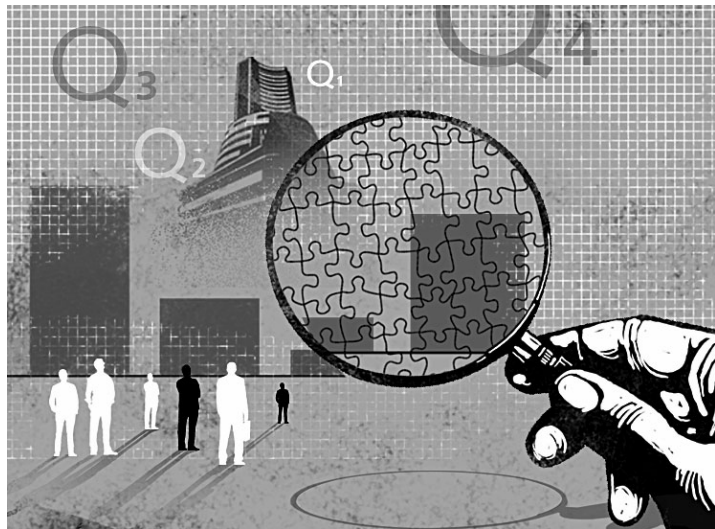


ILLUSTRATION: AJAY MOHANTY



GAINS FROM SEASONAL ADJUSTMENT

(in %)	Y-o-Y	POPSAA
2017 Q1	6.76	16.15
2017 Q2	6.24	0.68
2017 Q3	5.91	0.84
2017 Q4	10.12	20.70
2018 Q1	8.81	12.16
2018 Q2	14.43	19.67
2018 Q3	17.38	11.71
2018 Q4	12.79	4.36
2019 Q1	9.04	-0.69

Y-o-Y: year-on-year

POPSAA: point-on-point seasonally adjusted annualised rate of growth

Measure what you need to manage

Improved measurement for macroeconomic policy: Three problems and three solutions

An important constraint in difficult times is the lack of trusted and timely data. We face three problems. Many elements of information on the Indian economy are faulty. The data comes in with a lag. Year-on-year growth rates do not tell us what is going on right now. To this there are three solutions. We should emphasise data where the methods for measurement are sound. Seasonal adjustment makes it possible to see what is going on, closer to the present. Leading indicators give us an edge, of about one to two quarters, in peering into business cycle conditions.

In India we periodically face periods of macroeconomic and financial stress. One important constraint at such times is the lack of information. To understand what is wrong, and to come up with timely solutions, requires information about what is going on. There are three problems.

The first weak link is that of reliability of information sources. Many elements of the economic statistics in India

have conceptual or implementation problems. This is perhaps to be expected in a country with low state capacity. If the civil servants who are school teachers do not quite show up to teach at school, we should not be surprised when civil servants who are data collectors in the field do not quite show up to collect data. Given the broad scale of state failure in India, we should not be surprised when information produced by the Indian state apparatus is also weak.

Even when the data is trustworthy, it comes in with a lag. As an example, we are at the end of

August, but the most recent observed fact for bank credit pertains to June, and cement production is observed for May. The current account balance, and the performance of listed companies, is known till March. The release of some data mysteriously stops for a period and then restarts.

The staleness of the data is exacerbated by the use of year-on-year growth rates in the Indian economics community. Each year-on-year (Y-o-Y) growth number is the average of four quarter-on-quarter numbers. The year-on-year growth that we see for Q4 2019 is the average of the growth in Q1, Q2, Q3 and Q4 2019. It does not give a sense of what is going on at Q4 2019.

Economists have three responses in addressing these problems. The first issue is that of sound measurement. In India, we cannot proceed with using data in an uncritical and optimistic fashion. Each user of data is obliged to obtain full mastery of the sources and methods, which lie below each

number, and arrive at a judgment about its trustworthiness. Without critical thinking about what data can be trusted, we are reduced to garbage-in-garbage-out-exercises of data processing.

The second solution lies in switching from year-on-year growth rates to the quarter-on-quarter growth of seasonally adjusted data (<http://bit.ly/2Nv15mv>). The terms “quarter-on-quarter” and “point-on-point” are used interchangeably. The table offers one illustration of the gains from seasonal adjustment. The series being looked at here



SNAKES & LADDERS

AJAY SHAH

is the net sales of the non-oil non-finance listed companies. This is measured in nominal terms, and is a good measure of economic activity.

If we look at the conventional year-on-year growth, then Q1 2019 looks much like Q1 2018: These values are 9.04 and 8.81 per cent growth over one year ago. These seem like reasonable values. If inflation of about 4 per cent is taken out, they correspond to about 5 per cent real growth.

However, each reading of year-on-year growth represents the average of the four latest readings of quarter-on-quarter growth. We should focus on the “POPSAA”, i.e. the “point-on-point seasonally adjusted annualised” rate of growth. This column shows us how the economy actually evolved over this period, as opposed to the sluggish information obtained through year-on-year growth rates. For example, we see that growth peaked in the year from Q4 2017 to Q3 2018, and decelerated after that.

In Q3 2018, the year-on-year measure reported an improvement, to 17.38 per cent growth. But the point-on-point measure was already showing a decline to 11.71 per cent annualised.

In this table, we see two problems coming together. The latest available data for the performance of listed companies that we see in August 2019 pertains to a quarter that has long passed — January-March 2019. And, the conventional year-on-year growth data, for the March 2019 quarter, represents the average growth from April 2018 to March 2019. This stale information hampers thinking about the macroeconomy in August 2019.

As a thumb rule, when the year-on-year growth increases, this means that there was very strong performance in the point-on-point growth. For example, the year-on-year growth jumped from 5.91 per cent in Q3 2017 to 10.12 per cent in Q4 2017. This was because the point-on-point growth jumped up to 20.7 per cent in Q4 2017. This same idea applies on the way down.

Even if we are armed with seasonal adjustment procedures, only in September 2019 will we know what happened in the June 2019 quarter. How can we do better? The construction of “leading indicators” can help.

All macroeconomic and financial time series do not co-move with the main business cycle. As an example, a well-known regularity that has been seen in the world is that employment responds with a lag. Only after good times are well established employers increase their recruitment. Only when faced with deep difficulties are employees sacked. Hence, the employment series responds to business cycle conditions with a lag.

Conversely, some series are “leading indicators”: Their turning points run one to two quarters ahead of the business cycle. Of the well measured Indian quarterly time series, we find six indicators that lead the main business cycle: HCV sales, three wheeler production, car production, equity issues, new projects in the CMIE Capex database, and the P/E ratio of the CMIE Cospi index. An average of these gives an index which is a useful indicator; it gives a one- to two-quarter head start in peering into the business cycle.

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