Decline in Two Leading Indicators

2014 did not start out with very encouraging news. We have seen The S&P500 decline 3.6% from the end of December and the ISM's Purchasing Managers Index for January head lower to 51.3. As the chart below shows, the PMI rate-of-change nose-dived in January to -3.4%. A drop below zero is not necessarily an indication of impending recession, but it is a clear signal that the economy’s late-2013 upward momentum is going to be shifting to, at best, deceleration mode during 2014. The shift in the Purchasing Managers Index is therefore consistent with our forecast for slower growth in 2014. The drop in the stock market is potentially more disconcerting – if it continues.

The S&P500 history (for December-to-January) since 1950 gives a 68% probability that the market is going to end down for the year as a whole. However, in each of the last four instances of a poor January showing, the market in fact closed UP by year-end. Ongoing S&P500 decline could be damaging to the growth rate of retail sales, especially since the big box stores are also showing weak growth. The weak January Light Vehicle Retail Sales numbers are not particularly worrisome to us at this time. January automotive sales were down 3.1% from last January, but it was a brutally cold month for a big swath of the country. On balance, we see increasing signs for caution regarding the general economy’s growth rate for 2014 but as yet no signs of GDP actually declining for the year.

Weakness in Nondefense Capital Goods

The rate-of-change weakness evident through December in Nondefense Capital Goods New Orders (excluding aircraft) is worth watching very closely. The ISM New Orders Index for January is suggesting that the weakness continued through the first month of the new year. The chart (next page) shows that the 3/12 rate-of-change has changed direction. It is going to take better-than-average growth in this New Orders trend to keep the 3/12 from weakening further in the first quarter of 2014, thereby providing further evidence of a probable slowing in the economy.
US Dependence on Foreign Oil Declining

Now for some good news. The 2013 data shows that US dependence on foreign oil declined for the eighth consecutive year and is now at 32.3%. We have been below 50% for the past four years. The majority of the foreign oil depicted on the chart is from Canada and Mexico. The strides made in reducing our dependence on foreign oil should pay handsome dividends in terms of keeping the US dollar afloat despite our high national debt and eventually closing our perennial trade deficit. More and more items are being stamped with “Made in the USA” and increasingly we are using USA energy to do it.

Changes in Wage Inflation

Our last chart is a good news/bad news piece. The chart illustrates that there is upward change occurring in wages. The increase is good news in that it is higher than the rate of inflation and therefore represents a real increase in consumer purchasing power. Short-term good for the economy. The not-so-good news is that real wages for businesses are rising at a time when there is very little consumer price inflation so profit margins are likely getting squeezed.

The tendency for the upward trend in wage rates to continue once it starts could make for a challenging management situation, particularly if wages continue to escalate while the economy is slowing down. A key tactic is to make sure our training programs are worth the effort so that your higher wages are matched with increasing productivity.

On balance, not a great month but not terribly surprising either. So far, no need to second guess the recent upgrade to the US Industrial Production forecast.
About ITR Trends 10

The ITR Trends 10 compares the current cyclical status of 10 major benchmarks of macroeconomic activity as they move through this business cycle and into the next. Think of the Trends 10 as a train with 10 cars. The majority of the “cars” have gone through a soft landing for the 2012-2014 cycle. Please note that not all of the remaining cars will go down into a hard landing. Many are likely to pass through a low between Phase C and Phase B without going into Phases D and A. This is the essence of the soft landing we are projecting for this business cycle.

Summary

- The Financial and Housing sectors are in Phase C, Slower Growth, of the business cycle.
- The Medical benchmark and Retail Sales are joined in Phase B, Accelerating Growth by Production, along with New Orders and Wholesale Trade.
- The Foreign benchmark remains in Phase A as growth has yet to take a foothold around the world.
- Higher natural gas prices have had little effect on overall inflation. Price are in Phase C.
- Nonresidential Construction has moved further along in Phase D, Recession.

Phase A: Recovery

12/12 is rising and the data trend is either heading toward a low or is in the early stages of recovery. This is the first positive phase of the business cycle.

Phase B: Accelerating Growth

12/12 is rising above 0, data trend is accelerating in its ascent, and growth is occurring above year-ago levels. This is the second positive phase of the business cycle.

Phase C: Slower Growth

12/12 decline is in place, data trend is decelerating in its ascent or has stopped its rise, but it is still above last year. This is the first negative phase of the business cycle.

Phase D: Recession

12/12 is below 0, data trend is in recession at levels below the year-earlier level. This is the final phase and the second negative phase of the business cycle.
ITR Leading Indicator™
and Economic Forecast

ITR Leading Indicator Slips in January

The ITR Leading Indicator fell steeply in January to its lowest level since November 2011.

The ongoing decline in the Indicator suggests growth in US Industrial Production, our benchmark for the overall economy, will noticeably slow in the second half of 2014.

The US Total Industrial Production Index for December came in a strong 3.7% higher than one year ago. This brought the annual average Index for 2013 in 2.6% higher than 2012, right in line with our forecast. The annual average Index for 2013 is 99.6, matching the median forecast point.

Digging a little deeper shows all was not great in December. The rise in US Total Industrial Production largely stemmed from an 8.1% jump in Utility Production (December was cold!) and a 6.7% year-over-year increase in Mining Production. Manufacturing came in 2.6% higher than last December, a slowdown from prior months.

The outlook is one of ongoing growth through 2015, albeit at a decelerating pace in the second half of 2014 and the first half of 2015. Make sure you have sufficient quantities of trained personnel to handle the gains in business.

<table>
<thead>
<tr>
<th>Forecast Period</th>
<th>12MMA Forecast</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec 2013</td>
<td>99.4 - 99.8</td>
<td>99.6</td>
</tr>
<tr>
<td>Mar 2014</td>
<td>100.1 - 100.6</td>
<td></td>
</tr>
<tr>
<td>Jun 2014</td>
<td>100.7 - 101.2</td>
<td></td>
</tr>
<tr>
<td>Sep 2014</td>
<td>101.0 - 101.6</td>
<td></td>
</tr>
<tr>
<td>Dec 2014</td>
<td>101.2 - 101.8</td>
<td></td>
</tr>
<tr>
<td>Mar 2015</td>
<td>101.1 - 101.9</td>
<td></td>
</tr>
<tr>
<td>Jun 2015</td>
<td>101.2 - 102.1</td>
<td></td>
</tr>
<tr>
<td>Sep 2015</td>
<td>101.8 - 102.6</td>
<td></td>
</tr>
<tr>
<td>Dec 2015</td>
<td>102.6 - 103.5</td>
<td></td>
</tr>
</tbody>
</table>
Annual average US Industrial Production for 2013 was up 2.6% from 2012. The leading indicators, extant factors, and rate-of-change trend probabilities indicate that the Industrial Production growth rate for 2014 as a whole will not be as good as it was for 2013, but there will be additional ascent, most noticeably in the first half of the year.

The upside trend in Retail Sales and the Conference Board’s US Leading Indicator portend upward momentum for the economy for the first half of 2014. The biggest threat to this over the next six months is from consumer spending slowing in its ascent, as the rising trend in Retail Sales could be at risk from a downturn in stock prices. Annual Retail Sales for General Merchandise Stores are just muddling along right now with year-over-year growth slowing to 0.5%. Upscale retail activity, as indicated by Jewelry Store Sales, are up a robust 10.0% from last year and still accelerating. A correction in the stock market could easily cast a pall over the upscale purchasing activity.

Relative weakness in the second half of 2014 lingering into the first half of 2015 is our expectation. Most companies will not see actual decline (recession) in activity if they are actively working at gaining market share in existing markets, or pushing hard into new markets. The extended outlook is for generally improving economic conditions for the second half of 2015 and for 2016.

The best insurance against the probable slowdown in the cycle is to aggressively seek new opportunities in new markets.
Annual Metalworking Machinery New Orders climbed to $36.7 billion in 2013, posting a 12.2% gain over 2012. New Orders during the final quarter of the year were 15.1% higher than the corresponding three-month period the prior year. The ongoing positivity in the raw and quarterly data suggests that further acceleration is likely in the annual trend. However, growth will begin to slow around mid-2014 and New Orders will mildly contract during the latter half of the year.

The leading indicators are beginning to show definitive signs of business cycle decline for New Orders in the second half of this year. The ITR Leading Indicator, which provides an early indication of cyclical turning points for Metalworking Machinery New Orders approximately ten months ahead of time, turned decidedly downward in August 2013. The current decline suggests that momentum in New Orders will shift by midyear. The Institute for Supply Management’s Purchasing Managers Index is suggesting a similar trajectory for New Orders late this year. The PMI 1/12 rate-of-change is heading lower, and with a 10-month lead time to the market, this is again indicative of the business cycle decline we are projecting for New Orders late this year. As a gauge of the health of manufacturing industry, the recent negativity in the PMI is especially concerning for New Orders and supports our expectation of mild New Orders contraction late this year.

**ITR Management Note**

Manage backlog through pricing and delivery. Try to fill the funnel to help offset the mild negativity expected late this year and in early 2015.
The inflation rate, as measured by the Consumer Price Index (CPI), ended 2013 at its lowest rate (1.5%) in over three years (average annual basis). We expect inflation to remain benign through the end of 2014, rising just 1.2% over 2013. Prices will accelerate through 2015, ending the year 3.0% higher than the 2014 level.

Gasoline prices account for 5% of the total CPI, and despite their relative unimportance in the overall measure, they play a pivotal role in the lives of most Americans. Their declining trend has allowed consumers to spend additional money elsewhere. The annual CPI for Unleaded Gasoline is 3.2% below last year, and trends in the quarterly data suggest that further decline is expected. Retail On-Highway Gas Prices ended 2013 at their lowest level in nearly two years (annual basis). Over the long term lower prices should be expected as the US reduces its reliance on foreign oil and focuses on domestic production.

The CPI for Health Insurance is 4.0% higher than one year ago (average annual basis); however, this represents the slowest rate of growth in 19 months. It is likely that the individual costs associated with Obamacare have not yet been reflected in this data; however, the higher-than-expected costs that some consumers have seen should push inflation in this market higher this year.

**ITR Management Note**

*Prices will not rise rapidly until 2015. Ensure your products are priced competitively.*
Data Methodology

Moving Total/Moving Average

Moving totals/averages are used to smooth out the volatility inherent to monthly data.

Monthly Moving Total (MMT) vs Monthly Moving Average (MMA): Totals are used for things where it makes sense to add the data together. For example, units sold, or total dollars spent. There are times when it is desirable to calculate a monthly moving average instead of a total. Averages are used when the data cannot be compounded such as an index, percent, price level, or interest rates.

3MMT or 3MMA: A three-month moving total (3MMT) or average (3MMA) is the total (or average) of the monthly data for the most recent three months. Three-month moving totals (3MMT) or averages (3MMA) illustrate the seasonal changes inherent to the data series.

12MMT or 12MMA: A twelve-month moving total (12MMT) or average (12MMA) is the total (or average) of the monthly data for the past 12 months. The 12MMT (A) removes seasonal variation in order to derive the underlying cyclical trend. It is also referred to as the annual total or average.

Rate-of-Change

A rate-of-change figure is the ratio comparing a data series during a specified time period to the same time period one year ago. Rates-of-change are expressed in terms of the annual percent change in an MMT or MMA.

Rates-of-change reveal whether activity levels are getting progressively better or worse compared to last year. Consecutive rate-of-change illustrates and measures cyclical change and trends.

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, and 12MMT (respectively).

A rate-of-change above 0 indicates a rise in the data relative to one year prior, while a rate-of-change below 0 indicates decline.

Definition of an Index

An index is a statistical measure of percent change from a base value in a dataset. The base value is equal to 100. Any reading above 100 indicates a percentage gain above the base value and any reading below 100 indicates a percentage decline from the base value. For example: an Index with the base year 2007 means that the year 2007 is 100. A reading of 107 indicates a 7% gain over the base year. A reading of 94 means activity is 6% below the base year level.
Four Phases of a Business Cycle

Phase A: Recovery
12/12 is rising but remains below zero, and the data trend is either heading toward a low or is in the early stages of recovery. This is the first positive phase of the business cycle.

Phase B: Accelerating Growth
12/12 is rising above zero, data trend is accelerating in its ascent, and growth is occurring above year-ago levels. This is the second positive phase of the business cycle.

Phase A Management Objectives™
Phase Late A - Recovery:
1. Positive leadership modeling (culture turns to behavior)
2. Establish goals: tactical goals which lead to strategic achievement
3. Develop a system for measurement and accountability re:#2
4. Align compensation plans with #2 and #3
5. Be keenly aware of the BE (Break Even) point and check it regularly
6. Judiciously expand credit
7. Ensure distribution systems are ready to accommodate more 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

Phase B Management Objectives™
Phase Early B - Growth:
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 becoming tight
6. Find the answer to “What 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. 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

Phase Late B Early C - Prosperity:
1. Stay in stock on A items, be careful with C items
2. Consider selling the business in a climate of maximum “goodwill”
3. Penetrate new selected accounts
4. Develop plan for lower activity in traditional, mature markets
5. Freeze all expansion plans (unless related to “what is next”)
6. Spin off undesirable operations
7. Consider taking on subcontract work if the backside of the cycle looks recessionary
8. Stay realistic – beware of linear budgets
9. Begin missionary efforts into new markets
10. Communicate competitive advantages to maintain margins
Four Phases of a Business Cycle

Phase C: Slower Growth
12/12 decline is in place but remains above zero, data trend is decelerating in its ascent or has stopped its rise, but it is still above last year. This is the first negative phase of the business cycle.

Phase D: Recession
12/12 is below zero and declining, data trend is declining to levels below the year-earlier level. This is the second negative phase of the business cycle.

Phase C Management Objectives™

Phase Late C - Warning:
1. Begin work force reductions
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 & 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 justification of capital expenditures
14. Evaluate vendors for strength
15. Manage backlog through pricing and delivery, try to fill the funnel

Phase D Management Objectives™

Phase Early D - Recession:
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 justification of 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

Phase Late D - Recession / Early A - Early Recovery
1. Prepare training programs
2. Negotiate union contracts if possible
3. Develop advertising & marketing programs
4. Enter or renegotiate long-term leases
5. Look for additional vendors
6. Capital expenditures & acquisitions considered in light of market-by-market potential
7. Make acquisitions – use pessimism to your advantage
8. People will be scared – lead with optimism and “can do” attitude
Checking Points

**Positive Checking Points**

1. 3/12 reaches a low
2. 3/12 passes above the 12/12

The rate-of-change is making the transition from the previous cycle’s decline to rise in the current business cycle. Checking points #1 and #2 reflect this activity.

3. 12/12 reaches a low

The onset of business cycle rise is observed.

4. 3/12 crosses about the 0% line
5. 12/12 crosses above the 0% line

The entry of the cycle into its steepest part of the rise is with checking points #4 and #5.

**Negative Checking Points**

6. 3/12 reaches a high
7. 3/12 passes below the 12/12

Checking points #6 and #7 indicate that the business cycle is making the transition from rise to decline.

8. 12/12 reaches a high

Business cycle decline begins with checking point #8.

9. 3/12 crosses below the 0% line
10. 12/12 crosses below the 0% line

The entry of the cycle into its steepest part of the decline is with checking points #9 and #10.