

# What Are Your Assumptions?

*The author, Mark Felthouser, is chief statistician for Vista Information Services.*

**A**ssumption: a proposition that is taken for granted, as if it were known to be true.

In the book “The Naked Pilot: The Human Factor in Aircraft Accidents,” David Beaty describes the crash several years ago of a flight from New York to Portland, Ore.

Toward the end of an uneventful flight, the crew began making standard preparations for landing. Unfortunately, the indicator lights showed that the landing gear had not descended properly. After frantic efforts to get the landing gear in place seemed to fail, the pilot made the decision to attempt a landing without the landing gear. The flight attendants were directed to instruct the passengers in emergency procedures.

During this delay, the pilot flew the plane in large circles near the airport. This extra flying time consumed much of the remaining fuel. The flight engineer informed the pilot that the fuel gauge indicated low fuel levels. The pilot thought he had a clear understanding of how far they had flown. He assumed that there must be sufficient fuel.

But the fuel gauge was correct. The pilot, the rest of the flight crew, as well as ground control were mostly focused on the problems with the landing gear and the impending landing attempt. Even as the flight engineer continued to inform the pilot of the decreasing fuel levels, the “mindset” of group failed to address the dire fuel situation. As the engines flamed out and the fuel gauge went to zero, the pilot continued to demand more fuel be delivered to the engines. The plane crashed in a wooded area. Miraculously, most of the passengers survived.

Recently, with the sub-prime mortgage fiasco, a similar trap of group mindset and unexamined assumptions occurred. As we all know now, the lenders, borrowers, regulators, bond rating agencies and investors all convinced themselves that the system was working properly. Warning signals were largely ignored. During the early days of the sub-prime fallout, even after the problems were coming to light, there were numerous occasions of financial analysts explaining that the difficulties associated with sub-prime defaults would be short lived and contained.

---

**Taking some time to think about, articulate and write down possible assumptions can be a useful exercise.**

---

In these times of economic uncertainty, we are often in the uncomfortable position of having to make decisions based on incomplete, and sometimes, contradictory information. Even under the most stable circumstances, forecasts contain a wide interval of uncertainty.

It pays to make a careful assessment of one’s assumptions. In the practice of statistical analysis, properly identifying and testing assumptions is a key part of a complete project. In a business setting, a dangerous situation occurs when one is making assumptions without realizing it.

Is there a new competitor out there? Does another manufacturer have a small,

but growing market share? What are the current retail prices of your products and those of your competitors? Are you being undercut? Are your sales and marketing efforts having an effect? Will the housing market rebound quickly, slowly or continue a downward slide?

Taking some time to think about, articulate and write down possible assumptions can be a useful exercise.

Following the compilation of this list, the next step is to collect the appropriate data and compare one’s assumptions to the data.

Some Internet surveys ask the question “do you prefer more or less information when making decisions?” For consumers, with easy Internet access, large amounts of information are easily available. To an individual making a purchasing decision, it can seem overwhelming. It’s understandable for some people to want to ‘tune it out’ in an attempt to simplify the decision-making process.

For corporations, however, attempting to operate without the relevant data sources is analogous to flying blind. Data-free decision making, sooner or later, leads to poor results. Fortunately, in most business situations, relevant data are available. Also, unlike some aircraft emergencies, there is usually enough time to carefully analyze the data. You can avoid getting trapped in a group mindset that ignores important information. And there’s no need to make the same mistake as the unfortunate pilot who mistook his assumptions for the facts.

*To learn more about Vista Information Services, call (847) 768-3122 or visit [www.vistainfoservices.com](http://www.vistainfoservices.com).*