ITR ECONOMICS

Benefits of This Analysis

Turn static snapshots of your business into a view to trends that will show you where you are in the business cycle and what direction you are headed.

Step One: 3 Month Moving Total (3MMT)
- The first step is the 3MMT, or three-month moving total.
- To calculate the 3MMT, you simply total three consecutive months of data. When a new month closes, you drop the first month from the total and add the new month.
- This gives us that rolling total of quarterly sales activity and enables us to see the seasonal trends in the dataset that we are working with.

Step Two: 3/12 Rate-of-Change
- We then take it one step further and calculate a 3/12 rate-of-change. This is the quarterly growth rate of the dataset we are working with.
- As we can see in this example, the most recent three months of data for this market are up 6.0% compared to those same three months from one year prior.
- As you can imagine, the quarterly trend is subject to some inherent volatility. It can be impacted by pulling in orders at the end of the year, the timing of product promotions, disruptions to the previously discussed seasonal trends, and so on.
- For a clearer view of the overall health of your business, we will calculate what is called the 12MMT, or 12-Month Moving Total.

Step Three: 12 Month Moving Total (12MMT)
- The 12MMT is the same concept as the 3MMT, only now we are totaling 12 consecutive months of data instead of three. When we have data for a new month, we drop the first month from the total and add the new month.
- This gives us that rolling view of the annual sales or production and smooths out some of that noise or volatility we see in the quarterly trend.
- Much as we used the quarterly trend to calculate the quarterly growth rate, we can take the 12MMT and calculate the 12/12 rate-of-change, or annual growth rate.

	Raw	3MMT	3/12
May-16	1.5		
Jun-16	1.5		
Jul-16	1.4	4.4	
Aug-16	1.5	4.4	
Sep-16	1.3	4.2	
Oct-16	1.3	4.1	
Nov-16	1.6	4.2	
Dec-16	1.6	4.5	
Jan-17	1.5	4.7	
Feb-17	1.7	4.8	
Mar-17	1.6	4.8	
Apr-17	1.7	5.0	
May-17	1.7	5.0	
Jun-17	1.7	5.1	
Jul-17	1.6	5.0	13.6
Aug-17	1.7	5.0	13.6
Sep-17	1.5	4.8	14.3
Oct-17	1.5	4.7	14.6
Nov-17	1.9	4.9	16.7
Dec-17	1.7	5.1	13.3
Jan-18	1.7	5.3	12.8
Feb-18	1.9	5.3	10.4
Mar-18	1.7	5.3	10.4
Apr-18	1.7	5.3	6.0

3/12 Rate-of-Change

$$= \frac{April\ 2018\ 3MMT}{April\ 2017\ 3MMT} \times 100 - 100$$

$$= \frac{5.3}{5.0} \times 100 - 100 = 6\%$$
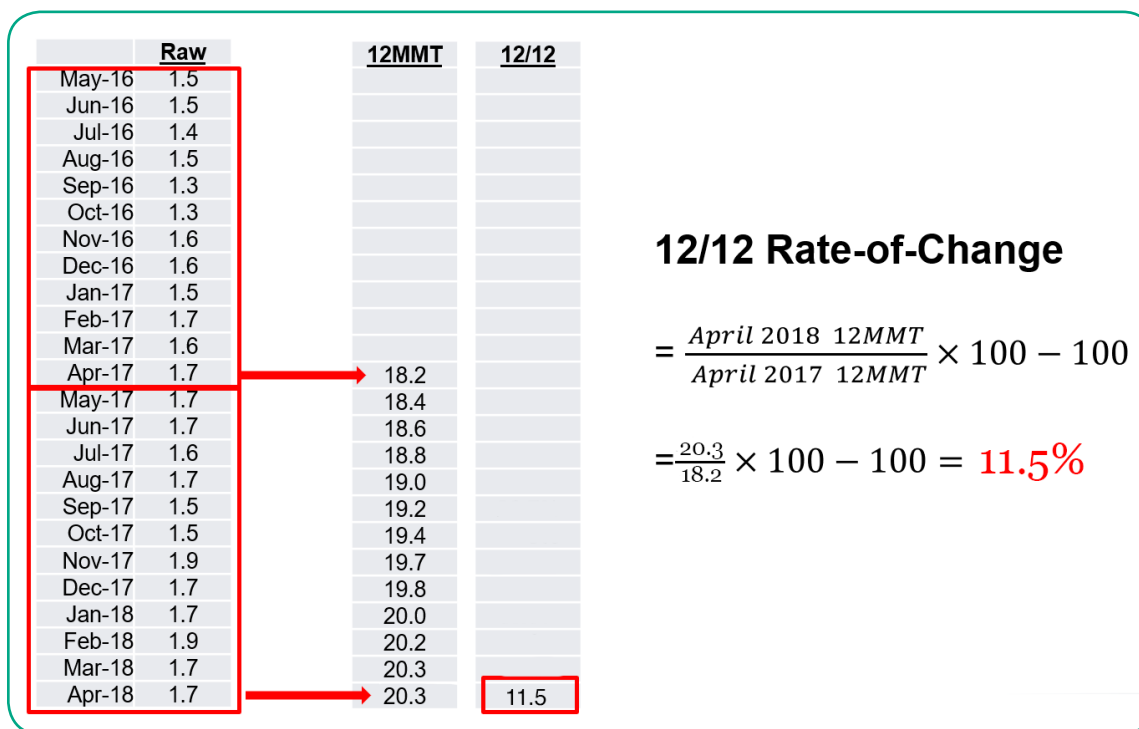
Step Four: 12/12 Rate-of-Change
- The 12/12 rate-of-change is essential to the analysis; I like to think of it as the heart of the analysis.
- This is where we identify not only the dataset's annual growth rate at any given point in time, but also where it is in the business cycle, and its relationship to leading indicators.
- In the example here, we see that the dataset was 11.5% above year-ago levels for the 12 months ending in April 2018. What we haven't yet dived into is that, when charted across sequential months and years in a timeline, the 12/12 rate-of-change tells a story – a story of where the market or company is in the business cycle, and, therefore, what Management Objectives™ should be considered.

Step Five: Analyze the 3/12 to 12/12 Relationship
- The 12/12 is rising:
  Has the 3/12 recently upward passed it? Then the 12/12 will likely continue to rise in the near term (3–5 months).
  Has the 3/12 downward passed it? The 12/12 may turn downward soon.
- The 12/12 is declining:
  Has the 3/12 recently downward passed it? Then the 12/12 will likely continue to decline in the near term.
  Has the 3/12 upward passed it? The 12/12 may turn upward soon.

Step Six: Analyze the 12/12 Rate-of-Change
- Identify what Phase of the Business Cycle the company is in.
- *Note: Generally speaking, three months in a new phase is required to establish a transition.*
- Understanding the phases helps with the mentality of managing a business.

	Raw	12MMT	12/12
May-16	1.5		
Jun-16	1.5		
Jul-16	1.4		
Aug-16	1.5		
Sep-16	1.3		
Oct-16	1.3		
Nov-16	1.6		
Dec-16	1.6		
Jan-17	1.5		
Feb-17	1.7		
Mar-17	1.6		
Apr-17	1.7	18.2	
May-17	1.7	18.4	
Jun-17	1.7	18.6	
Jul-17	1.6	18.8	
Aug-17	1.7	19.0	
Sep-17	1.5	19.2	
Oct-17	1.5	19.4	
Nov-17	1.9	19.7	
Dec-17	1.7	19.8	
Jan-18	1.7	20.0	
Feb-18	1.9	20.2	
Mar-18	1.7	20.3	
Apr-18	1.7	20.3	11.5

12/12 Rate-of-Change

$$= \frac{April\ 2018\ 12MMT}{April\ 2017\ 12MMT} \times 100 - 100$$

$$= \frac{20.3}{18.2} \times 100 - 100 = \textcolor{red}{11.5\%}$$

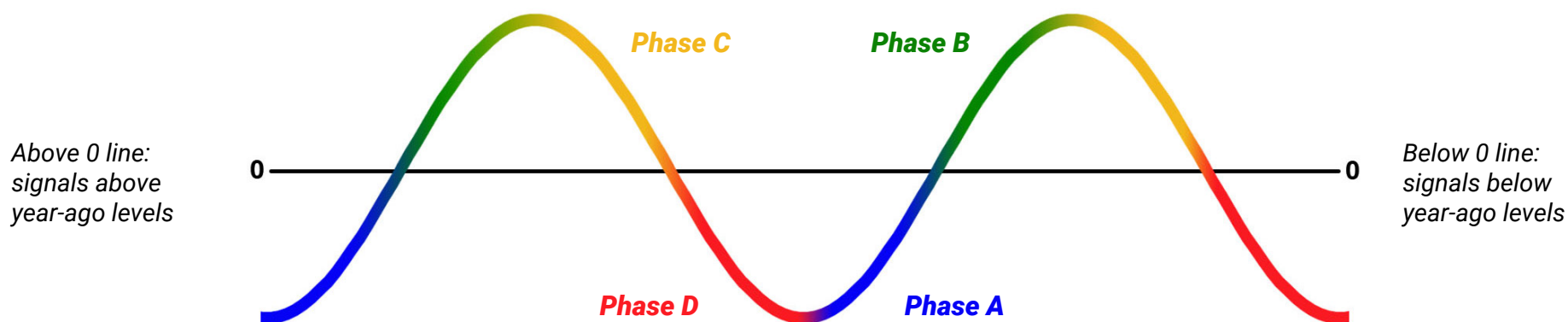# How to Analyze Data to Make Better Business Decisions

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Identifying business cycle phases is important, as each comes with its corresponding Management Objectives. ITR's Management Objectives are standard business practices that correspond to the phase in which they are most effectively applied. This helps management in making the right decisions at the right time.

For example: If your company is in Phase D, Recession, you are most likely cutting costs and are in "save the business" mode. However, if the company's rate of decline is slowing in the next few months and the company is about to transition into Phase A, Recovery, you may "miss the boat" by staying in this "hunkered down" state of mind. In this example: You miss out on opportunities by reacting rather than being proactive.

Another example: If you are in Phase B, the strongest growth phase, you are feeling great! Momentum is great, the teams are feeling great, orders are coming through the door, and you're thinking of opening that new office, expanding that facility, or upgrading that factory. All is well in the world. However, if you don't see that you are about to transition to Phase C, Slowing Growth, you can very easily overextend yourself, create too many expenses, and lose out on profitability.

Above 0 line: signals above year-ago levels

Below 0 line: signals below year-ago levels

Phase C   Phase B

0   0

Phase D   Phase A

What data should you analyze this way?

Orders, Revenue, Shipments, Units Sold – all may be applicable depending on your type of business. If raw materials prices impact your prices, then pounds shipped or units sold may provide a better reflection of the underlying trends within your business. If you have a lot of cancelled orders, revenue may give you a clearer trend line. Ask yourself: Which dataset best represents the "health" of my business?

ITR Economics' analysis turn data into usable tools for strategically managing your business!