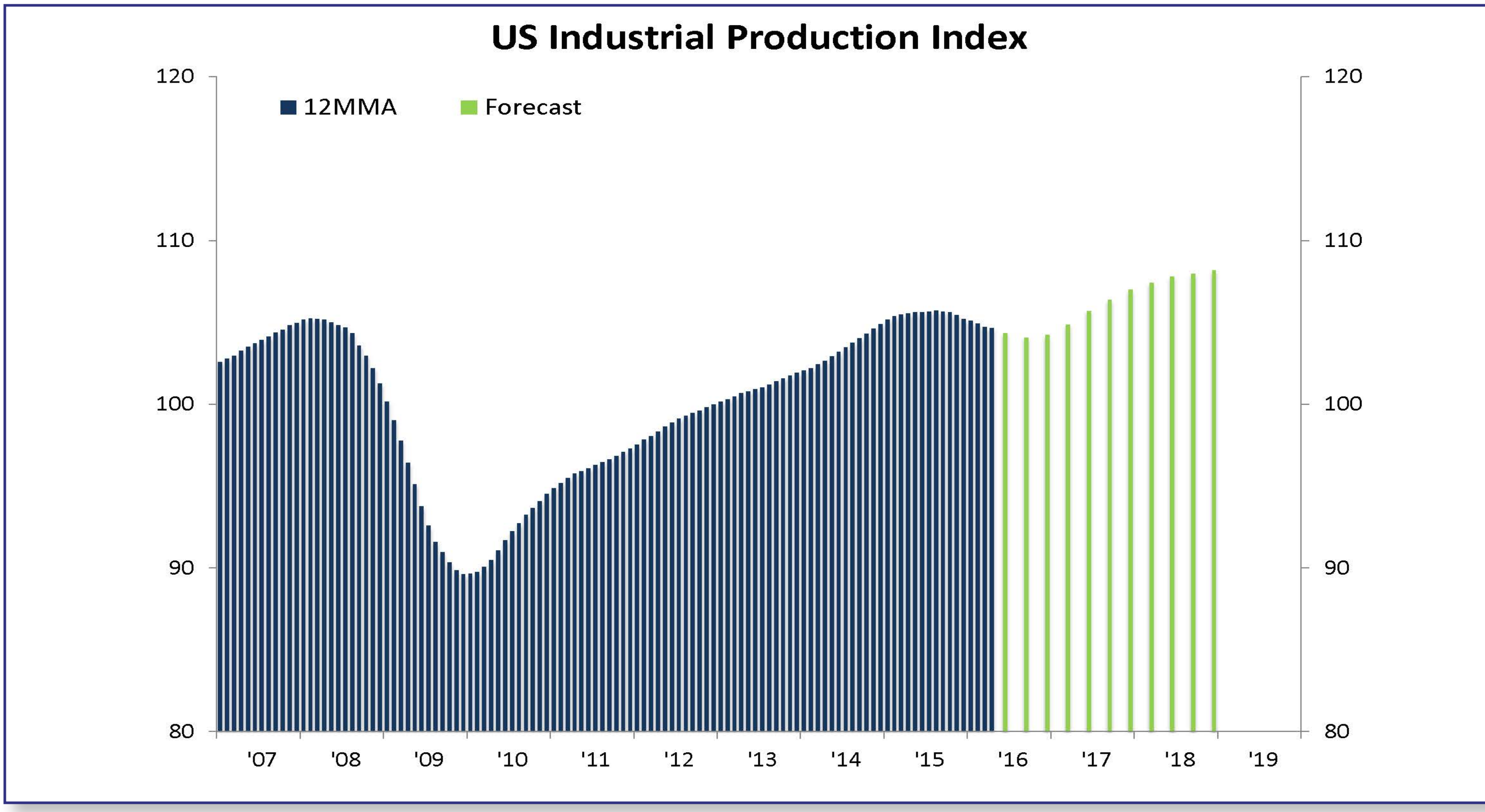
Reader's Question

I've heard in past presentations that we should be looking into Mexico. Can you elaborate on the logic behind investing in the Mexican economy, especially given security risks?

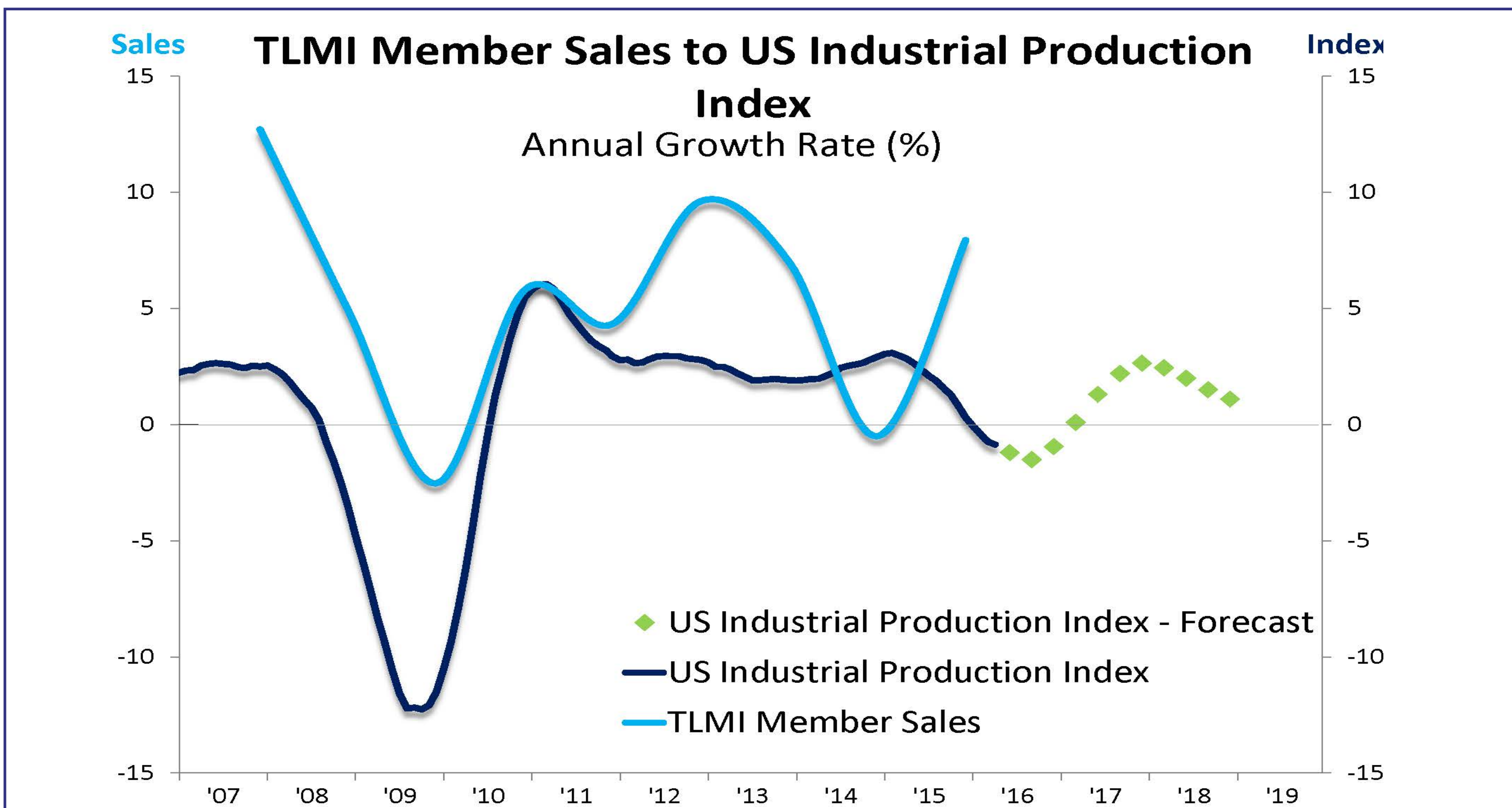
Answer:

There certainly are security risks in Mexico, but with any risk comes the potential for reward. From an economic standpoint, Mexico has a lot going for it: a growing (and fairly young) population, an expanding middle class, an abundance of natural resources, and near-sourcing. Near-sourcing is particularly important as companies reconsider their facilities in China. Firms are expanding into Mexico to take advantage of labor costs that are lower than the other North American countries, but still have the ability to take advantage of NAFTA tariff-free trade. We expect this trend will persist over the long run as the regional economies continue to improve.

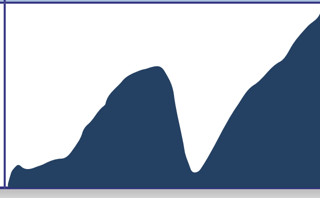
US Industrial Production



US Industrial Production to TLMI Sales

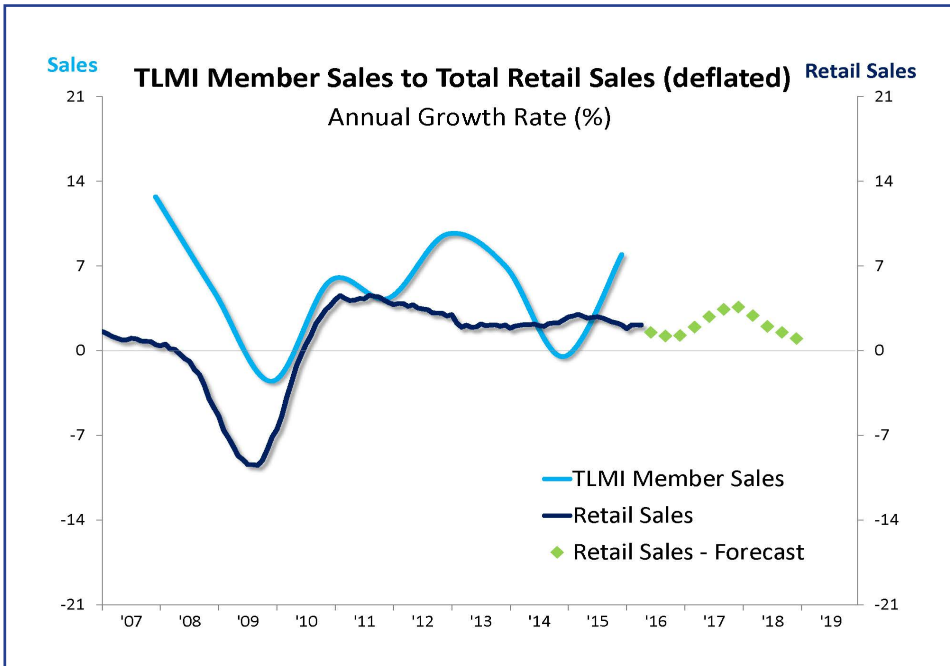


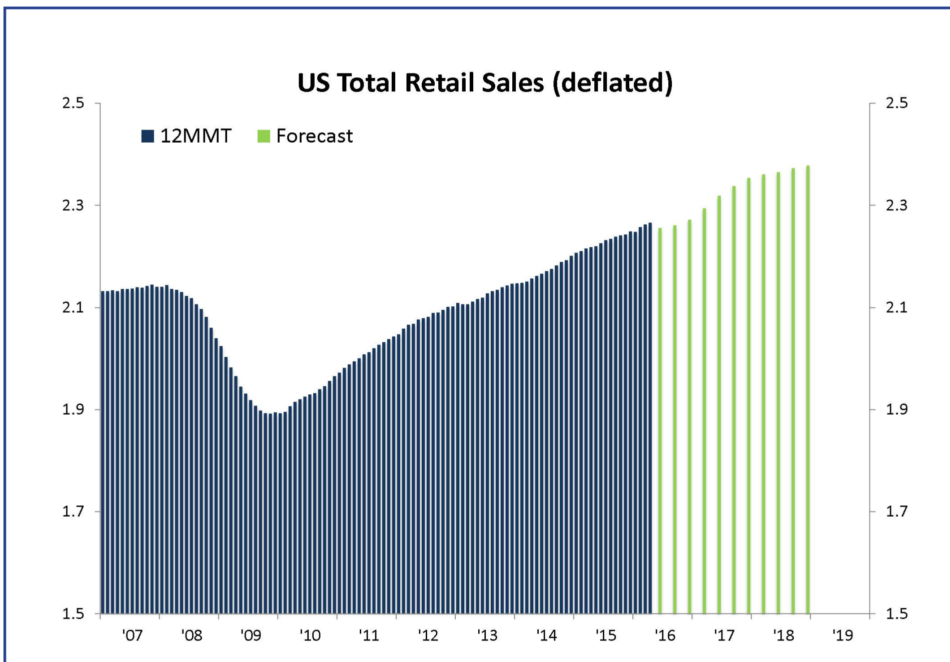
Retail Sales

Indicator	Data Trend [2000 - present]	Direction	2016 Estimate % Change	2017 Estimate % Change	2018 Estimate % Change	Outlook
Total Retail Sales (Deflated)		Mild Rise	1.3%	3.6%	1.0%	Retail Sales will generally rise through the end of 2018.

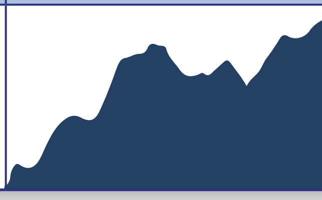
As measured by gross domestic product (GDP), the consumer is supporting the US economy amid weaker industrial output and exports. US retail sales in the twelve months through March totaled $2.266 trillion, an increase of 2.1% compared to the previous year. However, retail sales growth is and will continue to grow at a slower pace throughout 2016. Improving employment trends and rising disposable personal Income suggest retail sales activity will be stronger in 2017 than in 2016.

Consumers are turning away from traditional shopping outlets. Retail sales at non-store retailers are up 46.2%, and e-commerce sales doubled in the past five years versus 11.0% growth over the same period at general merchandise stores. Look to Online markets as traditional outlets face weakness.



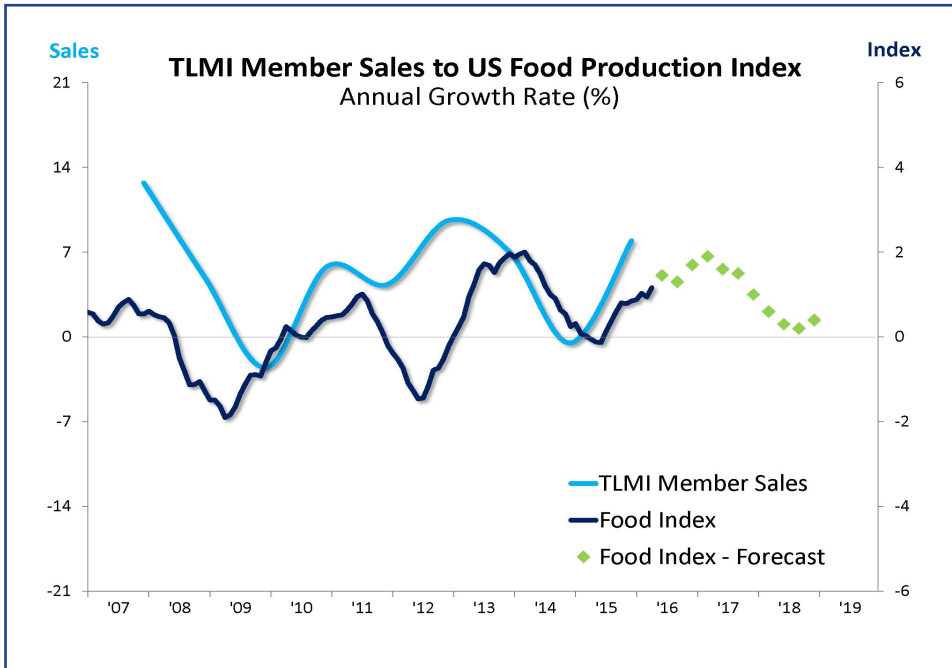


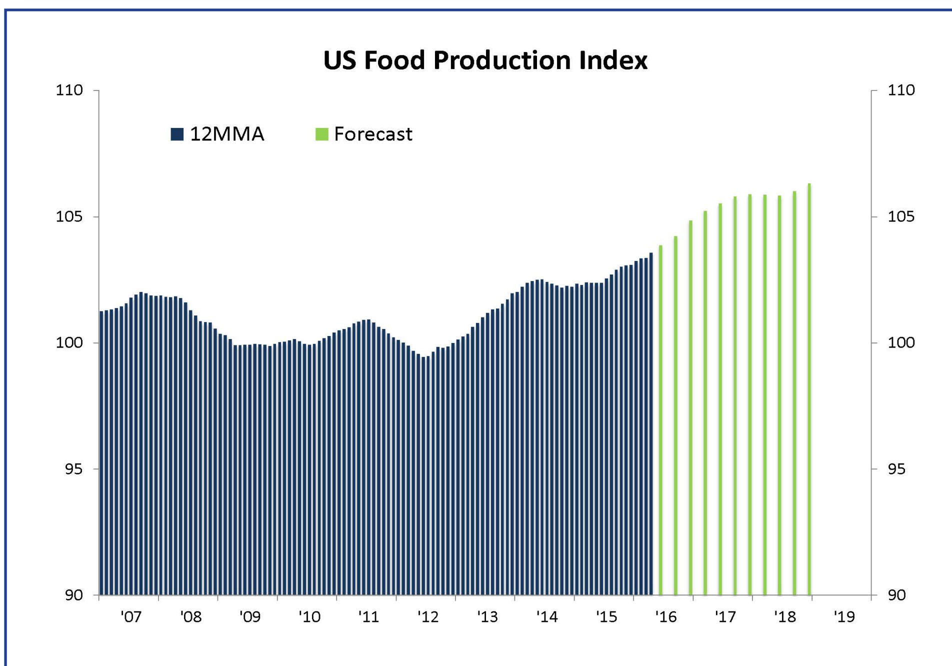
US Food Production

Indicator	Data Trend [2000 - present]	Direction	2016 Estimate % Change	2017 Estimate % Change	2018 Estimate % Change	Outlook
Food Production		Rise	1.7%	1.0%	0.4%	Production will expand through at least the end of 2018.

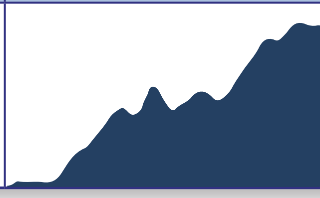
Average food production reached a record high in the twelve months through April, up 1.2% from the year ago level. Food production is expanding at an accelerating pace, which will persist into 2017. US food production will grow through 2018, but at a slower pace in 2017 and 2018.

US beef production and US grain production are both in recovery, and internal trends signal that market improvement will persist through at least mid 2016. US bakery production and US cheese production are rising at an accelerating rate. Growth in these segments will support the rising trend in US food production growth into 2017. The food industry will present growth opportunities while industries tied to raw materials struggle into 2017. Look for expansion opportunities into this market through 2018.



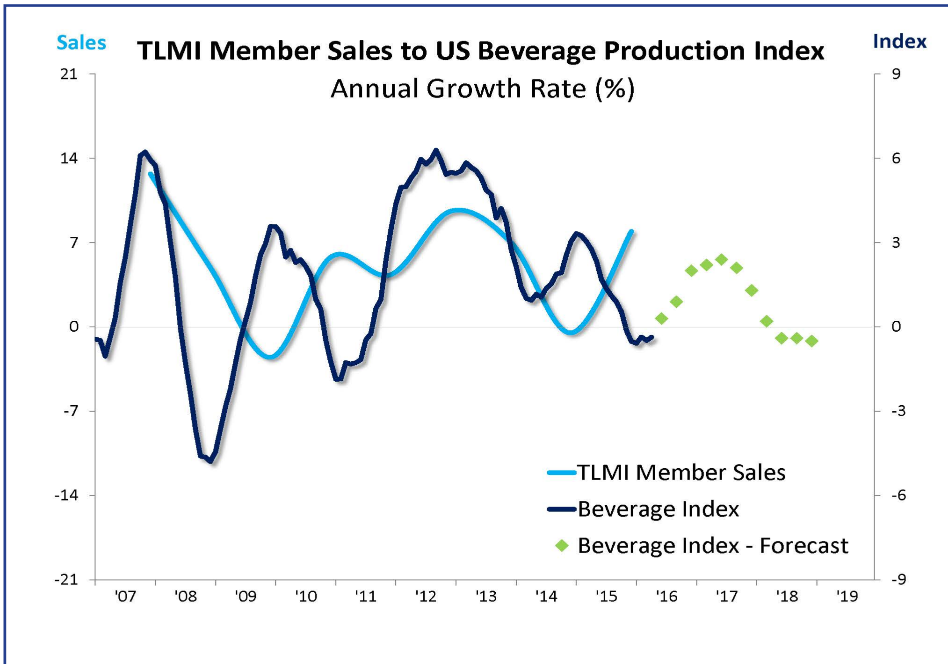


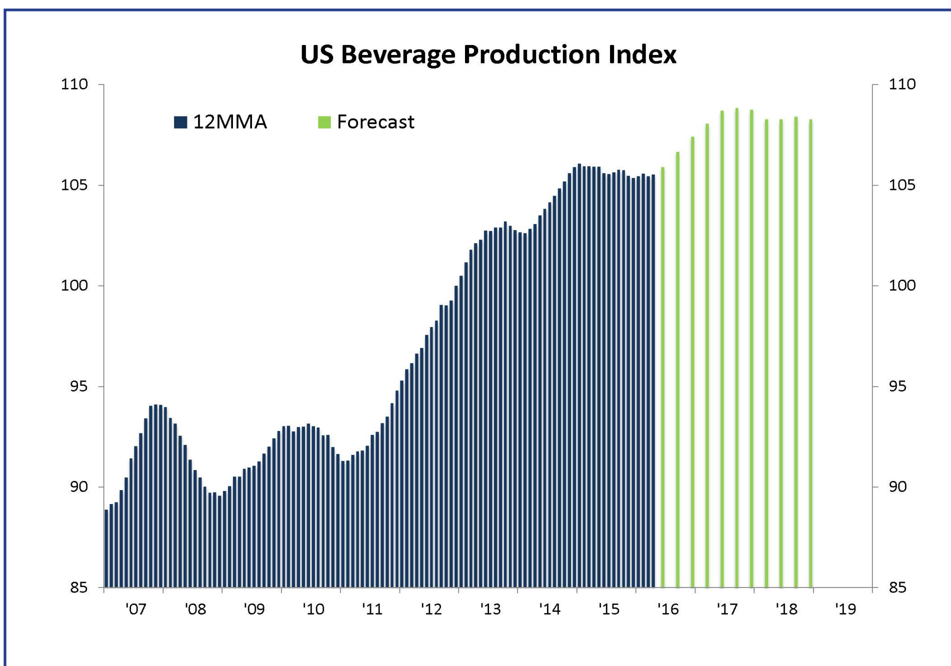
Beverage Production Index

Indicator	Data Trend [2000 - present]	Direction	2016 Estimate % Change	2017 Estimate % Change	2018 Estimate % Change	Outlook
Beverage Production		Mild Rise	2.0%	1.3%	-0.5%	Production will rise through mid 2017 and will then flatten in 2018.

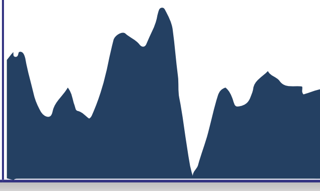
Beverage production declined 0.4% in the twelve months through April from the year ago level. However, US beverage production is showing nascent signs of expansion and internal trends are rising. This positive movement suggests beverage production will grow above year ago levels imminently. Beverage production will generally expand into mid 2018, before ending the year 0.5% below the 2017 level.

Expansion is not uniform through this market. Distillery production is growing the fastest, followed by wine production, coffee & tea, and fluid milk production. Soda and breweries production are contracting. Look for near term opportunities with the liquor and wine industry as these markets tend to be counter cyclical to the overall economy.



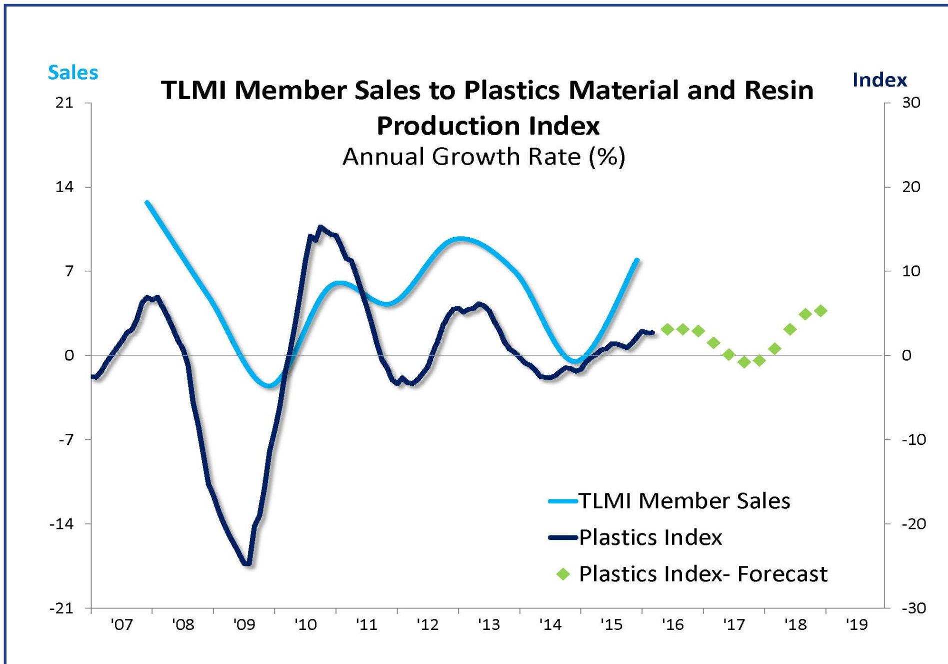


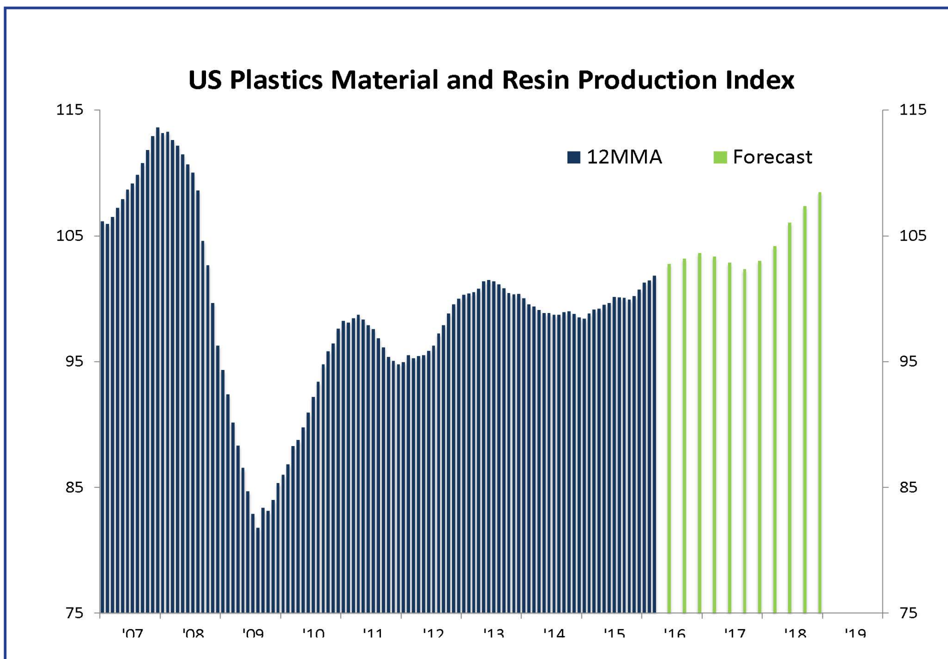
Plastics Material and Resin Production

Indicator	Data Trend [2000 - present]	Direction	2016 Estimate % Change	2017 Estimate % Change	2018 Estimate % Change	Outlook
Plastics & Resin Production		Rise	2.9%	-0.6%	5.3%	Production will expand through 2016 before mildly declining through most of 2017. Production will then rise through at least the end of 2018.

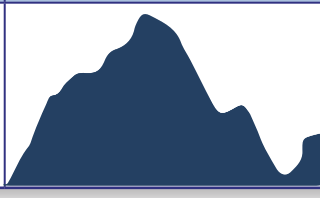
US plastics material and resin production in the twelve months through March is up 2.7% from the year ago level. Production will peak at the end of 2016 and will decline for most of 2017. Avoid major workforce or capacity reductions as the contraction will be mild and brief before growth takes hold through 2018.

US plastics material and resin production is benefiting from strong downstream demand. US food production over the past twelve months is up 1.2% from the year ago level, and US general purpose machinery is in a rising trend. Slower growth in these markets expected by 2017 signals that plastic production will face headwinds going into 2017. Current cyclical rise in natural gas futures prices suggests there will be growing industry demand by late 2017, indicating a rise in plastic material production into at least 2018.



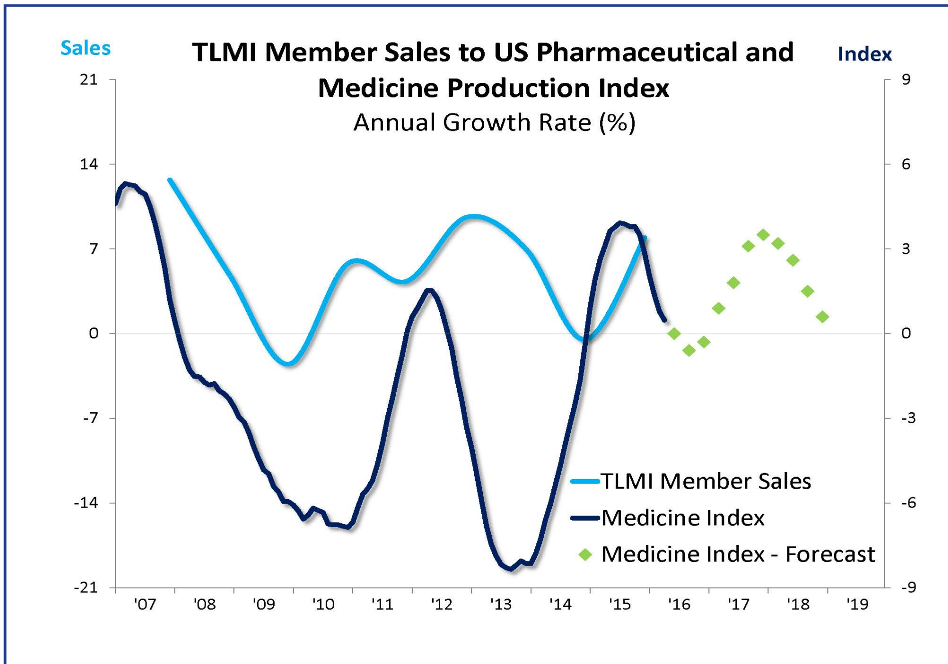


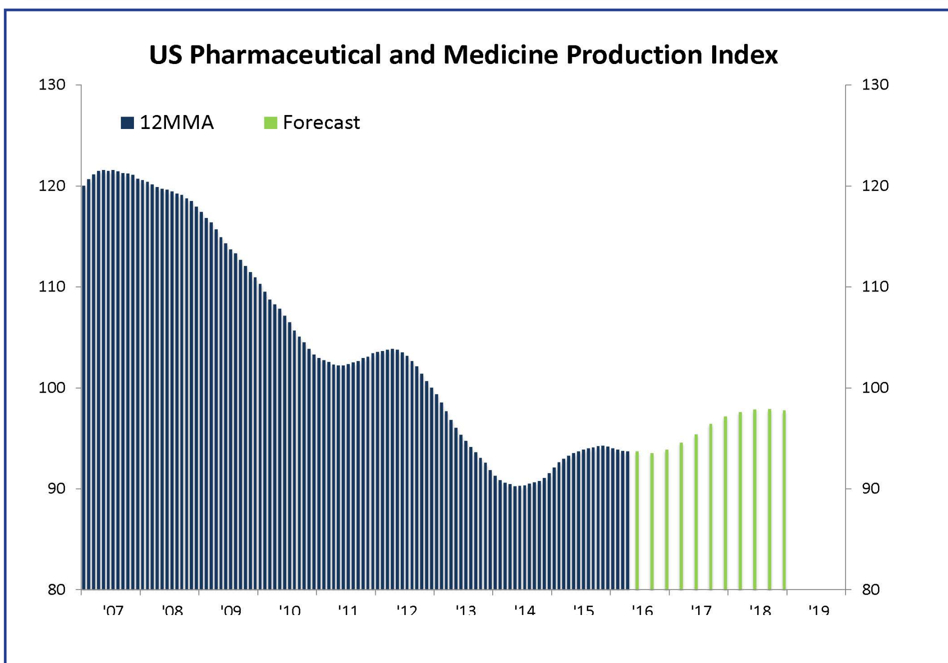
US Pharmaceutical and Medicine Production

Indicator	Data Trend [2000 - present]	Direction	2016 Estimate % Change	2017 Estimate % Change	2018 Estimate % Change	Outlook
Pharmaceutical Production		**Mild Decline**	**-0.3%**	**3.5%**	**0.6%**	**Production will mildly decline into the late 2016. Production will rise into late 2018.**

US pharmaceutical and medicine production rose 0.5% over the past year, but will fall below the year ago level imminently. The decline in production will be mild and short in duration, ending the year 0.3% below the 2015 level. Production will then expand into late 2018, with 2018 ending slightly above the 2017 level.

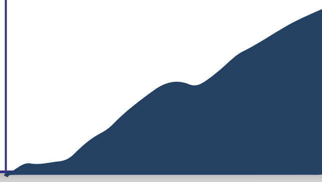
Hospital construction growth is decelerating. However, US State and local tax revenue will drive a near term recovery in public health care construction and year over year growth by the end of the year. This expected rise in construction activity suggests upcoming demand which will support production by late 2016. Divert sales and marketing efforts to the public sector of the healthcare market to capitalize on growth as government spending will increase over the next three years.





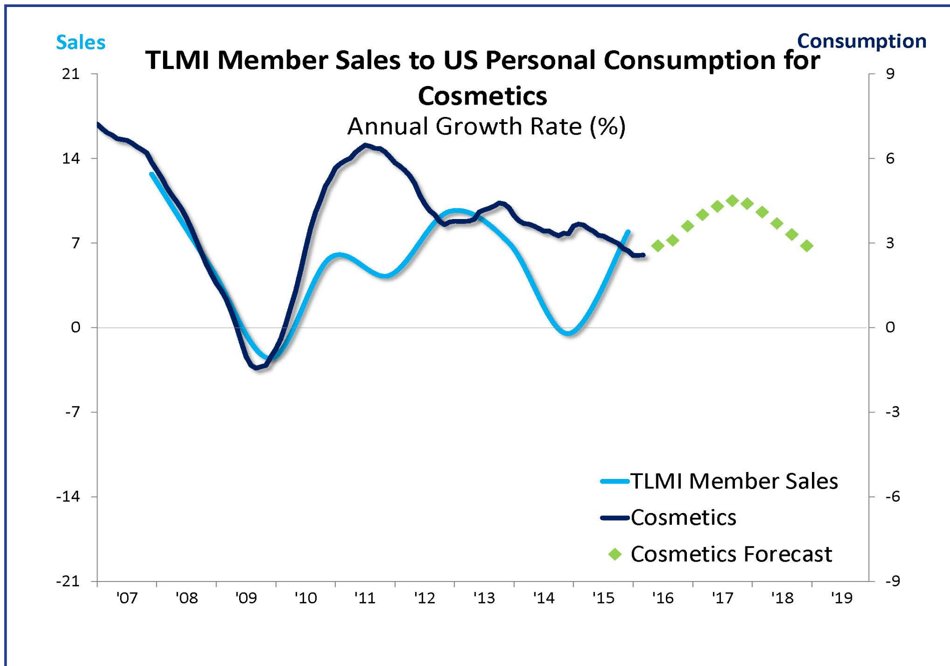
TLMI

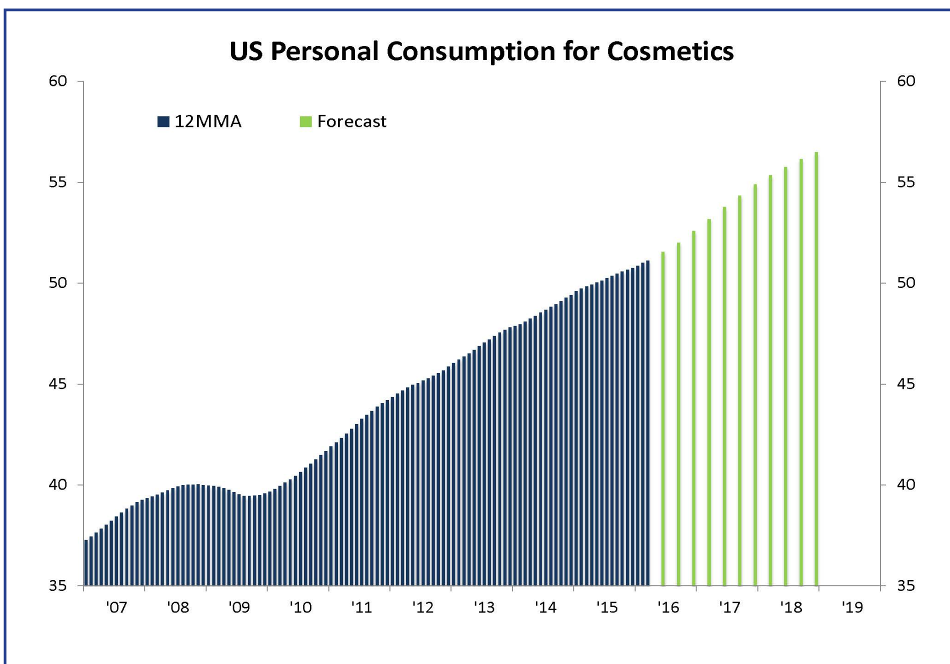
Consumption of Cosmetics

Indicator	Data Trend [2000 - present]	Direction	2016 Estimate % Change	2017 Estimate % Change	2018 Estimate % Change	Outlook
Cosmetics Personal Consumption Expenditures		**Rise**	**3.6%**	**4.4%**	**2.9%**	**Consumption will rise through the end of 2018.**

US personal consumption for cosmetics is expanding at an accelerating pace. Growth over the past year was 2.6%, but the rate will increase to 4.4% by the end of 2017. Growth will subside slightly in 2018, but consumption will expand to record levels through at least the end of 2018.

US soap and toiletries production is signaling growth within this market. Production rose 1.1% over the past year to its highest level in nearly three years and will generally rise through 2018. This is indicative of rising demand during this time. Consumption is performing in line with total retail sales but will outperform retail sales by late 2016. Look to pass on price increases to a strong consumer through 2017 to offset rising input costs.





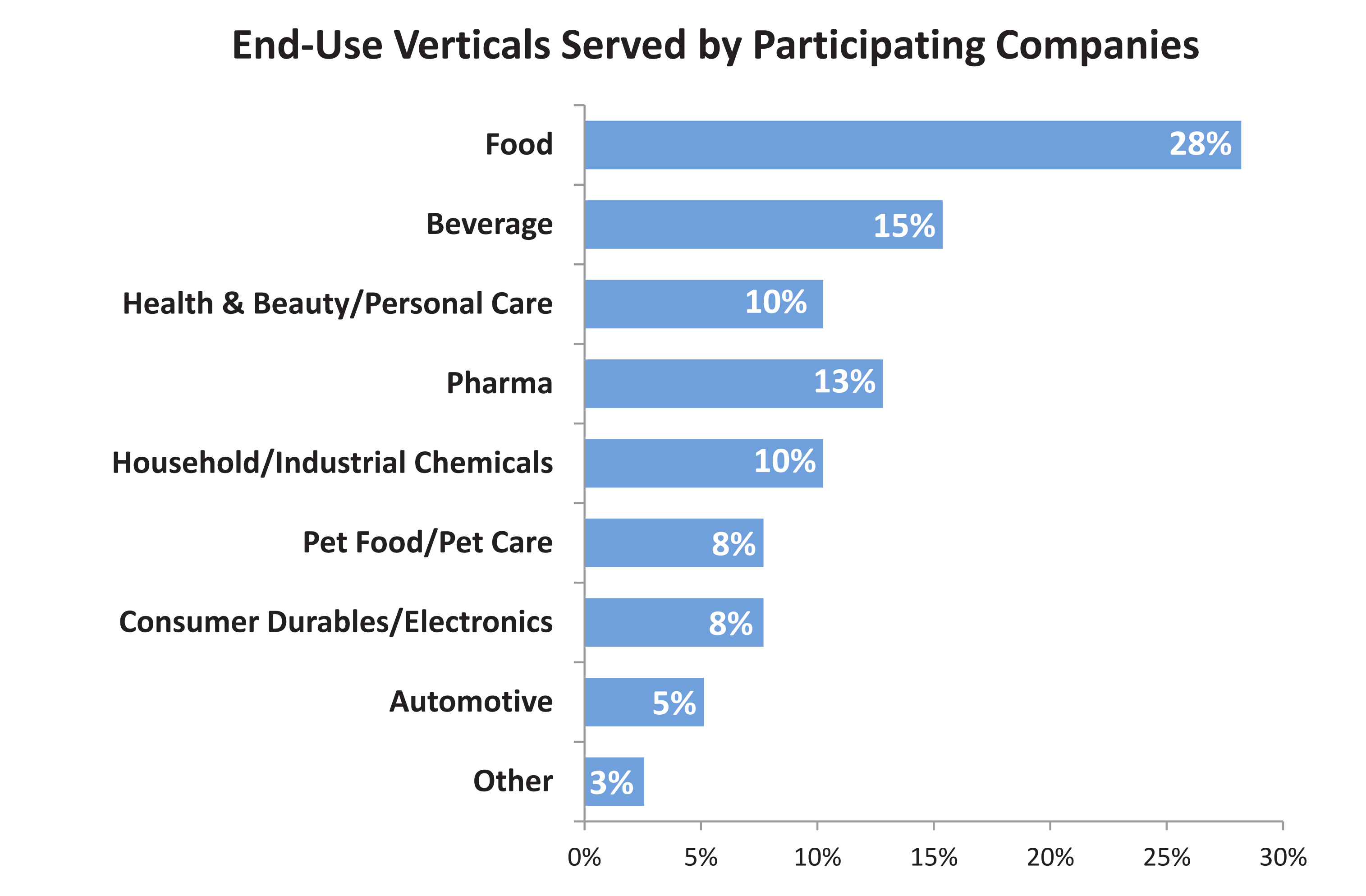
SECTION TWO

The Voice of the Brand Owner/Packaging Buyer

Includes: label procurement volume increases, artwork & design protocols, converter environmental practices, regional sourcing trends, and the primary influences in seeking new label vendors.

Each year the Index & Trend Report surveys industry brand owners and packaging buyers to obtain feedback from the customers and prospects of the association's converter members. These surveys allow us to offer all TLMI members the opportunity to hear the collective voice of the companies that source printed labels across formats: pressure sensitive, glue applied, in mold and sleeves. Companies were asked some new questions for the 2016 brand owner survey. North American label converters continue to seek ways to position themselves as value add solution providers. In an effort to gauge the perceptions of brand owners, companies were asked to rank the importance they place on their converters obtaining environmental certification, recycling waste, and utilizing LCA (Life Cycle Analysis).

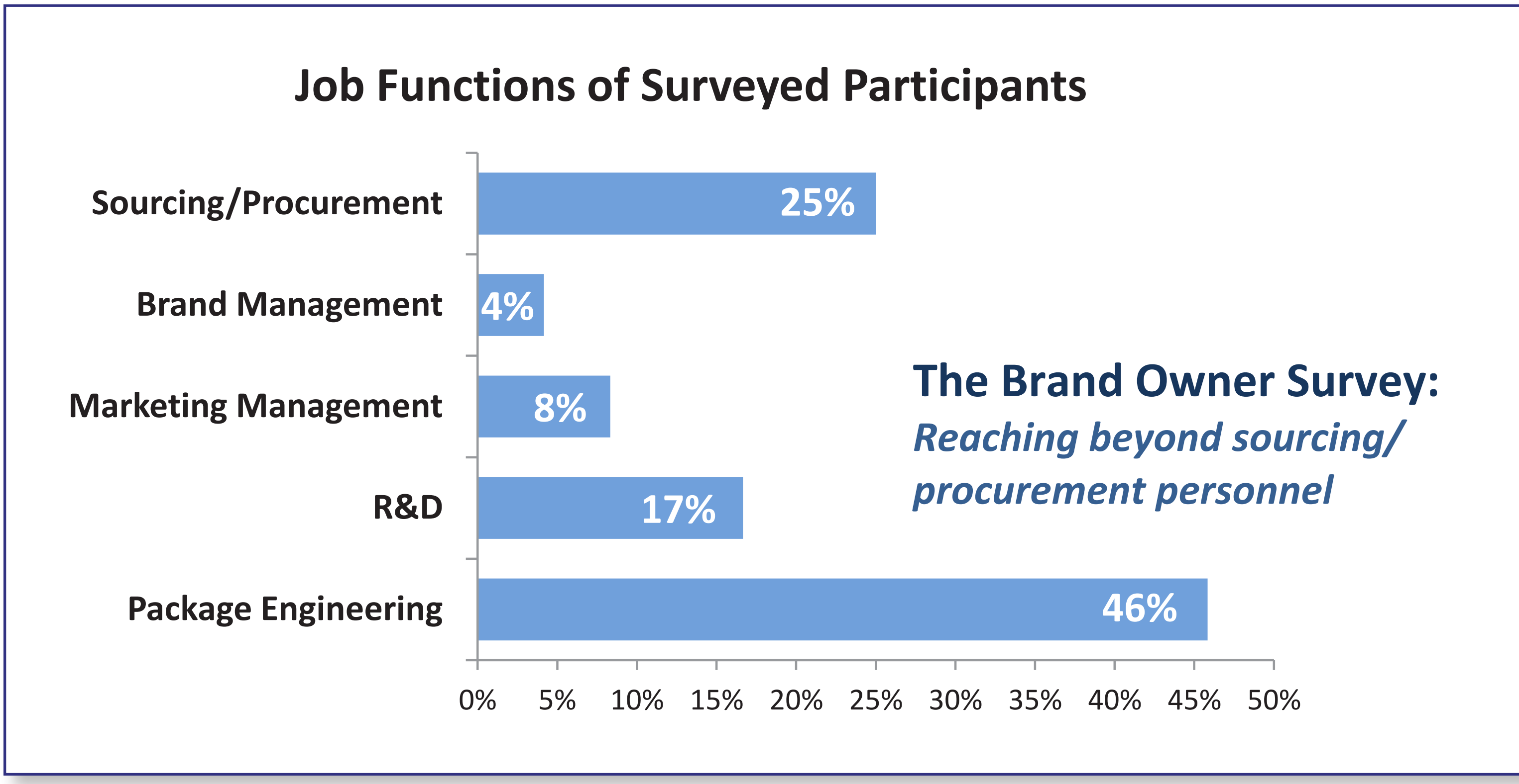
The largest consumer packaged goods companies participate in the brand owner surveys in addition to smaller, regional brand owners. More than seventy brand owners and packaging buyers participated in the surveys and qualitative interviews. Participating companies procure tags and labels across all primary end use categories. The chart below indicates participation by category.



Job functions of participants

More than 40% of participating brand owner companies serve the food and/or beverage sectors. Food and beverage make up more than 50% of North America's total annual label consumption.

In addition to the end use categories their companies serve, survey participants are asked to indicate their job function. One of the goals with surveying brand owners and packaging buyers is to ensure questionnaires are being completed beyond just the sourcing/procurement level. The management of printed packaging procurement is increasingly a cross-functional dynamic. As the printed label continues to move from a decorative and/or single-function feature to an optimally functional piece of the end-product; R&D, package engineering and marketing personnel all play a part in the vendor selection and overall procurement process. The chart below breaks down all participants by job function.

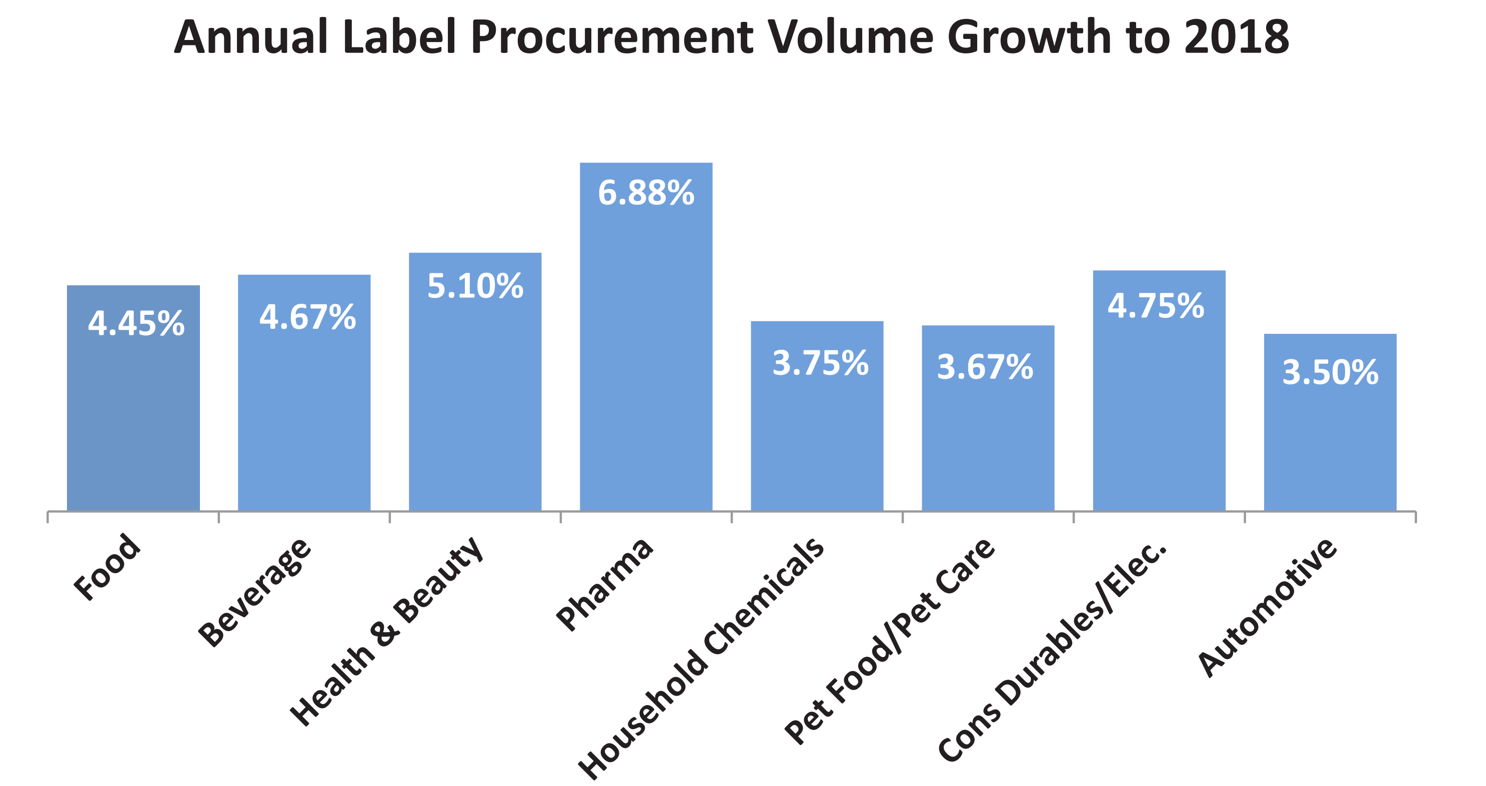


As this graph indicates, package engineers played a central role in the most recent brand owner quantitative and qualitative outreach. The survey has become more technical by asking questions such as the significance companies place on different adhesive types, printing platform types and label converter sustainability practices. Over time, it has become more and more important to obtain participation beyond these companies' sourcing/ procurement teams.

In the near future, the Index & Trend Report will explore areas like food safety and migration compliance. At that time the job functions of surveyed participants will expand even further to additionally include safety and quality personnel at the brand owner/packaging buyer level.

Projected label procurement volume growth 2016-2018

Every two years the Brand Owner Survey asks brand owners and packaging buyers to project their companies' label procurement volume growth (or decline). In the most recent survey, participants were asked to indicate label procurement growth rates for the specific end-use verticals their companies serve. The graph below shows projected annual label procurement volume growth per end-use category to 2018.



Note: "Cons Durables/Elec" = Consumer Durables/Electronics

More than half of TLMI's converter members sell products into the food packaging sector. Average annual growth for food packaging is projected to be 4.5% over the next two years. Historically, label volume growth in the food sector has averaged 1.5-2% above growth for the greater food packaging market. PMMI recently announced that the U.S. food packaging market is forecasted to increase at a steady rate of 2.9% CAGR to 2022.[1] PMMI projects highest growth in the snack and pet food categories.

Projected label procurement volume growth is highest in the pharmaceutical sector averaging nearly 7% per annum to 2018. Like the U.S. food packaging sector, pharmaceutical label volume growth rates have historically averaged 1.5-2% above growth rates in the greater pharmaceutical packaging sector. The pharmaceutical packaging sector is estimated to grow at 4.5-5% CAGR over the next five years. Market drivers include the aging US population, ePedigree/serialization demands, single-unit dosage demand, and the increased sophistication of drug delivery platforms.

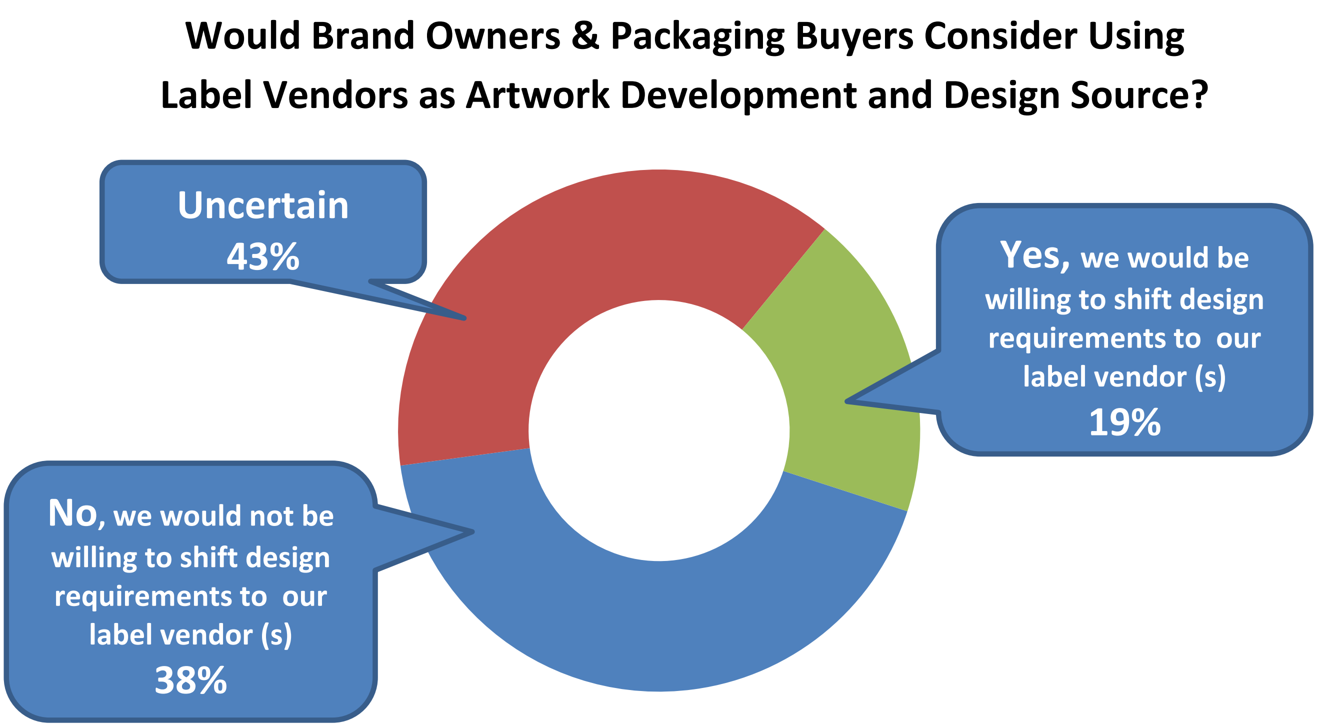
[1]2016 Food Packaging Trends and Advances, PMMI

Value add: Shifting label design to converters and brand owner enforced sustainability requirements

Brand owners' service level expectations are rising. In today's industry the label converter has become an integrated partner in helping brand owners and packaging buyers optimize the functionality and performance of their packaging applications. In the prime label market the label converter is central to enabling brands to differentiate themselves on the retail shelf.

Value add services like VMI (vendor managed inventory), label stock specification analysis, and prototyping aren't new. Label converters have been offering practices like these for more than a decade. However, one service that is gaining traction is the ability for label converters to replace design agencies in the creation of artwork. The Brand Owner survey asked participants about their company's current label design protocols. The survey also asked if packaging buyers would be open to sourcing the development and creation of their artwork to their label vendors given the sophisticated in-house design departments many TLMI member converters have in place.

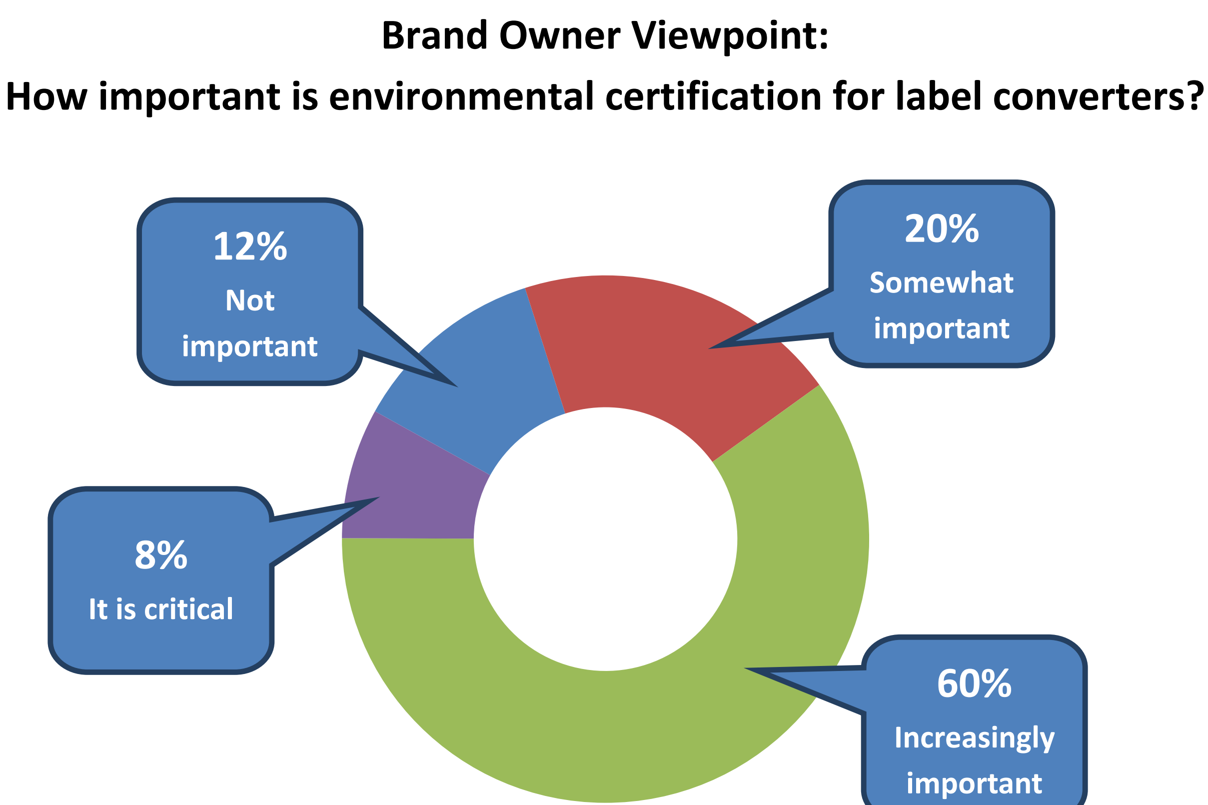
The graph below indicates the willingness of brand owners and packaging buyers to shift artwork development and creation onto their label vendors.



Nearly one in five surveyed companies cited they would be open to sourcing the development and creation of their artwork to their label vendors rather than an agency. While 38% of respondents indicated they would not consider it, there was a high level of uncertainty among participants when asked this question. This indicates a potential value add opportunity for label converters and one that the Index & Trend Report will continue to track moving forward.

How important is it to brand owners that their label vendors employ environmental protocols and are environmentally certified?

For the past five years the Index & Trend Report has been asking brand owners about the importance of their label vendors using best environmental practices. In the 2016 Brand Owner Survey brand owners and packaging buyers were asked to rank the importance they place upon their label vendors achieving environmental certifications, recycling their material waste and using LCA (Life Cycle Analysis). The chart below indicates the importance these companies place upon their label vendors having some type of environmental certification in today's marketplace.



8% of brand owners and packaging buyers surveyed indicated that environmental certification was 'critical' for their label vendors and that their companies only purchase labels from companies that have some type of environmental certification. 60% of participants indicated it is becoming increasingly important that their label vendors are environmentally certified, however it is not presently a vendor criteria.

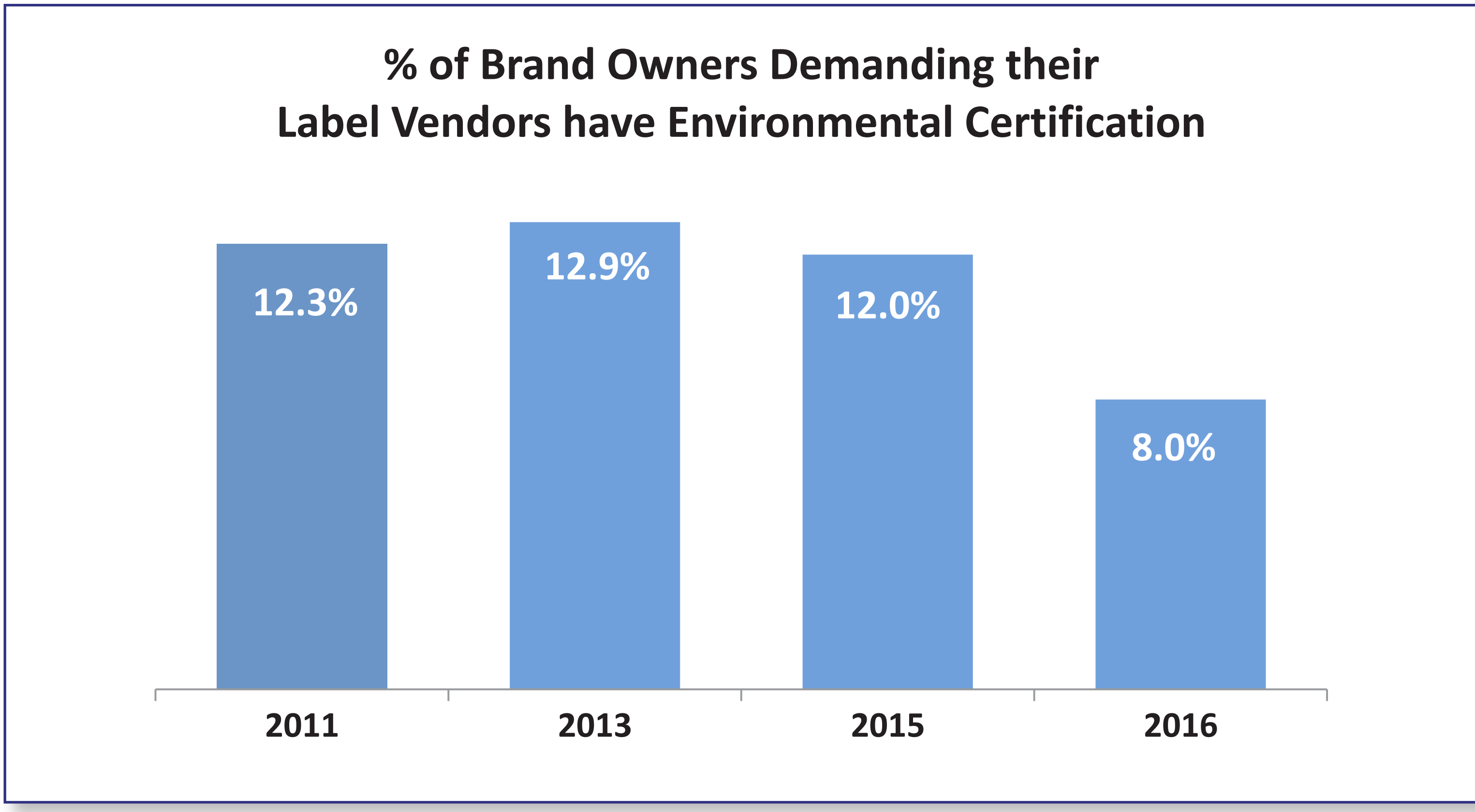
The group of companies that stated that environmental certification is critical are the largest brand owners surveyed and among them are companies like Unilever, P&G and Nestlé. According to the most recent survey and data analysis, the majority of smaller and regional brand owners and packaging buyers don't place as much importance on their printed packaging vendors having environmental certification.

Is label vendor environmental certification becoming more important in the eyes of the brand owners?

Since 2011 the Index & Trend Report has asked brand owners and packaging buyers how important it is that their label vendors have some type of environmental certification. In surveys, companies are given a series of answers to choose from that include the following:

- It is critical. We only purchase labels from companies that are environmentally certified.
- It is becoming increasingly important and I predict that in the near future we will likely only purchase labels from companies that are environmentally certified.
- It is important, however does not dictate who we do or do not purchase labels from.
- It is not important and does not influence our vendor selection.

The chart below shows the percentages of brand owners and packaging buyers that have historically cited that environmental certification is a 'critical' criteria for their label vendors compared to the results of the most recent survey.

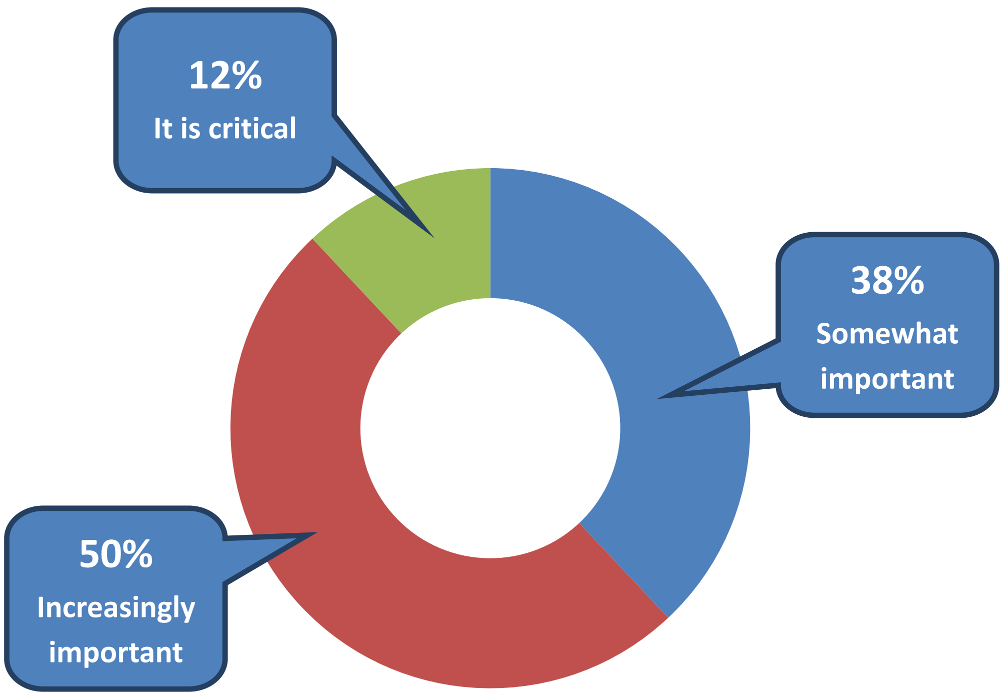


As this graph shows, the percentage of brand owners and packaging buyers demanding that their label vendors have environmental certification has changed minimally over the course of the past five years with the exception of the most recent survey. Up until this year, the percentage hovered right around 12% however dropped to 8% in the most recent brand owner survey carried out in the first two quarters of 2016.

How important is it to brand owners that their label vendors recycle waste materials?

In addition to environmental certification, brand owners and packaging buyers were asked to indicate how important it is that their label vendors recycle some or all of their waste materials. In 2015, the TLMI Illuminator featured interviews and comments from TLMI converter members whose companies are in the process of achieving 0% to landfill status. These companies have implemented matrix and/or liner recycling programs. Given the increased importance the association's converter members are placing on recycling, one of the goals of the recent Brand Owner Survey is to gauge how important this issue is among packaging buyers.

Brand Owner Viewpoint: How important is it that label converters are recycling some or all of their waste materials?



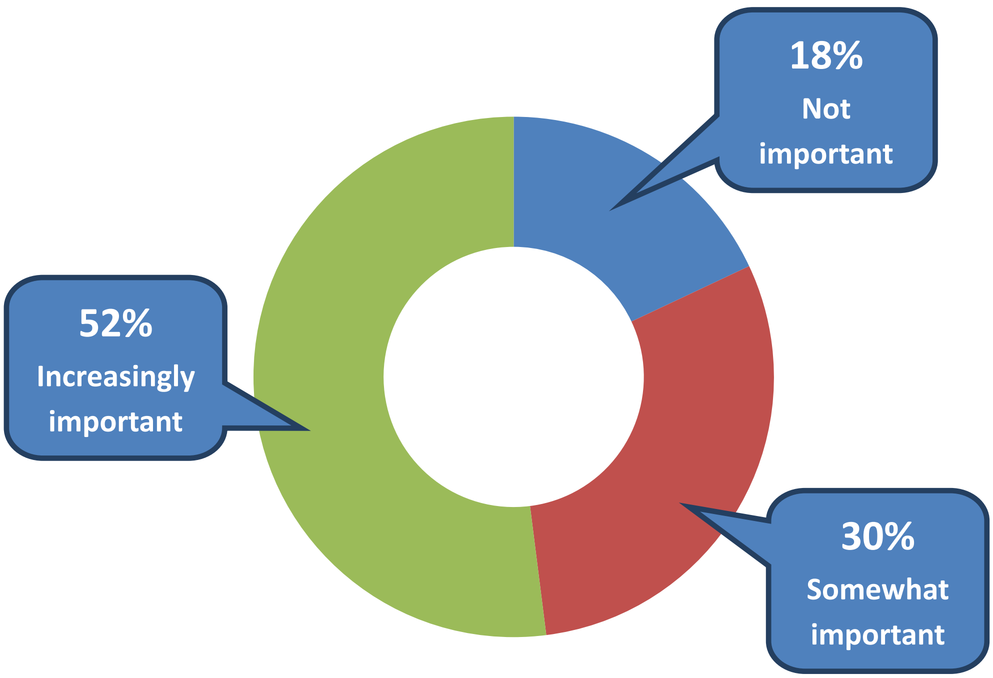
Interestingly, a higher number of brand owners indicated that their label vendors recycling some or all of their waste materials is 'critical' than indicated the same for environmental certification. It's important to note that no participants selected 'not important' as an answer to this question.

How important is it to brand owners that their label vendors use LCA (Life Cycle Analysis)?

Over the course of the past year TLMI has established a task force of Environmental Committee members to help in the creation of a harmonized LCA Guidance Document that will become available to all TLMI members in the coming months. LCA is an assessment tool that evaluates a products' impact on the environment from the creation of raw materials through to the product's final disposal.

LCA is an important tool for converters. It offers insights into where the environmental hot spots are for their products and where there might be opportunities for improvement. Increasing numbers of brand owners are requesting information about sustainability from their label vendors. In order to gauge how brand owners regard the utilization of LCA as a viable sustainability tool, the survey asked participants how important it was that their label vendors use LCA.

Brand Owner Viewpoint: How important is it that label converters are using LCA (Life Cycle Analysis) as a sustainability tool?

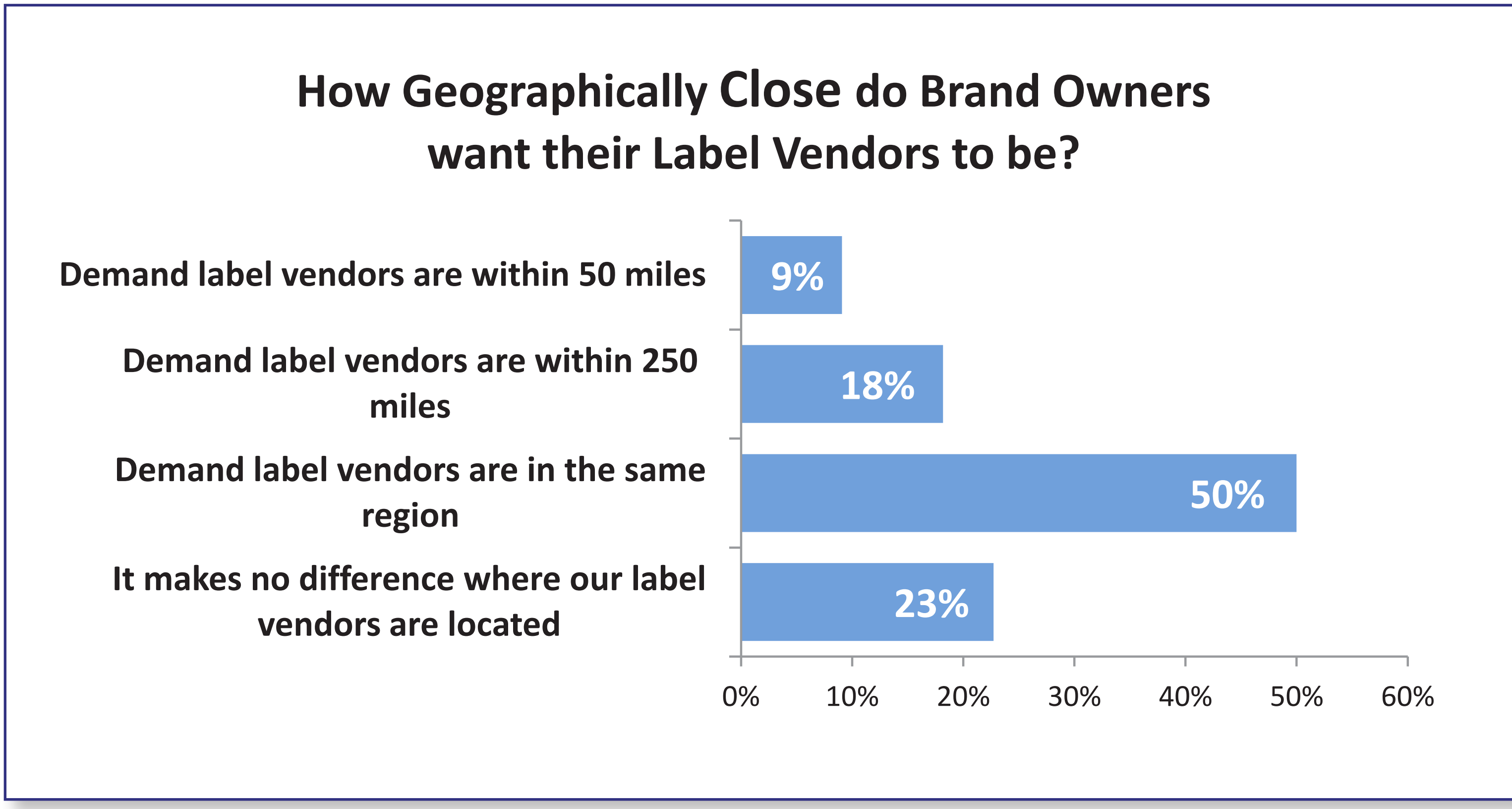


Brand owners and packaging buyers are placing more value on LCA as a tool they want their printed packaging vendors to use. More than half of all participants indicated they view the usage of LCA by their label vendors as increasingly important. However, no companies indicated that using LCA was 'critical' for label converters. This is another sustainability metric the Index & Trend Report will track in order to report back to TLMI converter and supplier members the importance brand owners and packaging buyers are placing upon LCA utilization.

How regionalized is the North American label printing industry?

The North American label printing industry has historically been highly regionalized. Brand owners and packaging buyers have wanted their label vendors within a specific proximity of where labels were applied. Over the past year TLMI converters have requested that the Brand Owner Survey contain a question about the regional preferences of brand owners and exactly how close to the point of label application these companies want their label vendors to be.

The chart below indicates label vendor proximity requirements and preferences for the total participant group.



The results of survey participants' responses show that geographic location is still important to brand owners. Half of respondents require their label vendors be within the same geographic region as point of application while more than one in four companies require their label vendors to be within 250 miles of point of application.

The label printing industry is estimated to be the most highly regionalized of all printed packaging sectors among labels, flexible packaging, folding cartons and corrugated. The label printing industry is also the most fragmented of all printed packaging sectors with the highest volume of printing plants located throughout the North American marketplace. As consolidation continues in the U.S. label printing marketplace, it will be interesting to track and to gauge brand owners' continued requirements and preferences when it comes to the geographic proximity of their label vendors.

How do brand owners and packaging buyers rank different label construction options and technologies?

Brand owners and packaging buyers constantly talk about innovation. Since its inception, the Index & Trend Report Brand Owner Survey has been asking brand owners what label converters can be doing to make their jobs easier. More often than not their answers contain the word innovation.

During interviews brand owners and packaging buyers talk about wanting their label vendors to have a broader and more innovative portfolio. Companies frequently comment that they want their label suppliers to be more innovative in delivering ways to remove costs from the supply chain. Innovation continues to be a buzzword in discussions and during a recent interview for the compilation of this report, a packaging engineer at a multinational food conglomerate stated:

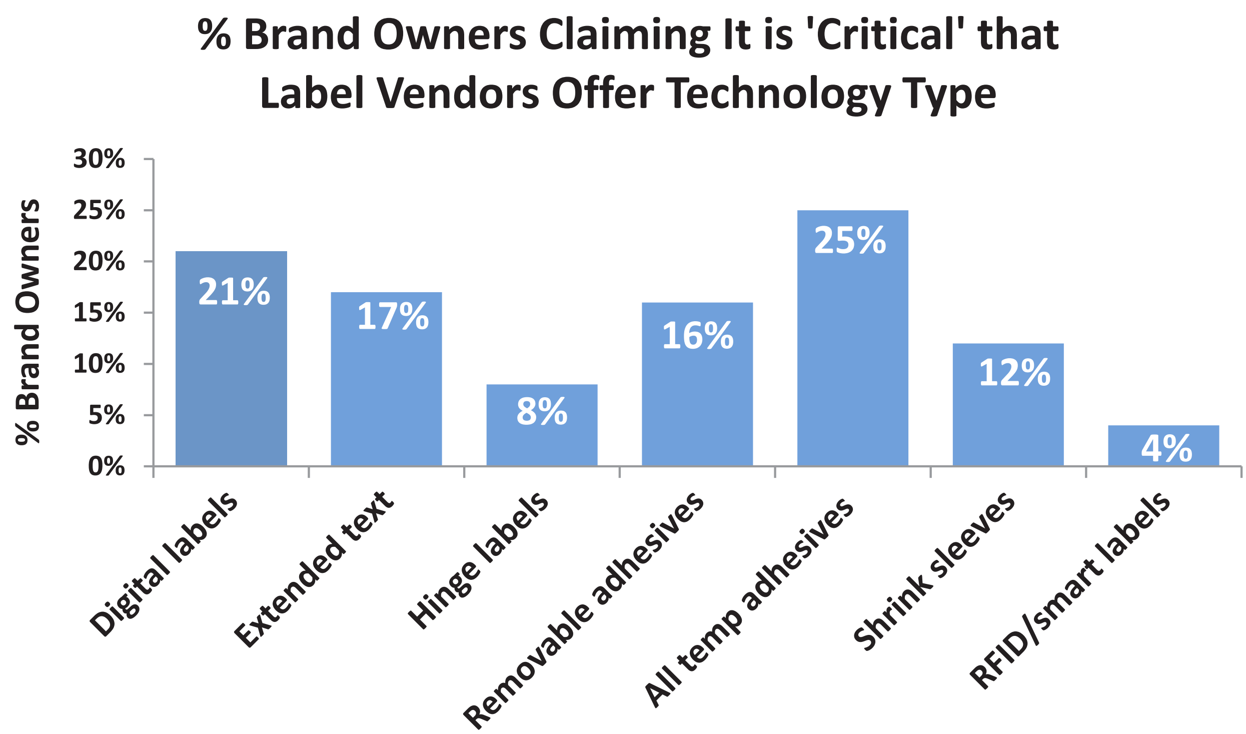
> **"We want our label suppliers to show us innovations that are projected three or more years out. We have a 3+3+3 mentality. Projects that are worked on today will typically materialize within the next three years, however we need to also be thinking beyond that three year mark. We need to know what is going to be happening in the label printing industry in six and nine years' time. We need to know what types of innovations we can be starting to look at today and how we can incorporate those innovations into our future plans. Even if we aren't sent up for the processes or have the equipment today, we need to know what these innovations are and how we can better prepare ourselves for the directions in which label printing will be moving."**
>
> **-Packaging Engineer, Food Company**

In an effort to gauge the importance companies place on different types of label application options and technologies, participants were asked to indicate how important it is that their label vendors offer each item in a list of criteria. The criteria companies were given included:

- Ability to offer digitally printed labels
- Ability to offer and convert extended text/expanded content labels (more than two layers)
- Ability to offer and convert 'hinge' labels (two layers)
- Ability to offer removable adhesives
- Ability to offer all temperature adhesives
- Ability to offer shrink sleeves
- Ability to offer RFID/s

How important is it that label vendors offer certain technologies?

This graph shows the percentage of brand owners and packaging buyers that consider it critical that their label vendors offers each technology.



Brand owners and packaging buyers place the greatest importance on converters' ability to offer digitally printed labels (21% of respondents) and all temperature adhesives (25% of respondents). It is important to note that while one in five survey participants claim it is critical that converters have the ability to print digital labels, a number of these companies are not yet purchasing digitally printed label products. Some brand owners actually cited that while they don't yet have a need to purchase digitally printed labels, they still only source labels from companies that have digital printing presses on their production floors.

21% compared to **4%**

of brand owners and packaging buyers say ability to offer **digital labels** is critical.

of brand owners and packaging buyers saying ability to offer **RFID/smart labels** is critical.

What are the issues that cause brand owners to seek new label vendors?

The Index & Trend report periodically asks brand owners and packaging buyers what the primary forces are that cause them to seek and obtain new label vendors. In answering this question, survey respondents are given a list of criteria and are asked to rank each one from most to least influential. It is important to note that pricing is purposely left out of this list of criteria in order to be able to effectively hone in on what the primary influencers are outside of product pricing.

The table below shows how brand owners and packaging buyers ranked these criteria from most to least influential.

The Primary Forces that Influence Brand Owners & Packaging Buyers to Seek New Label Vendors	
Influencer	**Ranking (Most to Least Significant)**
Quality with current vendor (color drift, inconsistent quality from run to run)	**#1**
Delivery (labels are not always delivered within the time frame companies require them)	**#2**
Responsiveness (occasional issues with label vendor's customer service)	**#3**
Capabilities (label vendor does not have digital printing capabilities)	**#4**

When this question was discussed with brand owners in interviews, companies stressed that print inconsistencies were the number one production related influence that cause a packaging buyer to seek and obtain alternate label vendors. While participants stressed that efficiencies and delivery times were still a critical factor, the inability to maintain print consistency from job to job was a more significant driver looking for and obtaining a new vendor.

Three years ago TLMI asked a group of almost two hundred brand owners and packaging buyers this same question and the way companies rank these influencers today remains unchanged compared to our research results in 2013. As we described on the previous page, one in five brand owners want their label vendors to have digital printing capabilities - whether or not they are sourcing digitally - printed labels. However, this table indicates that quality, delivery and responsiveness are more influential in driving a packaging buyer to replace an existing label vendor with a new supplier.

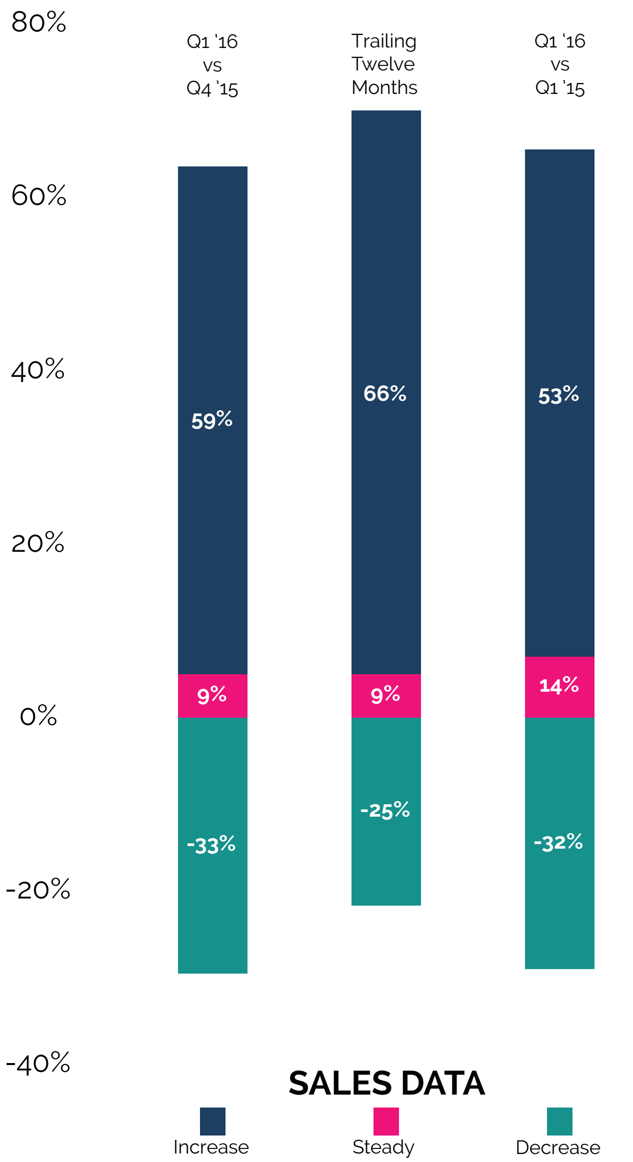
SECTION THREE

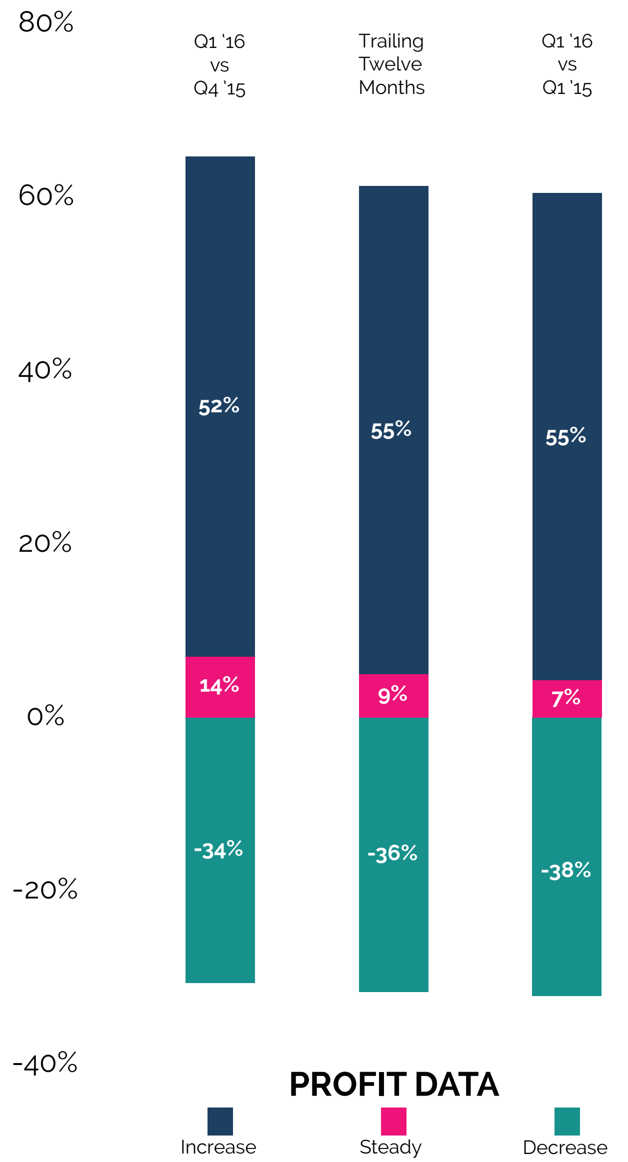
TLMI Converter Quarterly Trends Report

Synopsis of Q1 2016

Each quarter TLMI polls its converter member companies for the compilation of the association's converter Quarterly Trends Report that is distributed to all converter members on a quarterly basis. The report features sales and profits trending data in addition to backlog, lead time and number of employee metrics. It also tracks labor costs, press labor rates and material costs. This section of the Index & Trend Report summarizes all of the data from the most recent Quarterly Trends Report, offering converters a snapshot of market performance, in addition to offering TLMI supplier members insight into the performance and trending realities of their tag and label converting customers and prospects.

The chart below shows sales and profit data for the first quarter of 2016 compared to sales and profit data for the fourth quarter of 2015 in addition to year over year outcomes that compare the first quarter of 2016 with the first quarter of 2015.





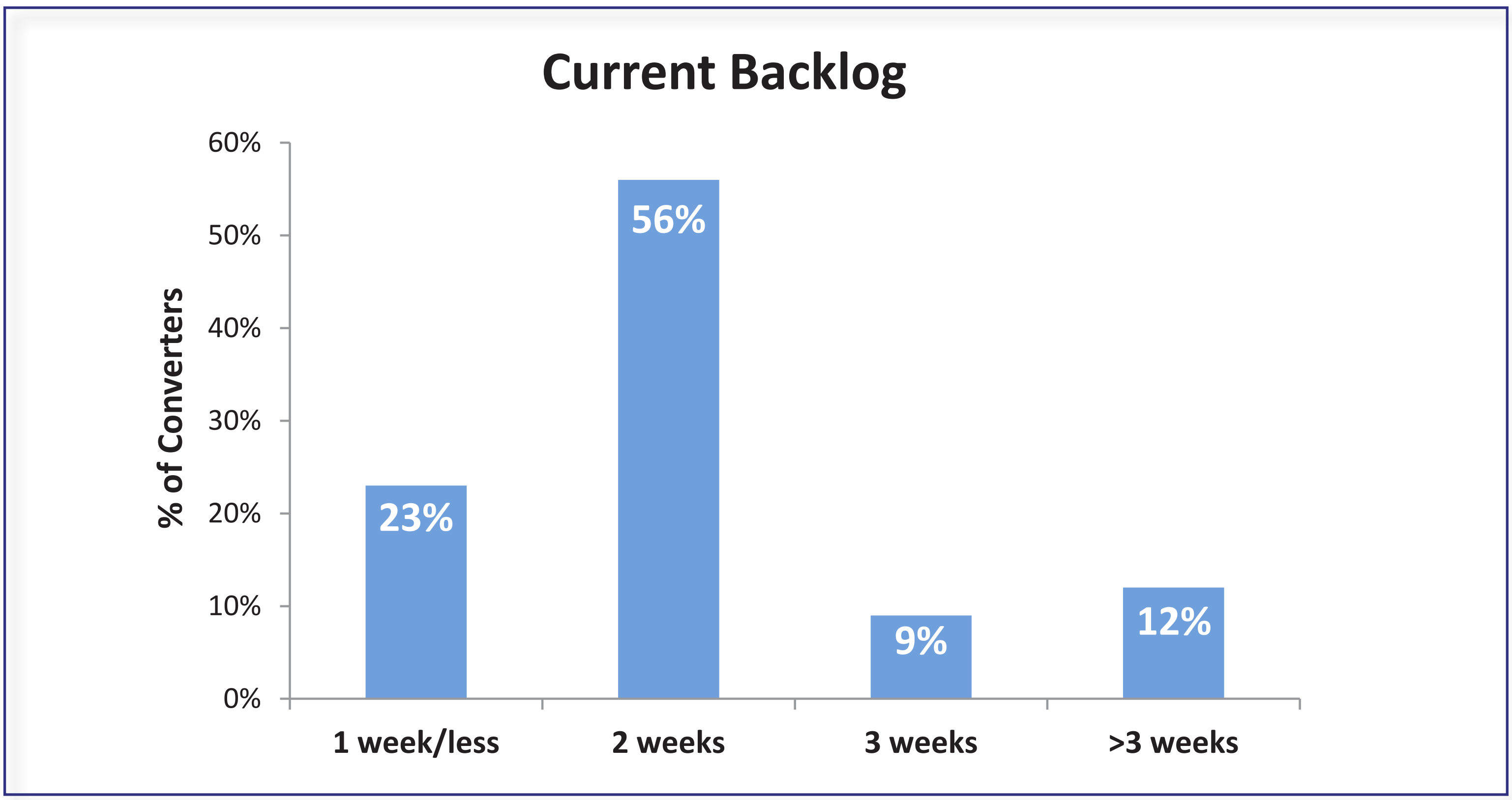
This year ushered in positive momentum for the majority of participating label converters. Quarter over quarter sales increased for 54% of respondents and decreased for 32% of respondents. Profitability increased for 52% of respondents with only 14% of participating converters reporting relatively flat profits. Year over year sales and profits also increased for more than half of respondents.

Data shows that quarter over quarter sales declines were felt most acutely by medium sized companies with annual sales revenues between $15 - $35 million. Forty five percent of medium sized companies reported a quarter over quarter decrease in sales. The scale category with the fewest number of companies reporting a decline in sales was the large company category (more than $35 million in annual sales) with 20% of large companies reporting quarter over quarter declines.

The mid range company group (companies with sales of $6-$15 million) had the highest number of companies reporting year over year sales declines with 39% of mid range companies reporting that sales for the first quarter of 2016 were down compared to the first quarter of 2015. Once again, the group with the lowest number of companies reporting year over year sales performance declines was the large company category with 20% of large companies reporting that first quarter 2016 sales were down compared to results for the first quarter of 2015.

Backlog Data

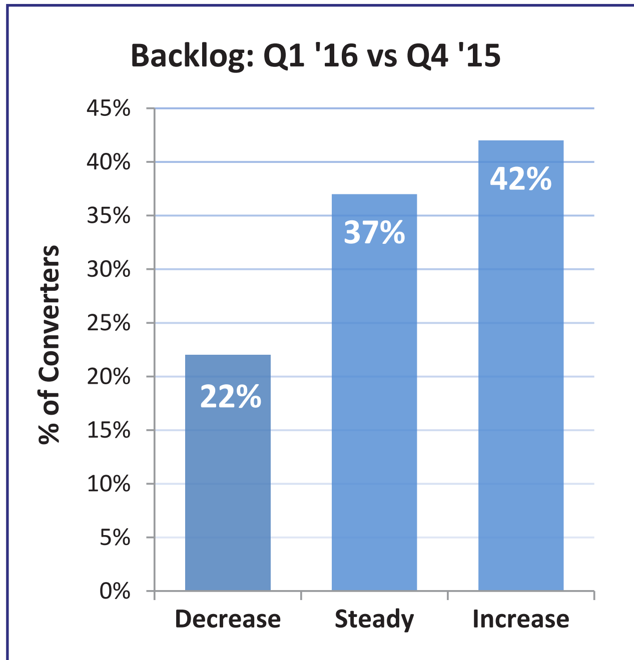
In addition to sales and profits, the trends data collected on a quarterly basis from TLMI converter member companies also benchmarks current backlog data and year over year backlog data. The charts that follow indicate current backlog reports as well as year over year results.



The majority of respondents (79%) are running at a one or two week backlog while 21% percent of participants reported a current backlog of three weeks or more for the first quarter of 2016. Forty two percent of respondents reported increasing backlog for the first quarter of 2016 versus the fourth quarter of 2015.

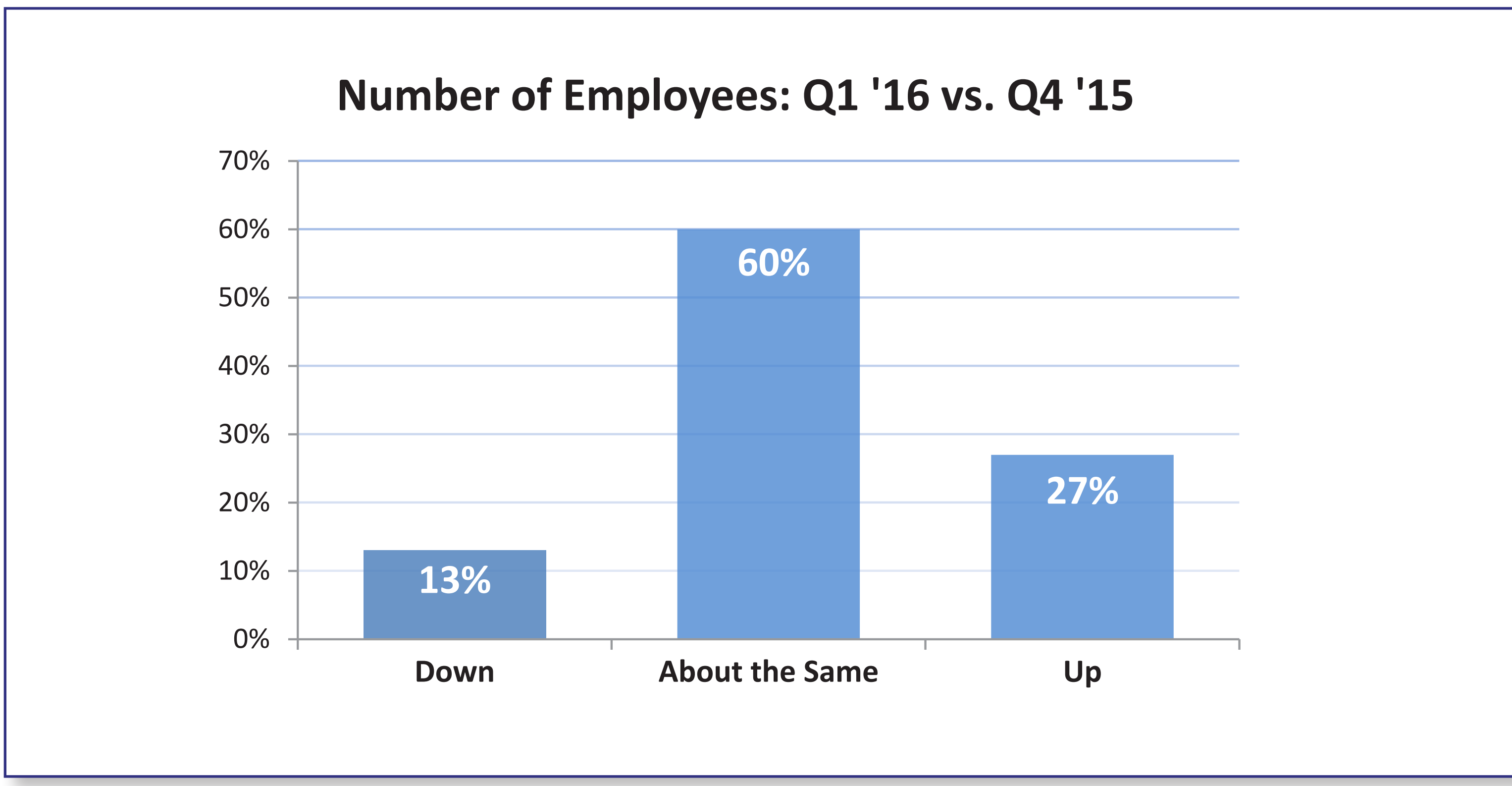
Small companies with annual sales of less than $6 million did not report any backlogs of more than two weeks while large companies did not report backlogs of less than two weeks. More mid range converters reported year over year backlog declines than any other scale group with 22% of these companies reporting decreased backlogs compared to the fourth quarter of 2015.

Quarterly data collected from TLMI member converters additionally tracks number of employees and number of shifts quarter over quarter to provide members with an effective benchmarking tool to compare and gauge their own company's performance against those of their peers.



Note: Graph does not add up to 100% due to rounding

As with all other analyses provided in the Index & Trends Report, the information is broken down into four company scale categories (small, mid-range, medium and large). However, this report will show data for all participating members as a grouped value only.



Material Costs and Labor Rates

Once again for the majority of converter respondents, labor costs, press labor rates and material costs have remained about the same for the first quarter of 2016 versus the fourth quarter of 2015. Twenty Percent of converters reported an increase in material costs compared to the previous quarter while 64% reported material costs remained the same. Labor costs remained the same for 63% of respondents and press labor rates remained the same for 83%.