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November 2020

Economic Report



ITR ECONOMICS

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[Click Here for a Brief Explanation of How to Read This Report](#)

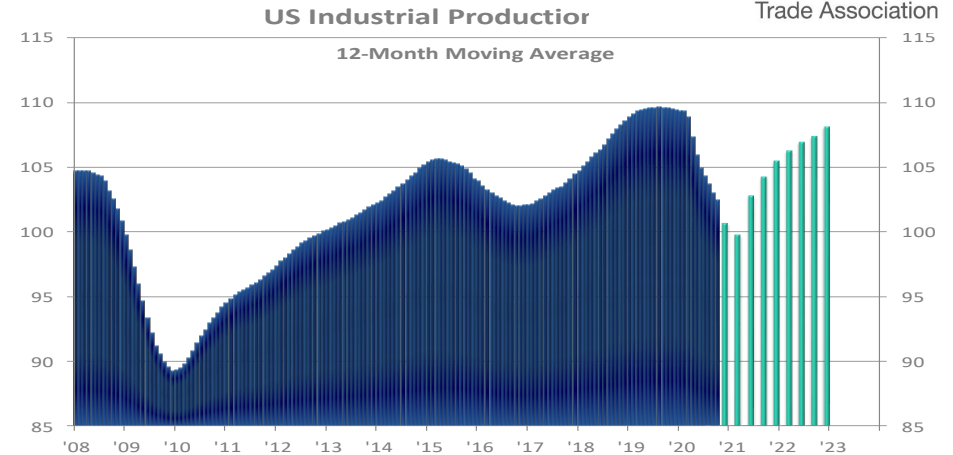
# overview

As we move into the final months of 2020, encouraging signs abound in our system of leading indicators and in the post-shutdown data.

Highlights include the following:

- Many monthly leading indicators for the US economy are rising, including our own ITR Leading Indicator™, the OECD's US Leading Indicator, and The Conference Board's US Leading Indicator.
- The more granular daily and weekly datapoints – such as retail spending, prices of many commodities, and industrial measures including steel utilization rates – are showing signs of recovering economic activity.
- Third-quarter US Machinery New Orders were down 1.2% relative to the third quarter of 2019, much milder than the rates of decline for April and May.
- US Total Retail Sales for the three months ending in October were 4.8% **above** the same three months in 2019.
- The unemployment rate, at 6.9% in October, is at less than half its April 2020 peak (14.7%).
- Leading indicators to US Single-Unit Housing Starts are setting the table for robust growth in that market in 2021.

The empirical evidence made it clear that results were likely to surpass our expectations for the industrial and consumer sectors, *barring a secondary set of broad-based shutdowns in the fall-winter flu season in response to elevated COVID-19 cases*. We revised our outlooks for both US Industrial Production and US Total Retail Sales accordingly, as well as outlooks for key markets such as chemicals, food, automotive, and aerospace. The timing of the business cycle turning points for these



indicators is generally little-changed from our prior forecasts, but the amplitudes are higher in magnitude.

As before, we expect US Industrial Production and US Total Retail Sales to reach business cycle lows in the first half of 2021, with the ensuing business cycle rising trends extending into the first half of 2022. We expect that annual Retail Sales will break above the pre-pandemic level around mid-2021, assisted by the massive and timely fiscal and monetary stimulus. Annual US Industrial Production will be about 1.1% below the pre-pandemic level by the end of 2022 as protracted recoveries in markets tied to oil, gas, and aerospace hinder Industrial Production's potential to bounce back more readily.

With the competition focused on the downturn, now is the time to prepare for the upcoming rising trend if your business moves closely with the US economy. Consider your capacity needs for 2021; take advantage of low interest rates to invest in the equipment and technology necessary to accommodate a robust rising trend. We are not out of the woods yet, but rise is on the horizon, and it is up to you whether your business will follow the herd or lead it.

# Terminology & Methodology

## Data Trends:

### Monthly Moving Total (MMT) vs Monthly Moving Average (MMA):

Totals are used when it makes sense to add the data together, as with units sold or total dollars spent. Averages are used when the data cannot be compounded, such as with an index, percent, price level, or interest rates.

### 3MMT/A and 12MMT/A:

A 3-month or 12-month moving total/average is the total/average of the monthly data for the most recent 3 and 12 months, respectively. The 3MMT/A illustrates the seasonal changes inherent to the data series. The 12MMT/A removes seasonal variation in order to derive the underlying cyclical trend. It is also referred to as the annual total or annual average.

## Rates-of-Change:

A rate-of-change figure is the ratio comparing a data series during a specified time period to the same period one year ago. **Rates-of-change** are expressed in terms of the **annual percent change in a 12MMT/A, 3MMT/A, and actual monthly data**.

Rates-of-change reveal whether activity levels are rising or falling compared to last year. A rate-of-change trend illustrates and measures cyclical change and trends in the data.

ITR Economics' three commonly used rates-of-change are the **1/12**, **3/12**, and **12/12**, which represent the year-over-year percent change of a single month, 3MMT/A, and 12MMT/A (respectively).

A rate-of-change above 0 indicates the data is higher than one year prior, while a rate-of-change below 0 indicates the data is below one year earlier.

**Accelerating Growth (B):** 12/12 is rising and is above zero; the data trend is accelerating in its ascent and is above the year-ago level. This is the second positive phase of the business cycle.

**Recovery (A):** 12/12 is rising but is below zero; the data trend is below the year-ago level and is either heading toward a low or is in the early stages of rise. This is the first positive phase of the business cycle.

## Business Cycle:

The data trends and rates-of-change identify positions in the business cycle. Those positions are:



**Slowing Growth (C):** 12/12 is declining but remains above zero; the data trend ascent is slowing or has stopped its rise, but it is still above the year-ago level. This is the first negative phase of the business cycle.

**Recession (D):** 12/12 is declining and is below zero; the data trend is below the year-ago level and the rate of decline is increasing. This is the second and final negative phase of the business cycle.

# Business Cycle

<u>Industry</u>	<u>Current</u>	<u>Phase</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>
US Paper and Paper Products Production Index	-3.0%	<b>D</b>	-3.3%	0.6%	0.1%
US Pulp, Paper, and Board Mills Production Index	-4.4%	<b>D</b>	-4.9%	-0.7%	-1.1%
US Commercial Printing Production Index	-11.3%	<b>D</b>	-13.4%	0.5%	-0.3%
US Paper Bags and Treated Paper Products Production Index	-14.0%	<b>D</b>	-16.4%	0.0%	0.4%
US Periodical, Book, and Other Publishers Production Index	-14.8%	<b>D</b>	-14.7%	-5.5%	-3.9%
US Media Spending on Print Advertising	-24.7%	<b>D</b>	-34.5%	-15.3%	-7.9%
US Nondefense Capital Goods New Orders (excluding aircraft)	-4.4%	<b>D</b>	-6.4%	4.1%	3.3%
US Paper Producer Price Index*	-2.5%	<b>A</b>	-2.5%	5.4%	4.2%

\*All growth rates are annual rates-of-change except the US Paper Producer Price Index, which quotes the quarterly growth rate (ex. 4Q20 relative to 4Q19), since it is a measure of pricing.



**RECOVERY**

ITR Economics™



**ACCELERATING GROWTH**



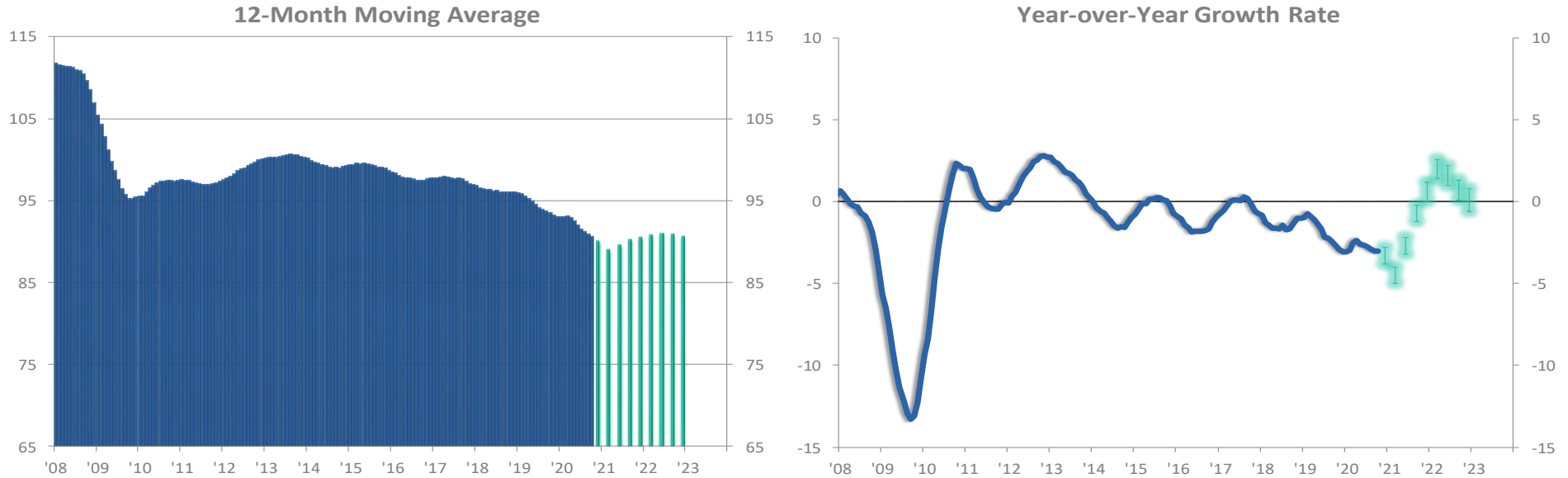
**SLOWING GROWTH**



**RECESSION**

# US Paper and Paper Products Production Index

Paper Production Outlook Lifted in Line With Our Macro Forecast; Timing of Low Unchanged



## Outlook & Supporting Evidence

- Both the retail and industrial sectors of the economy have shown resilience, coming back strong in the third quarter. We upgraded our outlook for these core sectors of the US economy. We now expect Production decline to be less severe, but the timing of the business cycle low — early 2021 — is unchanged. Confirmation of this is already appearing in paper-industry-specific leading indicators such as the US Paper Capacity Utilization Rate.
- We expect annual Production to decline into early next year, then rise mildly into the middle of 2022, although not to 2019 levels. Production will then decline through at least the end of 2022
- The potential for a second set of broad-based shutdowns across many states is a downside risk to the forecast.

## Phase & Amplitudes

**Phase D**

**Recession**

October 2020 Annual Growth Rate (12/12): -3.0%

October 2020 Annual Average (12MMA): 90.6

## Industry Outlook

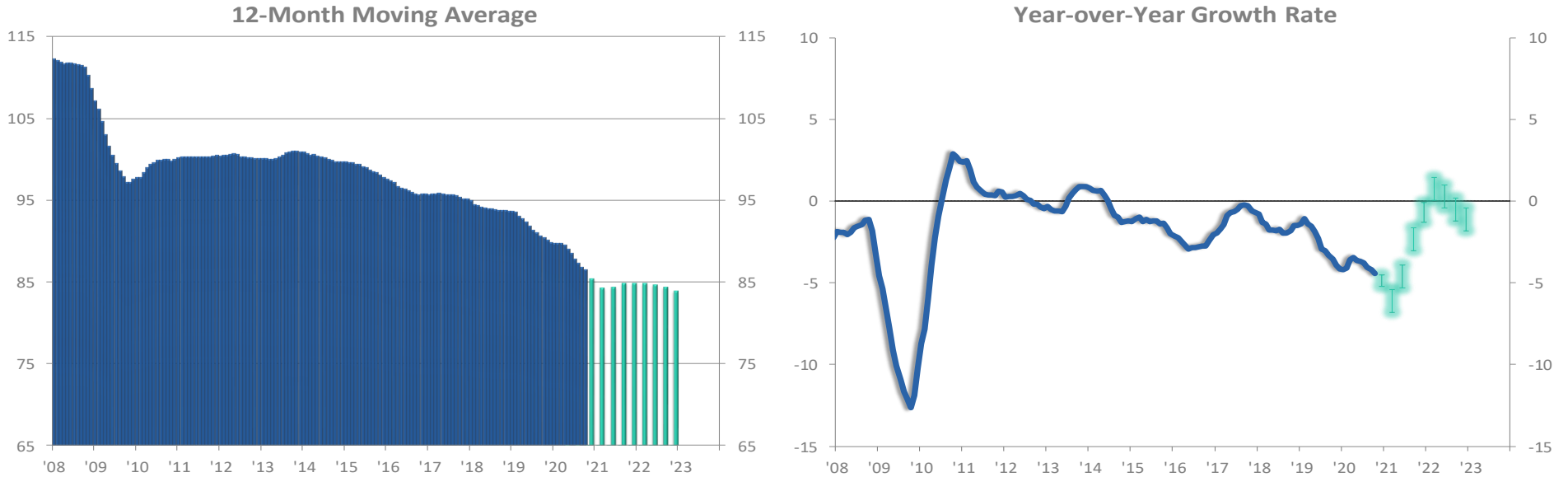
2020: -3.3%

2021: 0.6%

2022: 0.1%

# US Pulp, Paper, and Board Mills Production Index

Forecast Revised Upward; Business Cycle Turning Point Timing Unchanged



## Outlook & Supporting Evidence

- US Pulp, Paper, and Board Mills Production in September was within the forecast range. Although our analysis of the latest leading indicator data suggested that the timing of the business cycle turning points was still the most likely outcome, it was probable that Production would outperform the forecast range. We revised our expectations for annual Production upward by 1.4%, 4.3%, and 2.7% for 2020, 2021, and 2022, respectively.
- Expect annual Production to decline into the first half of next year. Production will then be relatively flat into mid-2022 before decline takes hold once again late in that year.

## Phase & Amplitudes

**Phase D**

**Recession**

October 2020 Annual Growth Rate (12/12): -4.4%

October 2020 Annual Average (12MMA): 86.4

## Industry Outlook

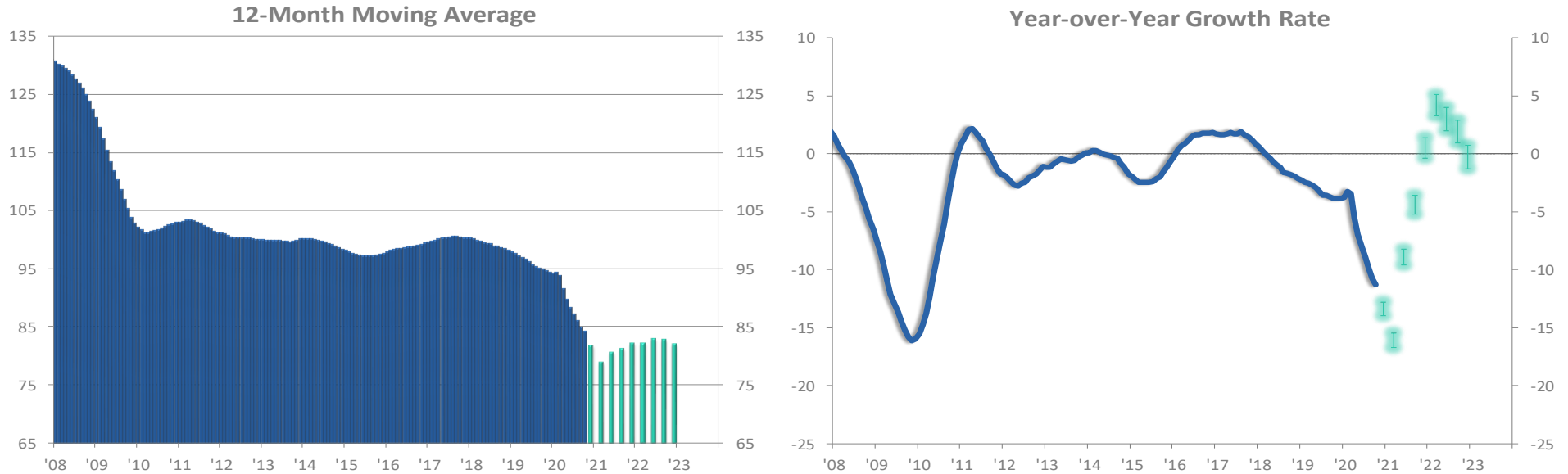
**2020: -4.9%**

**2021: -0.7%**

**2022: -1.1%**

# US Commercial Printing Production Index

Forecast Revised Upward Following Best 2nd-to-3rd-Quarter Percentage Change in 20 Years



## Outlook & Supporting Evidence

- Quarterly Production in September posted the strongest second-to-third-quarter percentage change in over 20 years. This resulted in Production outperforming the forecast range by 2.6%. Our analysis of the latest leading indicator evidence suggested further deviation was probable, necessitating a revision.
- Our expectation for Production to decline into early next year and then rise into the second half of 2022 is unchanged. Annual Production expectations were revised upward by 6.0%, 9.6%, and 7.6% for 2020, 2021, and 2022, respectively.
- Trends in the ITR Leading Indicator™ and the US ISM PMI (Purchasing Managers Index) suggest Production rate-of-change ascent will take hold early next year.

## Phase & Amplitudes

**Phase D**

**Recession**

**October 2020 Annual Growth Rate (12/12): -11.3%**

**October 2020 Annual Average (12MMA): 84.1**

## Industry



## Outlook

**2020: -13.4%**

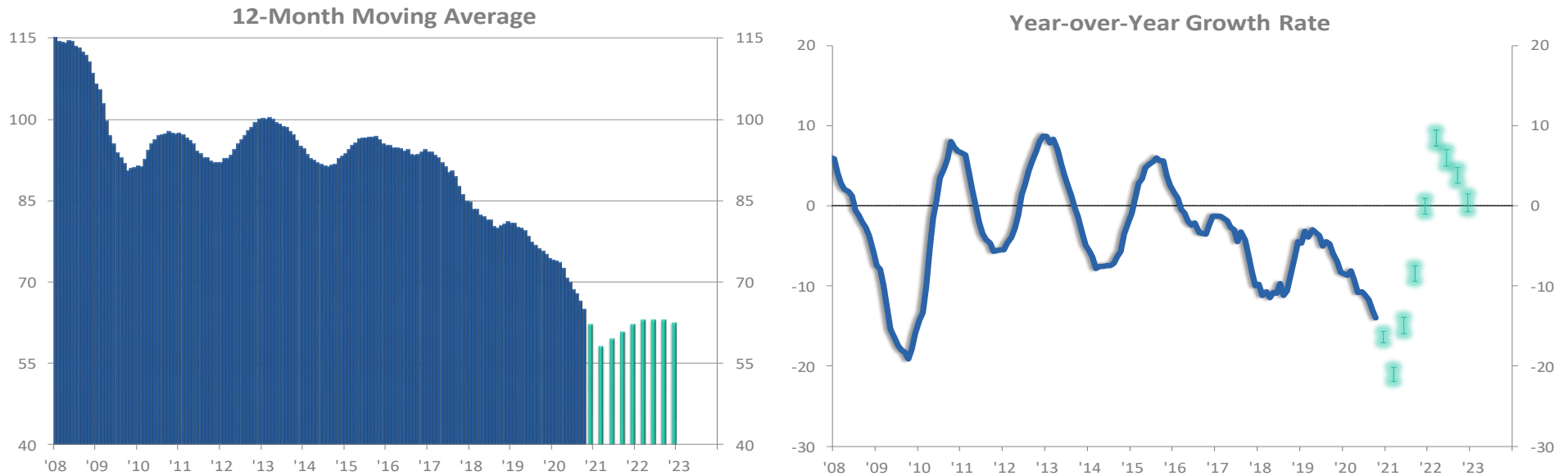
**2021: 0.5%**

**2022: -0.3%**



# US Paper Bags and Treated Paper Products Production Index

Forecast Lowered; Production to Remain Below Current Level Through at Least 2022



## Outlook & Supporting Evidence

- Annual Production through September came in 7.0% below the forecast range. Unlike overall US Paper and Paper Products Production, US Paper Bags and Treated Paper Products Production failed to bounce back sharply from the second-quarter shutdowns. We revised the forecast to reflect the latest data and leading indicator evidence.
- Expect annual Production to decline into early 2021. Subsequent Production rise will extend mid-2022, before decline takes hold late that year. By the end of 2022 annual Production will be about 4.0% below the current level.
- Macroeconomic recovery and rise will drive Production recovery and rise from mid-2021 into early 2022.

## Phase & Amplitudes

**Phase D**

**Recession**

October 2020 Annual Growth Rate (12/12): -14.0%

October 2020 Annual Average (12MMA): 65.0

## Industry



## Outlook

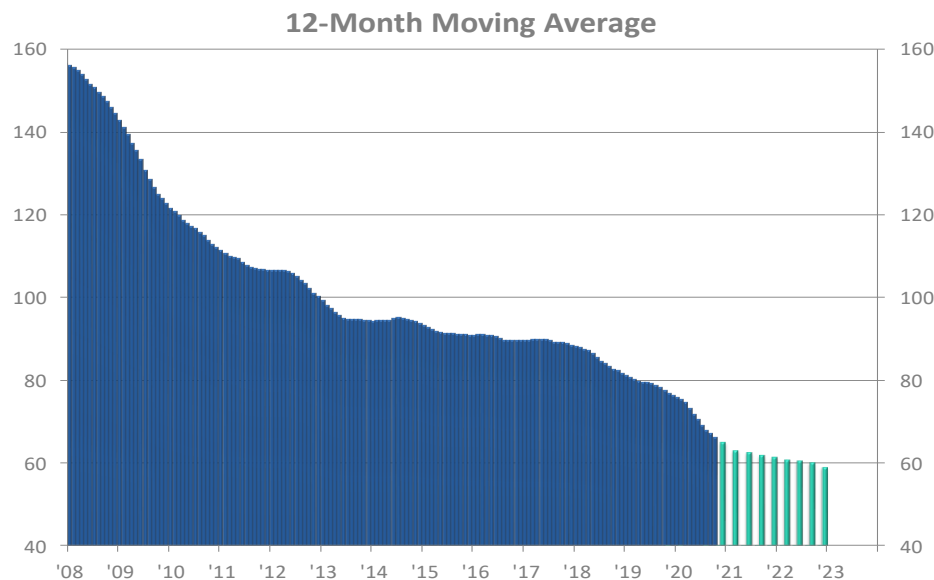
**2020: -16.4%**

**2021: 0.0%**

**2022: 0.4%**

# US Periodical, Book, and Other Publishers Production Index

Leading Indicators Suggest Early-2021 Business Cycle Low; Pace of Decline to Ease Into 1H22



## Outlook & Supporting Evidence

- US Periodical, Book, and Other Publishers Production during the three months through October was down 14.0% from the same three months one year ago. This was the fourth consecutive month of rise in the quarterly growth rate, a positive ITR Checking Point™ that bodes well for the Phase A, Recovery, trend we are forecasting for Production during much of 2021.
- Expect annual Production to decline through at least the end of 2022, although the severity of decline will ease during most of 2021 and the first half of 2022.
- Trends in the US Printing and Related Support Activities Utilization Rate suggest a near-term business cycle low for Production, in line with our outlook.

## Phase & Amplitudes

**Phase D**

**Recession**

**October 2020 Annual Growth Rate (12/12): -14.8%**

**October 2020 Annual Average (12MMA): 66.0**

## Industry



## Outlook

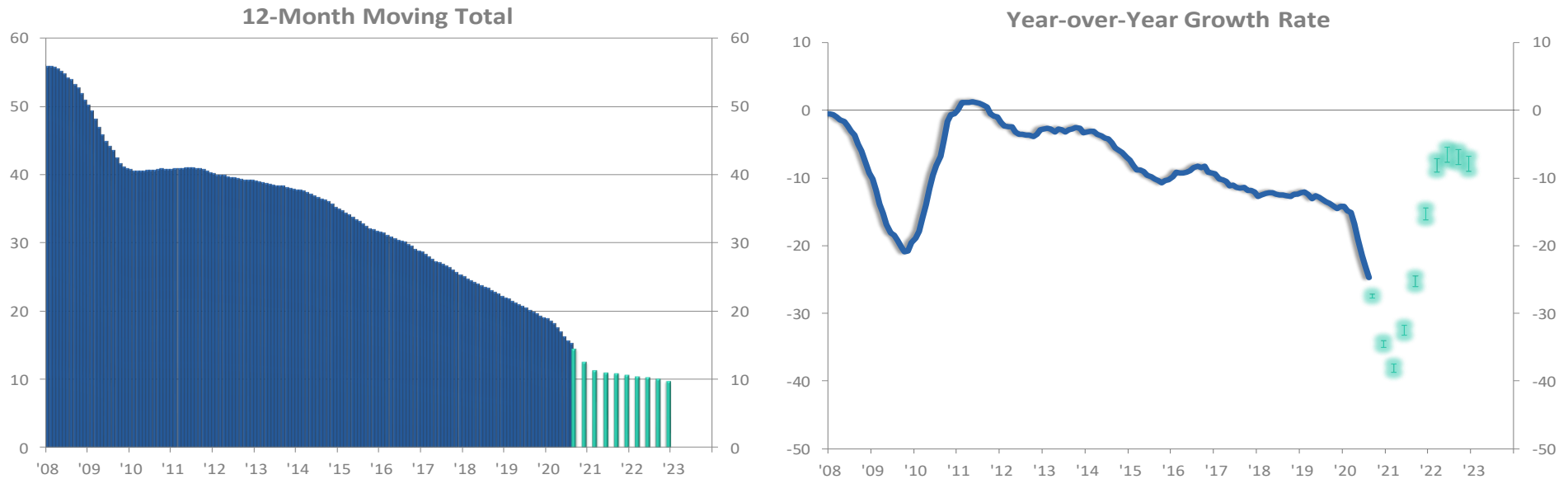
**2020: -14.7%**

**2021: -5.5%**

**2022: -3.9%**

# US Media Spending on Print Advertising

Forecast Downgraded; Increasing E-Commerce Retail Sales to Hinder Spending Through 2022



## Outlook & Supporting Evidence

- Annual Spending was 1.2% below forecast range in June. The severity of year-over-year decline in quarterly Media Spending intensified through August despite upward momentum in most related indicators following the 2Q20 shutdowns. Our analysis suggested results were likely to run below expectations. We lowered the forecast by between 13.7% and 20.5% for the upcoming three years.
- Annual Spending will decline through at least the end of 2022. Spending at the end of 2022 will be approximately 36% below the current level.
- Our forecast for E-Commerce Retail Sales, which indicate consumer and by extension advertiser movement toward digital media and therefore exhibit an inverse correlation with Media Spending on Print Advertising, media, informs our Spending outlook.

## Phase & Amplitudes

**Phase D**

**Recession**

August 2020 Annual Growth Rate (12/12): -24.7%

August 2020 Annual Total (12MMT): \$15.2 billion

## Industry Outlook

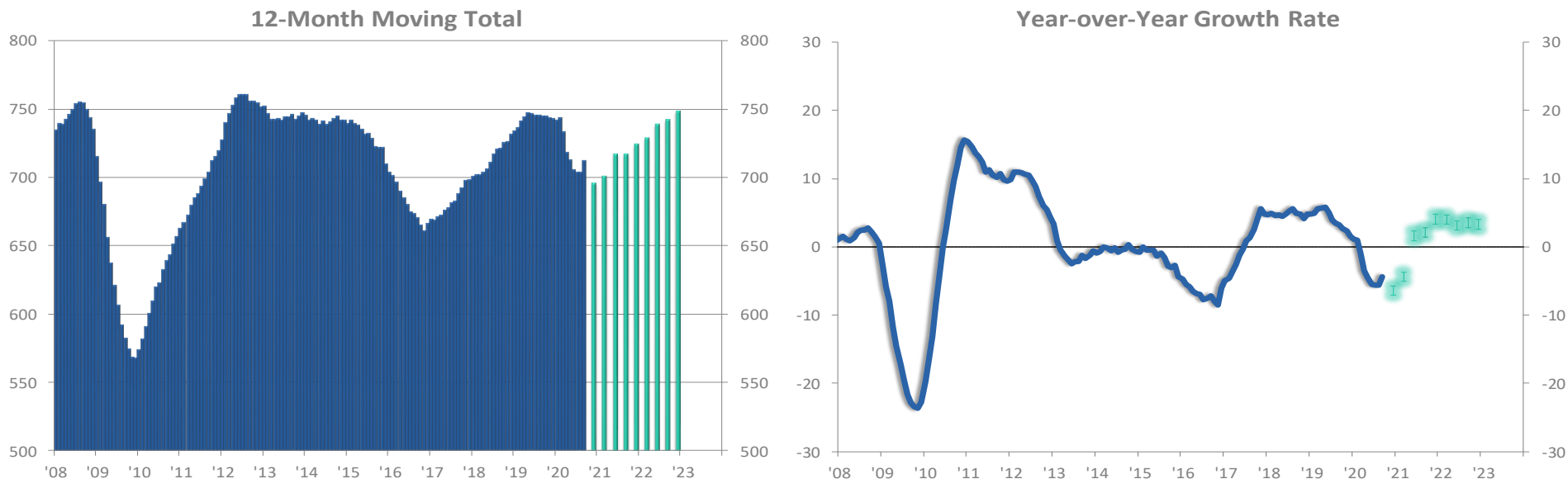
**2020: -34.5%**

**2021: -15.3%**

**2022: -7.9%**

# US Nondefense Capital Goods New Orders (excluding aircraft)\*

Data Adjusted to Better Reflect Trends in Business-to-Business Spending



## Outlook & Supporting Evidence

- Our investigation into the data revealed that the way the Census Bureau (our data source) was accounting for aircraft order cancellations was creating a discrepancy between the recorded Durable Goods New Orders movements and those experienced by ITR consultative clients. Accordingly, we replaced the Census Bureau's Durable Goods New Orders series with our adjusted Nondefense Capital Goods New Orders (excluding aircraft) series.
- Expect annual New Orders to rise during 2021 and 2022 as part of the general economic rising trend. We expect annual spending to be virtually even with the mid-2019 peak by the end of 2022.

## Phase & Amplitudes

**Phase D**

**Recession**

September 2020 Annual Growth Rate (12/12): -4.4%

September 2020 Annual Total (12MMT): \$712.1 billion

## Industry



## Outlook

**2020: -6.4%**

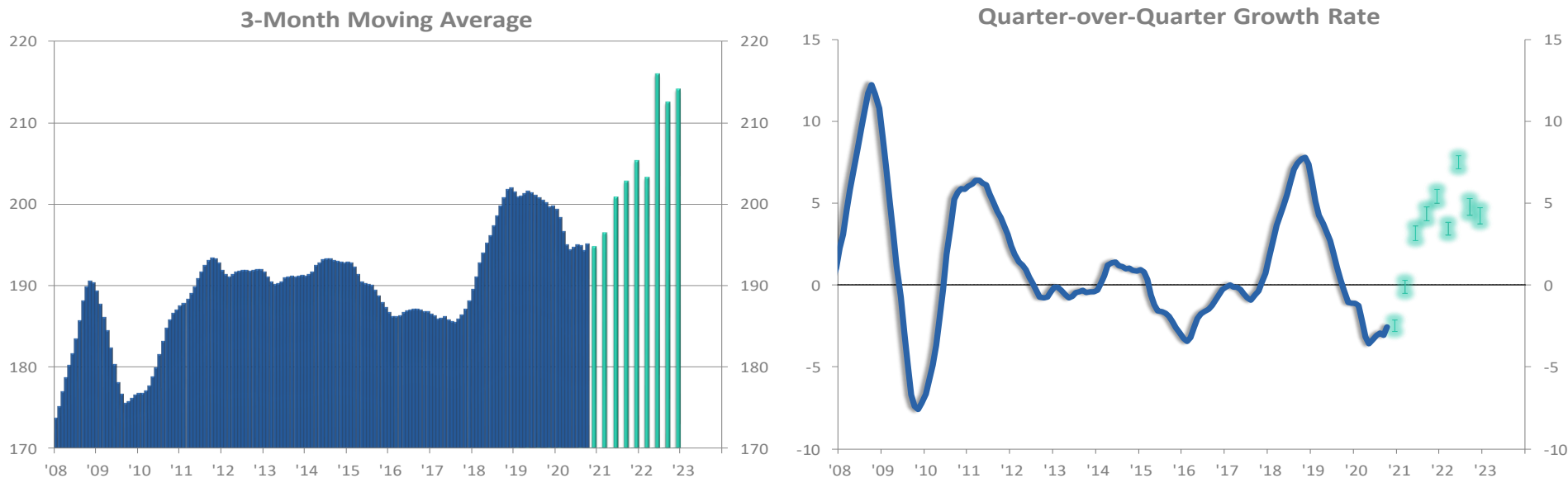
**2021: 4.1%**

**2022: 3.3%**

\*US Nondefense Capital Goods New Orders (excluding aircraft) replaces US Durable Goods New Orders (without Aircraft)

# US Paper Producer Price Index

Forecast Revised Upward; Prices to Generally Rise Into 2022



## Outlook & Supporting Evidence

- Quarterly Prices in September were 1.1% above the median expectation. Upward momentum in the quarterly rate-of-change indicated that further deviation was likely, necessitating a revision to our outlook.
- Expect quarterly Prices to generally rise into mid-2022. Expectations for quarterly Prices were revised upward by 2.4%, 7.4%, and 6.4% for the fourth quarters of 2020, 2021, and 2022, respectively.
- Prices rise may be tempered in the near term due to elevated COVID-19 cases. However, trends in both Exports and Imports of US Paper and Paperboard suggest upward cyclical momentum in Prices is likely to persist in at least the near term.

## Phase & Amplitudes

Phase A

Recovery

October 2020 Quarterly Growth Rate (3/12): -2.5%

October 2020 Quarterly Average (3MMA): 195.1

## Industry Outlook

4Q20: -2.5%

4Q21: 5.4%

4Q22: 4.2%

# INDICATORS

## US Leading Indicators

Indicator	Direction			What it means for the US economy
	4Q20	1Q21	2Q21	
ITR Leading Indicator™	●	●	N/A	<ul style="list-style-type: none"> <li>• The ITR Retail Sales Leading Indicator™ suggests sustainable rise in Retail Sales will begin in the first half of next year</li> <li>• Leading indicators for the industrial economy are largely in consensus and suggest that US Industrial Production will enter a business cycle rising trend in the first half of next year</li> <li>• As COVID-19 numbers reach record highs, the risk of statewide shutdowns increases, which poses a downside risk to the indicators and our outlook for Industrial Production</li> </ul>
ITR Retail Sales Leading Indicator™	●	●	●	
The Conference Board's US Leading Indicator	●	●	N/A	
US ISM PMI (Purchasing Managers Index)	●	●	●	
US Total Capacity Utilization Rate	●	●	N/A	
<p>Green denotes that the indicator signals cyclical rise for the economy in the given quarter. Red denotes the opposite.</p>				

Rising leading indicators signal US industrial sector activity will transition to a business cycle rising trend in the first half of 2021. Utilize any downtime afforded by lower economic activity to train and prepare for the upcoming rising trend, such as by implementing technological improvements to ensure you are competitive on quality and price.

# Appendix — Market Definitions

**US Industrial Production Index** — Index of total industrial production in the United States; includes manufacturing, mining, and utilities. Source: Federal Reserve Board (FRB). 2012 = 100, not seasonally adjusted (NSA).

**US Paper and Paper Products Production Index** — NAICS 322. Industries in the Paper Manufacturing subsector that make pulp, paper, or converted paper products. Source: FRB. Index, 2012 = 100, NSA.

**US Pulp, Paper, and Board Mill Production Index** — NAICS 3221. This industry group comprises establishments primarily engaged in manufacturing pulp, paper, or paperboard. Source: FRB. Index, 2012 = 100, NSA.

**US Commercial Printing Production Index** — NAICS 32311. This industry comprises establishments primarily engaged in printing on apparel and textile products, paper, metal, glass, plastics, and other materials, except fabric (grey goods). The printing processes employed include, but are not limited to, lithographic, gravure, screen, flexographic, digital, and letterpress. Establishments in this industry do not manufacture the stock that they print, but may perform post printing activities, such as folding, cutting, or laminating the materials they print, and mailing. Source: FRB. Index, 2012 = 100, NSA.

**US Paper Bags and Treated Paper Products Production Index** — NAICS 32222. This industry comprises establishments primarily engaged in one or more of the following: (1) cutting and coating paper and paperboard; (2) cutting and laminating paper, paperboard, and other flexible materials (except plastics film to plastics film); (3) manufacturing bags, multiwall bags, sacks of paper, metal foil, coated paper, laminates, or coated combinations of paper and foil with plastics film; (4) manufacturing laminated aluminum and other converted metal foils from purchased foils; and (5) surface coating paper or paperboard. Source: FRB. Index, 2012 = 100, NSA.

**US Periodical, Book, and Other Publishers Production Index** — NAICS 51112-9. This industry comprises establishments known either as magazine publishers or periodical publishers. These establishments carry out the operations necessary for producing and distributing magazines and other periodicals, such as gathering, writing, and editing articles, and selling and preparing advertisements. These establishments may publish magazines and other periodicals in print or electronic form. Source: FRB. Index, 2012 = 100, NSA.

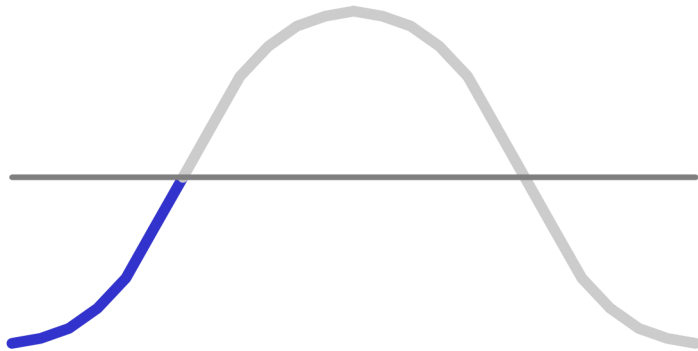
**US Media Spending on Print Advertising** — Media spending in the US on print advertising. Includes magazine and newspaper advertising. Source: Kantar Media. Measured in billions of dollars, NSA.

**US Nondefense Capital Goods New Orders (excluding aircraft)** — New orders for nondefense capital goods, excluding aircraft, in the United States. Includes farm machinery and equipment, construction machinery, mining machinery, nondefense small arms and ordnance, industrial machinery, commercial and service industry equipment, other general purpose machinery, photographic equipment, metalworking machinery, turbine and generator manufacturing, power transmission equipment, pumps and compressors, material handling equipment, electronic computers, computer storage devices and peripheral equipment, communications equipment, nondefense search and navigation equipment, electrometrical equipment, electrical equipment, heavy duty truck manufacturing, railroad rolling stock, nondefense ship and boat building, office and institutional furniture, and medical equipment and supplies. Source: US Census Bureau. Measured in billions of dollars, NSA.

**US Paper Producer Price Index** — Producer Price Index for paper in the US. Includes writing and printing papers, ground wood paper, newsprint, packaging and converting paper, coated and laminated paper, film, gift wrap papers, and other miscellaneous papers. Source: US Bureau of Labor Statistics. Index, 1982 = 100, NSA.

# Management Objectives™

## Phase



# A

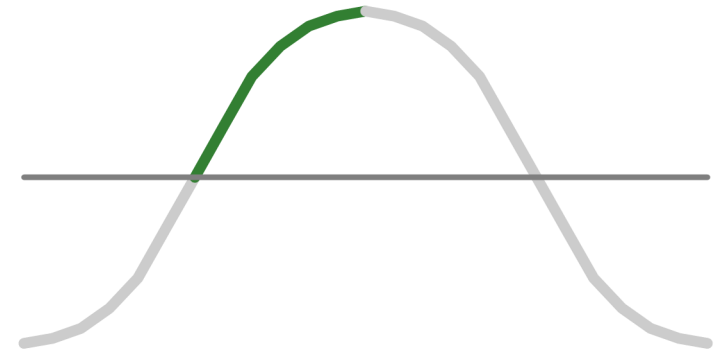
- 1 Model positive leadership (culture turns to behavior)
- 2 Establish tactical goals that lead to strategic achievement
- 3 Develop a system for measurement and accountability re: objective 2
- 4 Align compensation plans with objectives 2 and 3
- 5 Be keenly aware of the BE (Break Even) point and check it regularly
- 6 Judiciously expand credit
- 7 Check distributions systems for readiness to accommodate increased activity
- 8 Review and uncover competitive advantages
- 9 Invest in customer market research (know what they value)
- 10 Improve efficiencies with investment in technology and software
- 11 Start to phase out marginal opportunities
- 12 Add sales staff
- 13 Build inventories (consider lead time and turn rate)
- 14 Introduce new product lines
- 15 Determine capital equipment needs and place orders
- 16 Begin advertising and sales promotions
- 17 Hire "top" people
- 18 Implement plans for facilities expansion
- 19 Implement training programs



# Management Objectives™

- 1 Accelerate training
- 2 Check the process flow for possible future bottlenecks
- 3 Continue to build inventory
- 4 Increase prices
- 5 Consider outside manufacturing sources if internal pressures are becoming tight
- 6 Find the answer to “What is next?”
- 7 Open distribution centers
- 8 Use improved cash flow to improve corporate governance
- 9 Use cash to create new competitive advantages
- 10 Watch your debt-to-equity ratio and ROI
- 11 Maintain/pursue quality; don’t let complacency set in
- 12 Stay in stock on A items, and be careful with C items
- 13 Consider selling the business in a climate of maximum “goodwill”
- 14 Penetrate new selected accounts
- 15 Develop plan for lower activity in traditional, mature markets
- 16 Freeze all expansion plans (unless related to “What is next?”)
- 17 Spin off undesirable operations
- 18 Consider taking on subcontract work if the backside of the cycle looks recessionary
- 19 Stay realistic – beware of linear budgets
- 20 Begin missionary efforts into new markets
- 21 Communicate competitive advantages to maintain margins

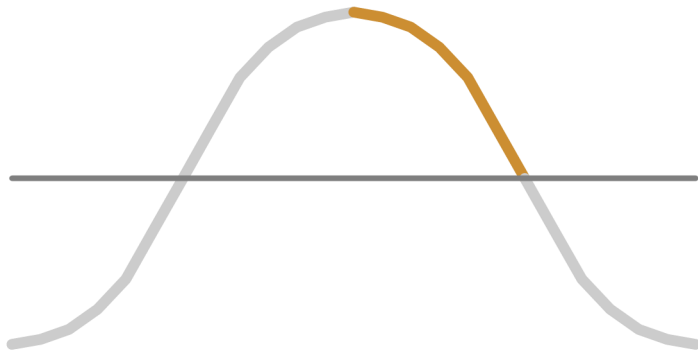
## Phase



# B

# Management Objectives™

## Phase



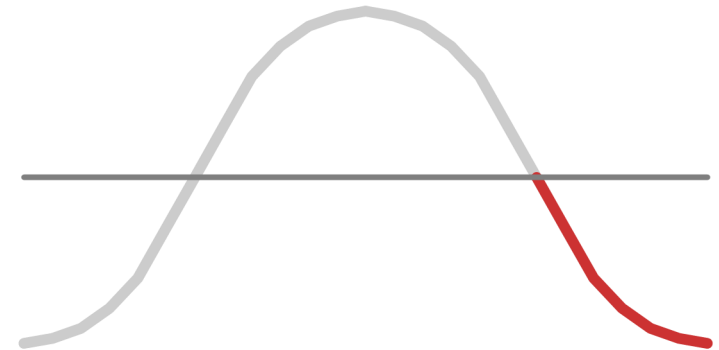
# C

- 1 Cross train key people to prepare for workforce reduction if the cycle looks recessionary
- 2 Set budget reduction goals by department
- 3 Avoid long-term purchase commitments late in the price cycle
- 4 Concentrate on cash and balance sheet
- 5 Reduce advertising and inventories
- 6 De-emphasize commodity/services in anticipation of diminishing margins
- 7 Weed out inferior products (lose the losers)
- 8 Encourage distributors to decrease inventory
- 9 Identify and overcome any competitive disadvantages
- 10 Make sure you and the management team are not in denial
- 11 Cross train key people
- 12 Watch Accounts Receivable aging
- 13 Increase the requirements for justifying capital expenditures
- 14 Evaluate vendors for strength (don't get caught honoring their warranties with no one to accept returned goods)
- 15 Manage the backlog through pricing and delivery; try to fill the funnel

# Management Objectives™

- 1 Continue force reduction
- 2 Reduce advertising – be very selective
- 3 Continue to avoid long-term purchase commitments
- 4 Review all lease agreements
- 5 Increase the requirements for justifying capital equipment
- 6 Eliminate all overtime
- 7 Reduce overhead labor
- 8 Combine departments with like capabilities and reduce management
- 9 Select targets of opportunity where price will get the business
- 10 Tighten credit policies – increase scrutiny
- 11 Look for opportunistic purchases
- 12 Grab market share as your competitor dies
- 13 Prepare training programs
- 14 Negotiate union contracts, if possible
- 15 Develop advertising and marketing programs
- 16 Enter or renegotiate long-term leases
- 17 Look for additional vendors
- 18 Consider capital expenditures and acquisitions in light of market-by-market potential
- 19 Make acquisitions – use pessimism to your advantage
- 20 Lead with optimism and “can do” attitude to mitigate employee anxiety

## Phase



# D