The Asset Allocation ADVISOR

The View from the Land of Steady Habits
The Trouble with Numbers

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Investors are captives of numbers, as I was reminded by a summer intern who remarked at the end of one of his first days of work, "All the numbers!" He had had a day filled with numbers—of collecting them, calculating them, and analyzing them.

We cannot do without numbers as investors. We use them to measure and to compare investment values, to quantify economic activity, to report business results, and even to gauge the sentiments of markets, business people, and consumers. Numbers are the life-blood of investment analysis. We could not make sound choices without them.

We cannot be reminded too often, however, that underlying all of these numbers is human behavior. All of the economic data, earnings reports, revenue projections, and market predictions are attempts to measure our behavior. And just as human behavior can at times be quirky and unpredictable, so our attempts to quantify that behavior can at times be misleading. But the difficulty of quantifying human behavior is not the point of this commentary.

We need to keep in mind one other shortcoming of the numbers we use; namely, that the numbers themselves are the products of human activity. Reports, measurements, and analysis all rely on human agents for their production. And there's the rub. The numbers we use are subject to the failures and distortions of human nature itself. The trouble with numbers is not just that we use them to measure slippery notions (like a nation's economic well-being or a corporation's success), the trouble is that the numbers themselves and how they are interpreted can be the products of knaves or fools.

We have had ample reminders of this in the news this summer. Consider, first, the knaves. We can all recite the litany of companies that have been guilty of false or distorted financial reporting—from Enron to Bernie Madoff. But when we learn that General Electric has agreed to pay the Securities and Exchange Commission $50 million to settle a case involving the manipulation of its quarterly earnings, we should all pause to ponder the frailty of corporate and human nature.

A spokesperson for General Electric was quick to state that the company was committed to the highest standards of corporate reporting and governance. Should we be reassured by this statement? Do we breathe a sigh of relief to know that GE had not decided to relax its standards and play fast and loose with its numbers?

Quite the contrary—I find no reassurance in GE's corporate flag waving. I want to know what a company with such corporate standards is going to do with the individuals whose fear, greed, or mendacity led them to strike deals to sell locomotives to banks to push sales ahead of when customers wanted to take delivery? I want to know what prompted individuals within a company with such corporate standards to behave the way they did?

If corporate standards are not evidenced in the behavior of employees, what's the point of the standards?

More troubling is the possibility that GE's case was not just a matter of one or a few bad apples. Enron had a corporate ethics policy. But what good is an official policy when it is undercut by a corporate culture ready to compromise its principles?*

Contrary to what many of us think, it does not take the devil incarnate to compromise a corporate culture. High standards are undercut by small compromises, all of which seem insignificant or unimportant at the time. Although it hardly seems to be a textbook in corporate ethics, Philip Zimbardo's book on the results of the Stanford Prison Experiment, The Lucifer Effect: Understanding How Good People Turn Evil, should be required reading for all corporate executives. The conclusion of Zimbardo's book is that good people can end up doing things they would have never imagined themselves doing if they are placed in a group that offers little resistance to small compromises in standards of decency and fairness. Small compromises compound and lead to major violations after some time.

If GE and all other publicly owned corporations are going to avoid cooking the books, they must maintain cultures that protect and empower corporate accountants as much as chief executives. This may be too much to hope for; and if it is, then investors should be wary. No matter what the corporate spokespeople say, the numbers we rely on may not be as good as we think they are or, perhaps, even as companies would have us believe.

What about numbers fools? Unfortunately, many of us fall into this category from time to time in our analysis and interpretation of numbers—sometimes through a lack of understanding, sometimes through an inability to see numbers in the right perspective, and sometimes by failing to see that the numbers don't tell the whole story .

A good example of this recently was with the July unemployment numbers where the drop in the unemployment rate was broadly heralded as a sign that the recovery was on its way. The headline of the weekend edition of the Wall Street Journal (for August 8-9) read: "Hopeful Signs for U.S. Jobs" with a sub-headline of "July Unemployment Rate Slips Unexpectedly to 9.4% as the Pace of Layoffs Slows." The scrolling update on CNN that Saturday read "Jobless rate down for first time in year."

But wait. Did anyone read the report from the Bureau of Labor Statistics? Did anyone look at the detail? A more accurate headline would have been: "Labor Force Participation Drops to Lowest Level since 1987," with the sub-headline, "Unemployment Rate Drops as People Stop Looking for Work." As optimistic as the headlines were in the Wall Street Journal and on CNN, they didn't tell the whole picture, and one might even argue they conveyed the wrong picture.

* In GE's defense, it should be noted that they spent a great deal of time and money in cooperating with the SEC's investigation.

The drop in the labor force participation rate (the percentage of people over the age of 16 who are working or looking for work) should be a cause for worry because a nation's output and standard of living are linked to this rate. An economy can't expand, and the standard of living can't improve, if people aren't working at providing services or manufacturing goods. As the U.S. population ages, the labor force participation rate among working age adults will have to increase to offset the number of people who leave the labor force due to retirement. Although the labor force participation rate is the lowest it has been since 1987, the percentage of the total population that is working is at the lowest level since 1984 at 59.4%. Where were these statistics in the press reports?

Another example of misleading numbers analysis appeared in a more recent (September 3rd) Associated Press report of statistics released by the Center for Disease Control (CDC) on how swine flu is impacting various age groups. The report was headlined, "Swine Flu Deaths Higher in Older Kids." The lead-in line to the internet version read, "About one in 13 U.S. swine flu deaths have been children and most of the kids have been of school age, the federal government says."

The impression given by the headline is that H1N1 flu is disproportionately impacting children, and school age children, in particular. But is this true? Children age 17 and under account for approximately 25% of the U.S. population, according to the most recent estimates of the Census Bureau. One in 4 Americans is a child. One in 13 swine flu deaths have been children. Clearly, children are not the age group at greatest risk.

The article goes on to say that 80 percent of the children who died from swine flu were 5 or older compared to the normal case in which half or more of the children who die from flu are under the age of 5. But even if all of the children who have died from swine flu were school-age, the impact would still not fall disproportionately on this age group. School age children (between 5 and 17) make up almost 18% of the population. More than 1 in 6 Americans are of school age. If 1in 13 of the swine flu victims were school age children, that still leaves the impact of the disease falling more heavily on other age groups.[†]

The statistics do seem to suggest that school-age children are more susceptible than pre-school children. But we should be careful about drawing this conclusion. Seventy-two percent of all children are school age. The fact that 80 percent of the child deaths have been among school age children may say more about how the disease is being transmitted than about an age-related susceptibility to the disease. The statistics by themselves don't tell the whole story, and without the whole story, we can't draw solid conclusions.

[†] An example will prove the case. Imagine that swine flu deaths to date have totaled 1,000. If 1 of 13 deaths were children, then 77 children have died. That means adult deaths totaled 923. Children make up 25% of the U.S. population or roughly 75 million of the total of approximately 300 million. The death rate among children would be about 1 per million (77 divided by 75 million), whereas the death rate among adults would be 4.1 per million (923 divided by 225 million). No matter what the actual totals have been, the rate for the adult population would be four times the rate for children, if 1 of 13 deaths were children as reported.

The trouble with numbers is not just that we can't always trust them. Sometimes we misinterpret them. Sometimes we fail to put them in the right perspective. Sometimes, we fail to realize that they don't tell the whole story.

A robust skepticism is the best attitude to adopt when dealing with all the numbers we rely on as analysts and investors. Whether we are analyzing the numbers ourselves or reading someone else's analysis, we should not automatically assume that the numbers as reported are accurate representations of the facts, especially if the individuals or organizations reporting the numbers have something to gain by them. When we think the numbers are reliable, we should not necessarily accept the consensus understanding of them. How do they appear in a broader or different context? What other conclusions could one draw from the numbers, or what alternative explanation might account for the data? Do the numbers tell the whole story, or is there more information to be had?

If we are going to avoid being misled by the numbers and by those who generate them, analyze them and interpret them, we need to be vigilantly skeptical. Caveat lector—reader beware! The truth may be different from or a whole lot more complicated than the numbers make it appear.

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