Action-Capture Camera Marketing Decisions
Help – Explanations – Cause-Effect Relationships

All seven marketing decisions for action cameras (along with your company’s P/Q rating for cameras and the number of camera models offered, both of which are determined by your management team’s entries on the Product Design page) will largely determine the degree to which your company’s action cameras are competitive with those of rival companies and have strong/weak buyer appeal in this decision round.

Each time you make a decision entry on this page, the on-screen calculations in the Market Segment Statistics section and in the Price-Cost-Profit Breakdown section will instantly show the projected effects, by geographic region, on unit sales, market share, revenues, unit operating costs, operating profit, and operating profit margin, as well as updated projections of overall company performance (in the box with the blue background on the middle-left of the page). All of these on-screen calculations are there to help you evaluate the relative merits of one decision entry versus another. As always, no decision entry is “final” until the decision deadline passes, so you can try out many different entries in each of the 7 marketing-related decision boxes for each geographic region and also try out as many different decision combinations as you wish in searching for a “winning” strategy and combinations of marketing-related decision entries that offer the “best” or “most attractive” projected outcomes across the four geographic regions.

Understanding the On-Screen Projections

When you first visit this page each decision round, the calculations for projected unit sales, market share, revenues, costs, operating profit, and operating profit margin are based on

1. The entries currently showing not only in the 7 decision boxes for action camera marketing but also the entries on all the other decision pages (some/many of which are prior-year decisions you may not yet have updated) and

2. The prior-year competitive efforts of rival companies in the market for action-cameras, as measured by the prior-year industry (all-company) averages for average wholesale prices to camera retailers, retailer support, advertising, website product displays/info, weekly sales promotions, the discount offered to camera retailers during the weekly sales promotions, the length of camera warranties, number of camera models, and camera P/Q ratings.

While the projections are updated as decision entries are made, the projections are initially based on the weak (almost certainly wrong?) assumption that the prior-year industry averages for selling prices, P/Q ratings, sales promotions, number of models offered, and other competitive factors will remain unchanged in the current decision round.

A far more reasonable assumption is that the industry averages for all the various competitive factors will change. Why? Because the managers of rival companies in entering their decisions for this upcoming year can be expected to make changes in their competitive efforts (by increasing/decreasing wholesale prices to retailers, increasing/decreasing P/Q ratings for camera and number of camera models offered, changing their promotional efforts, and so on). This means that the industry averages in the current year will almost certainly differ from those in the prior year—which, in turn, means that on-screen projections based not only on your decision entries but also on the prior-year competitive efforts of rival companies are going to be “wrong” because changes in upcoming-year competitive actions on the part of rival companies and the resulting changes in the industry averages are likely to produce competitive conditions in each geographic region that differ by some amount (perhaps a little or perhaps a lot) from those in the prior-year. So for your company’s management team to believe or rely upon projections based on the prior-year competitive efforts and maneuvering of rivals is highly questionable. But you and your co-managers can do something about this “problem” of potentially unreliable projections.
The Competitive Assumptions Entries at the Bottom of the Page

The purpose of the Competitive Assumptions entries in the bottom section of the page is for you to enter whatever changes in the industry (all-company) averages you believe are likely to occur in each region. **Any updates you make in the industry averages will be “estimates” or “approximations” that you may be reluctant to make or that will make you uncomfortable/nervous. But there are often sound reasons to expect that the competitive efforts of rivals will, on average, be different than in the prior year** because (1) poorly-performing companies that were outcompeted last year have strong incentive to initiate actions to boost their competitiveness and (2) high-performing rivals may well try to open up a wider competitive advantage on certain competitive factors to further enhance their prior-year’s performance.

You will find the information in the most recent Competitive Intelligence Reports to be very helpful in pinpointing the fresh actions poorly-performing firms are likely to take to boost their performing in this upcoming decision round—check out the competitive factors where they were at a big competitive disadvantage against the industry average, region-by-region. Also, check out whether it would be reasonable for one or more rivals to change their efforts on certain competitive factors from prior-year levels. This will help you decide how much to raise/lower (or leave unchanged) the prior-year industry averages (remember here that if you believe some/many rivals are likely to cut/raise their wholesale prices to retailers, then the industry average for price to retailers is likely to fall/increase). Which companies are poorly-performing and are thus under pressure to increase their competitive efforts can be seen on the first page of the Camera & Drone Journal (along with specific details on pages 2 and 3 of this same report).

**Decision Entry Tip:** Even if you should overestimate the strength of competition from rivals in the upcoming year by some modest amount (which, in turn, will lower the projected sales/market shares for a given level of marketing effort on the part of your company) and then actually end up with bigger sales/market shares than were projected, your company will still assemble, ship, and sell the unexpected units demanded by buyers provided your company has sufficient idle workstation capacity to fill the unexpected orders from buyers.

Consequently, when the results come out, it is far better to have the pleasant surprise of discovering your company actually sold more than the projected sales volume in one or more regions (and enjoying the accompanying extra revenues and profits) than having the unpleasant surprise of learning that your company ending up selling less than the projected sales volume because you and your co-managers underestimated the strength of the competitive efforts from rivals.

**Recommendation #1:** Consider entering your updates/estimates/approximations for the industry averages for each of the 8 Competitive Assumptions at the bottom of the page before proceeding to make marketing decision entries. This should make the resulting on-screen projections more “forward-looking” or “credible” or “reliable” than “backward-looking” projections based on “out-of-date” prior-year industry averages (assuming your updates of the averages are predicated on a careful study of the information in the most recent Competitive Intelligence Report and on a somewhat thoughtful and perceptive diagnosis of what changes in competitive efforts rival companies are likely to make).

**Recommendation #2:** Exercise caution in adjusting the industry averages up or down by “large” percentage amounts. There is always going to be uncertainty about the extent to which competition from rivals is likely to grow stronger or weaker in the upcoming year—“big changes” in the industry averages are. Moreover, all rivals are not likely to make competitive changes in the same direction—for example, some/many might lower their average wholesale prices to retailers, while others raise their prices (especially if they have taken action to increase the P/Q ratings of their cameras). Probably the safest or most conservative assumption about the prior-year averages is that the competitive efforts of rivals will on average be “a little stronger” or “slightly stronger”—this equates to adjusting the prior-year industry averages downward in the case of the average wholesale price to retailers by, say, $3 to $8 (but if you think many rivals have a strong incentive to boost the P/Q ratings of their cameras and will thus incur meaningfully higher costs to do so, then it is reasonable to assume the average wholesale price for cameras will rise by $4 to $10). An expectation of somewhat stronger
competition from rivals might also warrant an upward adjustment of 0.1 to 0.3 in the case of both P/Q rating and number of models, and perhaps $50 to $150 in the cases of retailer support, advertising, and website displays/info, and maybe a 30-day jump in the warranty period.

AC Camera Marketing Decisions

Pricing Decisions. You have the flexibility to set different prices for each region. There are several reasons to charge different prices in different regions:

1. Because competitive conditions and maneuvering of rivals (with regard to price or other competitive factors) are different from region to region.
2. Because the buyers of action cameras in Latin America and the Asia-Pacific regions are more sensitive to cross-brand price differences than are camera buyers in North America and Europe-Africa.
3. Because you and your co-managers wish to stake out different market positions in each regions and pursue different strategies for competing in each region.
4. Because import duties are not the same for all regions.
5. Because exchange rate adjustments vary from region to region.

Alternatively, you have complete discretion to pursue a mostly global pricing strategy and charge identical (or much the same) wholesale prices to retailers in each region—your company always markets the same camera models having the same P/Q ratings and the same production costs in all four geographic regions of the world (although other marketing-related costs, as well as the competitive efforts of rivals, tend to vary by region).

How the average wholesale price of your company’s action-capture cameras in a given region compares to the industry average price in that region has a major bearing on your company’s unit sales and market share in the region. You can see the projected effect on unit sales and market share in a region of a change in the average wholesale price to retailers by watching how much projected unit sales and market share change (see the Market Segment Statistics section just below the marketing decision entries) when you enter a higher or lower price. A higher/lower wholesale price translates into a higher/lower retail price, since retailers try to maintain a fairly constant markup over the wholesale prices they have to pay digital camera makers.

Decision-Making Tip: Before attempting to enter a wholesale price to retailers always consult the most recent Competitive Intelligence Report to see how your company’s prior-year wholesale price to retailers compared against those of rivals region by region. These comparisons, along with your entries of the anticipated industry averages of wholesale prices to retailers in each region (see the “price to retailers” in the Competitive Assumptions section at the bottom of the page), should provide helpful guidance in arriving at what average wholesale price to retailers to enter for each region. Use the info in the Competitive Intelligence Report to guide your entries for the other marketing decisions as well.

Each time you make alternative decision entries for average wholesale price, use the resulting changes in the on-screen calculations to help zero in on what you and your co-managers consider, at least temporarily, to be an "optimal" or at least "acceptable" decision entry for price. After you enter the other marketing decisions, you can always come back to the decision entry for price in a particular region and make further adjustments. Expect to recycle through the marketing decision entries for each region several times.

While lower average wholesale prices to retailers tend to boost unit sales/market shares (assuming you and your co-managers do not undercut the effects of a lower price by reducing your company’s competitiveness in other areas), lower wholesale prices can narrow operating profit margins and lead to a decline in total profit (because the gain in revenue attributable to a higher unit volume is insufficient to overcome the revenue erosion associated with a lower price on all units sold). So as you try out different entries for average wholesale price, it is important to look beyond just the effects on projected unit sales/market share for the
region and also check out the projected effects on (1) a region’s operating profit and operating profit margin and (2) overall company performance.

**Abandoning a Region.** Should, at some point and for whatever reason, you decide you want to withdraw entirely from selling cameras in a particular geographic region for one or perhaps more decision rounds, you simply need to set region’s price entry to $0. Then also eliminate the dollar expenditures for retailer support, advertising budget, and website product displays/info (in order to avoid paying costs for these items when you are not striving to secure buyers and thus have no sales in the region). You can reenter a region and resume sales whenever you wish.

**Retail Outlets.** Observe that the last three lines of the Market Segment Statistics section showing the number of multi-store chains, online retailers, and local retail shops in each region that decided at the end of the prior year to stock and display your brand of action cameras in the upcoming year. In the last two months of each year, camera retailers decide whether to stick with the camera brands they are currently stocking or whether to make some adjustments based on five considerations:

1. Which camera brands in their region are growing in popularity and declining in popularity among buyers (as measured by changes in each company’s market share in the region).
2. Company P/Q ratings relative to the industry average.
3. Each camera company’s expenditures for retailer support in the region relative to the regional average.
4. Each camera company’s number of weekly sales promotions in the region and the size of its promotional discount during these sales promotions.

The number of retailers willing to stock and merchandise each camera brand in the upcoming year are always updated when the prior-year decision entries are processed and are reported in the Competitive Intelligence info in that region (in order to avoid paying costs for these items when you are not striving to secure buyers and thus have no sales in the region). You can reenter a region and resume sales whenever you wish.

**Retailer Support Decisions.** Decisions on how much to spend on retailer support have to be made for each geographic area. It is normal to spend different amounts on retailer support in different geographic areas because your company has a different number of retailers in each region (as shown on the last three lines of the Market Segment Statistics section) and also because unit sales vary considerably from region to region. It is normal to spend different amounts on retailer support in different geographic areas because your company has a different number of retailers in each region (as shown on the last three lines of the Market Segment Statistics section) and also because unit sales vary considerably from region to region.

Retailer support expenditures in each region involve providing retailers with in-store signs, up-to-date product-information brochures, and video-enabled point-of-purchase (POP) displays that showcase engaging video samples and that attractively present the company’s camera models and accessories. A portion of these expenditures are also used to support the trips of company marketing personnel to visit the stores of high-volume retailers and work with store managers/clerks in expanding/improving the footprint of the company’s POP displays.

The size of your company’s retailer support budget in each geographic region is one of the factors determining the competitiveness of your brand of cameras vis-à-vis the offerings of rivals and also has a major effect on how many retailers in the region will be attracted to merchandise your cameras (this number is always updated at the end of each decision round). **Companies providing greater retailer support per unit sold gain a competitive edge in attracting retailers to stock their brand compared to companies spending a lesser amount on retailer support per unit sold.** The bigger a company’s network of multi-store retailers, online retailers, and local retail shops in a region, the stronger is its brand exposure to camera shoppers and the better chance it has to win sales and market share in the region.
Consult the most recent Competitive Intelligence Report to see how your company’s prior-year retailer support budget compared against those of rivals region by region; these comparisons, along with your entries of the anticipated industry averages of retailer support expenditures in each region in this decision round, should provide adequate guidance for helping arrive at how many dollars to spend for retailer support in each region.

Each time you make alternative decision entries for the retailer support budget, you can use the resulting changes in the on-screen calculations to help zero in on what you and your co-managers consider to be an "optimal" or at least "acceptable" decision entry.

**Advertising Decisions.** It is normal to spend different amounts on advertising in different geographic areas since unit sales and market share differ widely across each region. You can either pursue a similar marketing strategy for each region or have moderately or radically different marketing strategies for each region.

If your company’s advertising budget exceeds the industry average amount of advertising in a geographic region, then your company will enjoy a competitive edge over rivals on advertising in that region—a condition that boosts unit sales and market share. If your company’s advertising expenditures are below the industry- or industry average in a geographic region, then your company is at a competitive disadvantage on advertising and will sell fewer units than would be the case at higher advertising levels. Consult the most recent Competitive Intelligence Report to see how your company’s prior-year advertising expenditures compared against those of rivals region by region; these comparisons, along with your anticipated industry averages of advertising expenditures in each region in this decision round, should provide adequate guidance for helping arrive at how much to spend on advertising in each region.

Decisions of how much to spending on advertising in each region always need to be made with an eye toward how much rivals are likely to spend on advertising in the upcoming year. It is very risky to arbitrarily decide to spend only so many dollars on advertising when rival companies are spending double or triple your amounts. But this does not mean that you have to be drawn into a contest with rivals on who-can-outspend-whom on advertising—rather it means you have to be alert to the effect of advertising expenditures on your company’s overall competitiveness against rivals.

Furthermore, it is critical that you understand there is no set value of how many more action cameras your company can expect to sell if advertising is increased, for example, by $1 million annually. There is no pre-determined value (say, 100,000 cameras) that has been programmed into GLO-BUS specifying that if a company increases its advertising by $1 million annually then its camera sales will rise by x units. Rather, the size of the impact of a $1 million increase in ad spending depends on the actions of competitors.

Here is why "it all depends" is perfectly logical and realistic in a competitive marketplace. Suppose, all other things remaining equal, your company increases its advertising in the Asian-Pacific market by $1 million and your rivals change none of their prior year's decisions. Then, indeed, your company’s unit sales would rise by, say, x units (based on algorithms contained in the GLO-BUS software). But, if in the same year when your company increases advertising by $1 million, several rivals decide to raise their advertising by $500,000 in the Asian-Pacific market (all other competitive factors remaining the same), then your company’s sales will rise by a lesser amount, say, only y units. And, should all rivals elect to boost their advertising in the Asian-Pacific by $2 million (all other things remaining equal), your company’s $1 million advertising increase would be accompanied by a decline in unit sales (albeit a smaller decline than if you had failed to increase advertising at all). So, just how many extra units your company will sell as a result of increasing advertising by $1 million "all depends" on the full range of competitive efforts of rivals and this includes actions not only with respect to their advertising levels but also with respect to price, number of models, technical support, promotional activities, and so on. The "Well, it all depends" answer also applies to the impacts on unit sales and market share for all other moves you and your co-managers might make—raising/lowering prices, adding/deleting models, lengthening/shortening warranties, getting a higher/lower P/Q rating, and so forth.

**Website/Product Display/Info Decisions.** The timeliness, creativity, and effectiveness of the product displays, informational content, and customer reviews at each company’s website, along with the website’s
visual appeal and functionality, is an important element in prompting buyers to visit a nearby retailer of the company’s brand, personally inspect the company’s various models, and perhaps make a purchase. Visits to a company’s website also enable customers to obtain needed after-the-sale technical support, download apps and software updates for previously-purchased camera models, browse product manuals, discover how to file a warranty claim, and use the chat function to pose questions to online personnel.

Spending different amounts in different regions is normal because (1) unit sales differ widely by region, (2) your company’s management team may wish to put more emphasis on gaining sales/market share in some regions versus others, and (3) rivals in some regions may be spending considerably more/less than your company on this competitive factor. As should be the case the for all the marketing decision entries, consult the most recent Competitive Intelligence Report to see how your company’s prior-year expenditures for website product displays/info compared against those of rivals region by region; these comparisons, along with your entries of the anticipated industry averages of website product displays/info expenditures in each region in this decision round, should provide adequate guidance for helping arrive at how much to spend in each region this upcoming decision round.

Sales Promotions and Discount Decisions. Rival companies can run from 0 to 15 week-long sales promotion campaigns annually to tout their action-capture cameras—all such campaigns involves offering retailers a discount of some size off the regular price. Retailers like for the company to have periodic sales promotion campaigns because they call attention to the brand, spur consumer interest and store traffic, and help increase unit sales.

The size of the discounts off regular price a company offers during sales promotion events is a very crucial factor in determining the sales-enhancing impact of its promotional campaigns, more so than the number of weekly promotional events. Promotional campaigns involving sales prices of 15% to 20% off the regular price have substantially greater sales-enhancing impact than promotions offering only 5 or 10% discounts, even if a company holds more sales promotions with such small discounts.

You will quickly see (by trying out different decision entries for the number of weekly sales promotion campaigns and the percentage size of the price discounts during these campaigns) that these two decisions can have a positive and profitable impact on the projections of unit sales, market share, revenues, and operating profits. As a consequence, they are very important marketing decisions.

Both the number of promotional campaigns annually and the size of the discounts off regular price are factors that impact the decisions of retailers (multi-store chains, online retailers, and small local retailers) to stock and merchandise your brand of cameras.

Again, make it a point to consult the most recent Competitive Intelligence Report to see how your company’s prior-year number of promotional campaigns and the percentage discount off regular price compared against those of rivals region by region. These comparisons, together with your competitive assumption entries (in the bottom section of the page) of the anticipated upcoming-year industry averages of (1) the number of promotional discounts and (2) the percentage discount off regular price in each region, should help your management team decide on the two decision entries for sales promotions.

The effects of the promotional discounts are automatically taken into account in calculating the projections of the company’s net revenues (after allowing for the revenue erosion associated with promotional discounts) and operating profits in each region—see the on-screen calculations in the Price-Cost-Profit Breakdown section. Net revenues per unit refer to the amount the company receives per unit sold after the effects of price discounts during sales promotion campaigns are taken into account.

Warranty Period Decisions. Lengthening the warranty period for cameras, while making your camera models more appealing to buyers, also has the effect of boosting warranty repair costs because of (1) the increased number of sales associated with offering buyers a longer warranty and (2) having warranty claims come in over a longer period of time.
• The expected warranty claim percentage and the projected warranty repair costs associated with whatever length of the warranty period is entered are shown just under the warranty period decision field. The cost of handling a warranty claim for your action cameras is $50 per claim.

• The percentage of expected warranty claims declines as your company’s P/Q rating for cameras rises. (Your company’s management team can also opt to reduce the warranty claim percentage by increasing the size of the “assembly quality incentive” paid to camera PATs—this means of cutting warranty claim costs will be discussed in the Help section for the Compensation, Training, and Product Assembly Decision page.)

• As you can see from making different entries for the warranty period and observing the on-screen projections for warranty claim costs, longer warranty periods can increase future warranty costs significantly. Keep in mind that projected warranty claims repair costs are indeed projections, since the actual number of cameras sold can turn out to be higher/lower than projected in the likely event that the competitive efforts of rivals are weaker/stronger than anticipated.

• You have complete flexibility to offer different warranty periods in different geographic regions.

Entries for Competitive Assumptions

As was discussed above in the section “The Competitive Assumptions Entries at the Bottom of the Page”, you should beware of putting much faith in projections of unit camera sales, market shares, revenues, costs, and operating profits that are partly based on backward-looking prior-year industry averages of the competitive efforts of all the various companies in the industry. This is because it is highly probable that, on average, rival companies will make some kind of upward/downward changes in (1) the wholesale prices they charge camera retailers, (2) the P/Q ratings of their cameras, (3) expenditures for advertising, (4) sales promotion efforts, and so on in the upcoming year. In other words, the intensity of competition your company faces from rival camera-makers in the current year is likely to be different from the previous year.

After all, if you are considering making different marketing decision entries (or taking action to increase or decrease the P/Q rating of your cameras or change the number of models offered), then the co-managers of other companies may have reasons for changing the makeup of their competitive efforts as well. The management teams of camera-makers that performed poorly in one or more of the geographic regional markets are undoubtedly motivated and certainly feel pressured to make changes they believe will improve the buyer appeal of their cameras and, more importantly, their company’s overall performance in the current decision round.

The entry fields in the Competitive Assumptions section for cameras provide you and your co-managers with a means of improving the accuracy of the on-screen projections by entering your own reasoned estimates or approximations (best judgment) of what the various industry averages may be in the upcoming period, thereby replacing projections tied to the backward-looking competitive efforts of what rival companies did last year in the 4 geographic markets for action-cameras with projections tied to your best judgement about the forward-looking competitive efforts of rival camera-makers in this upcoming decision round. The key thing to understand here is that it is the anticipated actions of rivals that should drive how much of what kind of competitive effort your company will need to undertake in the upcoming year to improve your company's camera-related performance and lessen the risks of being outcompeted and surprised by the competitive aggressiveness of some/many rival companies.

Adjusting the Industry Averages. In the first several decision rounds of the GLO-BUS exercise, there is admittedly considerable uncertainty regarding whether the industry averages will rise or fall and by how much because there is little or no track record to go on in judging what rival companies, on average, will do differently. But even early on, there’s usually strong reason to suspect that a majority of your company’s rivals are likely to increase/decrease their wholesale prices to retailers or raise/lower their P/Q ratings for their brand of cameras or spend more/less on advertising or alter other aspects of their efforts to outcompete and outperform rivals in the various geographic markets for action cameras.
**Recommendation #1:** The first thing to do is review the column of industry averages for each region in the Competitive Intelligence Report for the last couple of years and look for trends in the movement of the various industry averages for wholesale price, P/Q rating, number of models, advertising, warranties, and so on to get a clue as to which direction the camera-related industry averages may be headed in the upcoming year. The camera-related industry averages in the last column of the Competitive Intelligence Reports indicate the degree/intensity of competition your company was up against in the action-camera marketplace, competitive factor by competitive factor.

**Recommendation #2:** If you have doubts or are unsure about whether competition from rival camera-makers is likely to grow stronger or weaker in the upcoming year, probably the safest or most conservative assumption is that competition will be "a little stronger" or "slightly stronger"—this equates to adjusting the prior-year industry averages downward in the case of price to retailers by, say, $5 to $15, upward by 0.1 to 0.3 in the case of P/Q rating and number of models, and perhaps $100 to $250 in the cases of advertising and website spending, 1-3 weeks in the case of sales promotions, a couple of percentage points in the case of price discounts during sales promotions, and maybe a 30-day jump in the warranty period. However, should a price war break out or if several camera-makers seem likely to aggressively step up their competitive efforts to win bigger sales/market share in a region, then "somewhat bigger" adjustments may be appropriate. On the other hand, if competition in the prior year or two has been especially brutal, such that profits have plunged, there may be reason to assume some/many companies will not further intensify their aggressive and costly marketing efforts to pursue "profitless" gains in unit sales and market shares, in which case you may leave the prior-year industry averages unchanged (or possibly even assume that a few companies will cut back on certain competitive efforts, like advertising or website displays or warranties, in an attempt to trim losses.

**Recommendation #3:** Try out graduated adjustments in the Competitive Assumptions (most especially for price to retailers and for P/Q rating because they are such important competitive factors) and observe the different impacts on the on-screen projections. Then see what changes in your own company’s competitive efforts may be needed to counteract/defeat the potential changes in the competitive efforts (small or large) of rivals in order for your company to achieve the desired levels of company performance you are targeting. This will give you a better feel for what entries to make in the marketing decisions boxes and perhaps whether to return to Product Design page and make changes in the number of models offered and/or P/Q rating. Achieving increased unit sales and market shares in an industry environment where competitive conditions are growing stronger will take a stronger competitive effort on your company's part (in the form of lower price, higher P/Q rating, more advertising and promotional efforts, and so on) than if competitive intensity remains about the same or grows weaker.

**Tip:** Overestimating the likely strength of competition from rivals is better than underestimating the likely competitive efforts of rivals. Should the competitive efforts of rivals turn out to be weaker than expected, your company’s actual performance will likely be better than what was projected (because unit sales and market shares will usually be higher than projected)—you can live happily with the good surprise of better-than-expected results. But should the competitive efforts of rivals turn out to be stronger than you anticipated, your company’s performance is likely to be worse than you projected because rivals captured some of the sales and market shares you were expecting to get. The bad surprise of weaker-than-expected results is obviously something your company should try to avoid.

**Tip:** Avoid making rosy assumptions that the competitive efforts of rivals will become weaker just because such assumptions result in more appealing on-screen projections of unit sales and market shares. To base your company's strategy and decisions on "best-case" (unrealistic?) competitive scenarios when the chances are that your company will face significantly stronger competition from rivals simply sets your company up to under-perform and fall short of meeting investor expectations. The purpose of making adjustments in the anticipated degree of competitive intensity is to make on-screen projections of unit camera sales, market shares, revenues, and profitability more accurate. Indeed, the closer the on-screen projected outcomes are to the actual outcomes when
the decision results appear, the more that your company’s projected performance will approximate its actual performance and the less likely you will encounter bad surprises and wonder “what happened?”

Making Adjustments in the Industry Averages Gets Easier. As the decision rounds unfold, you will find that it becomes easier to arrive at approximations of the anticipated actions of rival companies and to make adjustments to the last-year’s industry averages that you are fairly comfortable with. As you gain growing familiarity with the strategies and actions of competitors and have a longer track record of how the industry averages for the various competitive factors have been changing, you will become more comfortable and confident in deciding how much to increase/decrease the industry averages in the Competitive Assumptions boxes and thus whether to expect stronger/weaker or about the same competitive efforts from rivals in the upcoming decision round.

Is It “Necessary” to Adjust the Competitive Assumptions? If you are willing to accept the inaccuracy of the region-by-region projections of unit sales, market shares, unit costs, and operating profit that are derived from how your company’s competitive efforts this upcoming year stack up against the overall competitive efforts of rival companies last year (and don’t want to take the time and trouble to develop your own reasoned judgments about the likely overall competitive efforts from rivals your company will face in this upcoming year), then you can skip the task of updating the values in the Competitive Assumptions boxes (which represent last year’s industry or industry averages for the various competitive factors).

An Important Thing to Understand: How far off the on-screen projections of unit sales, market shares, unit costs, and operating profit will turn out to be from the actual results depends on the extent to which the adjusted or unadjusted values for Competitive Assumptions differ from the actual industry averages that appear in the upcoming year’s Competitive Intelligence Reports—the smaller the differences, the closer the projections will be to the actual results; the bigger the differences (especially as concerns wholesale price and P/Q rating), the greater the projections will differ from actual results.

The Market Statistics Section

AC Camera Demand (Unit Sales) and Market Share. The first two lines of the Market Segment Statistics section for AC Camera Demand and Market Share display how prior-year actual unit demand and market share compare against the projected unit demand and market share for the upcoming year, region by region. As has been emphasized above, the upcoming year projections are based on (1) the entries currently showing in the marketing decision boxes (and entries on all the other decision pages) and (2) the prior-year competitive efforts of rival companies, as measured by the prior-year industry-averages (all-company averages) for selling prices, advertising, promotions, P/Q ratings, and so on. The retail sales and market share projections can turn out to be different from the actual outcomes the more that your judgments about whether the upcoming year all-company averages for the various competitive factors for action cameras in each geographic region will prove to be about the same, a little stronger/weaker, slightly stronger/weaker, somewhat stronger/weaker, or much stronger/weaker prove to be off-the-mark.

Numbers of Retail Outlets. The last three lines of this section compare the number of multi-store chains, online retailers, and local retail shops in each region that stocked and displayed your brand of action cameras in the prior-year and the number that have decided to stock and display your brand of action cameras in the upcoming year—there’s nothing you can do in the current year to attract additional retailers (the number of retailers who decide to stock and merchandise your cameras this upcoming year make their decisions at the end of the prior-year).

Gaining/Losing Retailers. How many retailers in a region that will decide at the end of the current year to stock and merchandise your company’s brand of cameras the following year is based on five factors:

1. Your brand’s share of action-capture camera sales this upcoming year in that region. Other things being equal, action-camera retailers are more attracted to stock and merchandise high-share brands than low-share brands.
2. Your company’s P/Q ratings for its line of action cameras this upcoming year. Other things being equal, camera retailers are more attracted to merchandise brands with high P/Q ratings as opposed to brands with low P/Q ratings.

3. The number of week-long sales promotion campaigns your company undertakes this upcoming year as compared to the regional all-company average. Retailers like a bigger number of sales promotion campaigns because of the added store traffic and sales volume such campaigns generate.

4. The size of the discount offered to camera retailers during the weekly sales promotion campaigns. Obviously, camera retailers in each region view discount percentages that are above the regional average more favorably than discounts that are below the regional average.

5. How much your company spends this upcoming year to support the merchandising efforts of your retailers in each region as compared to the regional average of all camera-makers. Not surprisingly, camera retailers consider relatively high or above-average amounts of merchandising support as a positive factor as compared to lesser amounts of support.

The Price-Cost-Profit Breakdown Section

The following items in the Price-Cost-Profit Breakdown section are linked directly to the projections of how many action cameras are expected to be sold in each region.

Selling Price — This number for each region always corresponds exactly to the price entered in the decision box for “Average Wholesale Price to Retailers” at the top of the page.

Promotional Discounts — Some of the company’s camera sales are, of course, made during those weeks when sales promotion campaigns are underway in a region and when the company has discounted its price to retailers to enable retailers, in turn, to discount their regular retail selling price to camera buyers. The size of the downward adjustment for promotional discounts for a region is governed by the number of weeks your company opted to conduct sales promotion campaigns in that region and by the size of the promotional discount offered to retailers in that region.

Exchange Rate Adjustment — The size and direction of the exchange rate adjustment for each region typically varies from region to region in accordance with whatever real-world exchange rate fluctuations occurred between the beginning of the prior-year decision round and the beginning of this upcoming year’s decision round.

- The company’s sales price for cameras sold to retailers in North America is adjusted up or down for exchange rate changes between the U.S. dollar and the Taiwan dollar.
- The company’s sales price for cameras sold to retailers in Europe-Africa is adjusted up or down for exchange rate changes between the euro and the Taiwan dollar.
- The company’s sales price for cameras sold to Asia-Pacific retailers is adjusted up or down for exchange rate changes between the Singapore dollar and the Taiwan dollar.
- The company’s sales price for cameras sold to retailers in Latin America is adjusted up or down for exchange rate changes between the Brazilian real and the Taiwan dollar.

The GLO-BUS system accesses all the relevant real-world exchange rates and does all the pertinent calculations, thus relieving you and your co-managers from mastering the intricacies of the exchange rate adjustments.

Special Note — Options for Dealing with Favorable/Unfavorable Exchange Rate Adjustments. While you do not have to worry with the mechanics of calculating exchange rate adjustments, you do need to
concern yourself with what actions, if any, to take to mitigate the unfavorable/negative exchange rate impacts and to capitalize on the favorable/positive exchange rate adjustments shown on the decision page. There are several ways to counter the adverse effects of unfavorable (those with a minus sign) exchange rate adjustments. One option is to adjust sales and marketing efforts in a manner that results in (1) added sales in those areas where the exchange rate adjustments are positive (favorable) and (2) somewhat smaller sales in the regions where the exchange rate adjustments are negative (unfavorable). Another option is to raise the selling prices in a particular region to help offset negative revenue adjustments and realize higher net revenue per camera sold. Because all competing companies have assembly facilities in Taiwan and are thus subject to much the same favorable/unfavorable exchange rate impacts on net revenues per camera sold, you may be able to make offsetting price adjustments without much risk of putting your company at a price disadvantage.

**Note:** See the section at the end of this document for more information on exchange rate adjustments.

**Net Revenue Per Unit** — The net revenue numbers in each region equal the average wholesale price to retailers (as entered in the box on the first row of the page) adjusted downward for the effects of the price discount during weekly sales promotions (see the two entries for sales promotions) and then adjusted upward/downward for the effects of shifting exchange rates. Net revenue per unit, in effect, is the “actual cash” amount in US dollars that the company is projected to receive on each action camera projected to be sold in each region.

**Cost of Units Assembled** — the $/Unit number is calculated by dividing the projected total production costs of the cameras that will need to be assembled and shipped to retailers in the region by the number of cameras projected to be sold in the region (see the first row in the Marketing Statistics section).

**Delivery Costs** — the $/Unit number represents the costs per camera sold that will be incurred for shipping ($5 per camera in all regions) and import duties (import duties are $0 for North America, 4% of the average wholesale price to retailers in Europe-Africa, and 6% of the average wholesale price to retailers in both Latin America and the Asia-Pacific).

Both shipping costs and import duties are subject to change by your instructor (you will be notified of such changes).

**Marketing Costs** — the $/Unit number equals all marketing costs incurred in the region (as a direct consequence of the decisions entered on this page) divided by the projected number of cameras to be sold in the region.

**Administrative Expenses** — your company’s camera-related administrative expenses are allocated to each region based on that region’s projected percentage of total cameras sold worldwide. The $/Unit number represents the total amount of the company’s administrative expenses for its camera assembly facility allocated to each region divided by the projected number of cameras to be sold to retailers in the region. This generally accepted accounting procedure for allocating a company-level expense to different geographic regions results in the same administrative cost per camera sold in all four regions.

**Total Operating Cost** — the $/Unit number equals net revenues per unit less all projected operating expenses per camera sold (cost of units assembled, delivery costs, marketing costs, and administrative costs). Interest payments and taxes are not part of operating expenses, as per general accounting principles.

**Operating Profit** — the $/Unit number for projected operating profit is calculated by subtracting projected total operating cost per camera sold from projected net revenues per camera sold.

**Operating Profit Margin** — the projected percentage for operating profit margin equals projected operating profit per camera sold divided by projected net revenue per camera expected to be assembled, shipped and sold to retailers in each region.
Projected negative operating profits per camera sold and the associated projected negative operating profit margins in any region are red flags that company managers should address/correct immediately. The same can be said of operating profits per camera sold and operating profit margins that, while positive, are nonetheless “too small” to produce attractive profitability.

The Importance of the Projected Performance Figures
(see the box in the middle-left of each decision page)

On the left side of every GLO-BUS decision page there is a box containing projections of the company’s overall performance for the upcoming year on the following measures:

- **EPS (earnings per share)**—defined as net profit divided by the number of shares of common stock outstanding at the end of the year. Earnings per share is one of your company’s five annual performance targets.

- **ROE (return on average equity)**—defined as net profit for the year divided by the average of beginning shareholder equity and ending shareholders equity. ROE is one of your company’s annual performance targets.

- **Credit Rating**—Company credit ratings are a function of three factors: (1) the debt-equity percentage; (2) the interest coverage ratio (defined as annual operating profit divided by annual interest expense); and (3) the current ratio (defined as current assets divided by current liabilities). The credit rating in the projections box is the projected credit rating for next year, given the current entries in the decision boxes for all the decision pages.

- **Image Rating**—The projected company image rating is based on your company’s expected P/Q rating for action cameras, the expected P/Q rating for UAV drones, the projected market shares for action cameras in the four geographic regions, the projected market shares for UAV drones in the four geographic regions, and the company’s CSRC efforts—a total of 11 projected outcomes for the upcoming year (all based on the currently entered decisions in the decision boxes on the various decision pages.

- **Revenues**—The company’s projected worldwide revenues (after taking into account all exchange rate adjustments and promotional discounts) from the combined sales of both action cameras and UAV drones in all four geographic regions. Revenues are booked at the time of shipment, not when the company receives the cash payments for buyer purchases (which occurs following shipment).

- **Net Profit**—The company’s projected worldwide profit after all expenses and taxes on its sales of actions and drones in all four geographic regions.

- **Ending Cash**—the company’s projected end-of-year cash balance after disbursing funds to pay for all of the company’s operating expenses, capital expenditures, any interest due on outstanding debt, any principal repayments on outstanding debt, profits taxes, and any dividends paid to shareholders. Be aware that capital expenditure decisions to add new workstations, expand assembly facility space, or shift to robotics-assisted assembly may result in a projected negative ending cash balance until company managers take actions to raise sufficient funds to cover any overdrafts on the company’s checking account by issuing new shares of common stock to raise equity capital and/or by taking out additional loans.

Each time you make a new decision entry, all of the above companywide performance projections are instantly recalculated, thereby showing you the incremental impacts of that decision entry. It is easy enough then to simply enter a “trial” decision and determine whether the resulting projections look better or worse than before. By entering several different “trial” decisions, you can quickly and readily compare the projected outcomes of “what if we do this” against “what if we do that.” After entering a number of different trial decisions, you'll be able to identify which decision entry seems “best” or “most acceptable,” given all the different calculations that
are provided. This GLO-BUS feature provides you with powerful capability to explore all kinds of “what if” scenarios and make wise numbers-based decisions.

*Always bear in mind that the projections do not represent a “valid” indication of your company’s projected performance until you have made a complete set of decisions (covering all decision pages) for the upcoming year.* In other words, while you are working your way through the early decision pages the projections will be updated with each entry, but the numbers shown are at best “a rough approximation” until they are based on all the decision entries you plan to make for the upcoming year.

Once you have gone through all the decision pages and entered what you think are reasonable decisions for all the boxes, then it is time to really scrutinize all the various company performance projections and determine whether the projected outcomes of your strategy and decision-making look acceptable. If not, then you need to tour back through the decision pages, make different trial decisions here and there as seem appropriate, and not stop tweaking and fine-tuning until you arrive at a set of performance projections that appears to be the best you can come up with. But even then, the projections are still only projections—they do not represent actual outcomes. Why? Because, despite the competitive assumptions you will make on the two Marketing Decision pages, there will still be uncertainty about what competitors will actually do (what prices will they charge, how much they will spend on advertising, how many different models they will offer, what warranties they will offer, and whatever other competitive maneuvering they will undertake and what the all-company averages for the various competitive factors will turn out to be). The actual strength of the competitive efforts of rivals cannot be known for sure until the deadline for the decision round arrives, at which time the GLO-BUS server will process the decision entries of all companies and determine the actual outcomes of competition in the marketplace.

**More Details about the Exchange Rate Adjustments**

As discussed earlier, exchange rate adjustments result from producing cameras in Taiwan (where the local currency is Taiwan dollars) and selling them to retailers in other parts of the world (where local currencies are different). These adjustments stem from two things:

1. Camera orders, camera shipments, and retailer payments for cameras all occur on different dates, and currency exchange rates on these different dates are almost certainly going to be different.

2. The local currency payments of camera retailers have to be converted into Taiwan dollars and ultimately into U.S. dollars (since the company reports its financial statements in U.S. dollars).

Thus the company’s business is one with potentially significant foreign exchange risks. To help manage these risks, company officials have negotiated a long-term currency exchange agreement with the Global Community Bank through which the company does most of its business; the agreement calls for the bank’s foreign currency department to handle the company’s many foreign currency transactions. The agreement is complex but the essence of the arrangement calls for the net revenues the company actually receives on cameras assembled and shipped from the Taiwan assembly facility to retail dealers in various parts of the world to be subject to exchange rate fluctuations in four local currencies (the U.S. dollar, the euro, the Brazilian real, and the Singapore dollar) against the Taiwan dollar. For simplicity, both of the reasons for currency adjustments are combined into a single adjustment based on the real-world currency swings during the period from one decision round to the next as concerns the U.S. dollar against the Taiwan dollar, the euro against the Taiwan dollar, the Brazilian real against the Taiwan dollar, and the Singapore dollar against the Taiwan dollar). More specifically:

- **The net revenues received from sales to North American retailers are adjusted up or down for exchange rate changes between the U.S. dollar and the Taiwan dollar.** Should the exchange rate of U.S. dollars per Taiwanese dollar fall, say from 0.250 to 0.245 U.S. dollars per Taiwan dollar, then retailer payments of the agreed upon number of U.S. dollars per camera at the time the order was placed equate to more Taiwanese dollars at the time of payment and an upward (favorable)
adjustment in the company’s revenues. Conversely, when the exchange rate of U.S. dollars per Taiwanese dollar rises, say from 0.250 to 0.255 U.S. dollars per Taiwan dollar (meaning that a specified number of U.S. dollars equate to fewer Taiwanese dollars), then the company does not receive as many Taiwan dollars in payment for the cameras sold and shipped to North American retailers and the revenue adjustment is downward (unfavorable).

- **The net revenues the company receives from sales to retailers in Europe-Africa are adjusted up or down for exchange rate changes between the euro and the Taiwan dollar.** Should the exchange rate of euros per Taiwanese dollar fall from one decision period to the next, say from 0.250 to 0.245 euros per Taiwan dollar, then retailer payments of the agreed upon number of euros per camera at the time the order was placed equate to more Taiwanese dollars at the time of payment and an upward (favorable) adjustment in the company’s revenues. Conversely, when the exchange rate of euros per Taiwanese dollar rises, say from 0.250 to 0.255 euros per Taiwan dollar (meaning that a specified number of euros equate to fewer Taiwanese dollars), then the company does not receive as many Taiwan dollars in payment for the cameras sold and shipped to Europe-Africa retailers and the revenue adjustment is downward (unfavorable).

- **The net revenues received from sales to Asia-Pacific retailers are adjusted up or down for exchange rate changes between the Singapore dollar and the Taiwan dollar.** Should the exchange rate of Singapore dollars per Taiwanese dollar fall say from 20.40 to 20.35 Singapore dollars per Taiwan dollar, then retailer payments of the agreed number of Singapore dollars per camera at the time the order was placed equate to more Taiwanese dollars at the time of payment and an upward (favorable) adjustment in company revenues. Conversely, when the exchange rate of Singapore dollars per Taiwanese dollar rises, say from 20.40 to 20.45 Singapore dollars per Taiwan dollar (meaning that a specified number of Singapore dollars equate to fewer Taiwanese dollars), then the company does not receive as many Taiwan dollars in payment for the cameras sold and shipped to Asia-Pacific retailers and the revenue adjustment is downward (unfavorable).

- **The net revenues received from sales to Latin American retailers are adjusted up or down for exchange rate changes between the Taiwan dollar and the Brazilian real.** Should the exchange rate of Brazilian real per Taiwanese dollar fall, say from 10.65 to 10.60 real per Taiwan dollar, then retailer payments of the agreed upon number of Brazilian real per camera at the time the order was placed equate to more Taiwanese dollars at the time of payment and an upward (favorable) adjustment in the company’s revenues. Conversely, when the exchange rate of real per Taiwanese dollar rises, say from 10.65 to 10.70 real per Taiwan dollar (meaning that a specified number of Brazilian real equate to fewer Taiwanese dollars), then the company does not receive as many Taiwan dollars in payment for the cameras sold and shipped to Latin American retailers and the revenue adjustment is downward (unfavorable).