Perspectives

REPRINT

N° 187

The Rule of Three and Four

A stable competitive market never has more than three significant competitors, the largest of which has no more than four times the market share of the smallest.

The conditions which create this rule are:
- A ratio of 2 to 1 in market share between any two competitors seems to be the equilibrium point at which it is neither practical nor advantageous for either competitor to increase or decrease share. This is an empirical observation.
- Any competitor with less than one quarter the share of the largest competitor cannot be an effective competitor. This too is empirical but is predictable from experience curve relationships.

Characteristically, this should eventually lead to a market share ranking of each competitor one half that of the next larger competitor with the smallest no less than one quarter the largest. Mathematically, it is impossible to meet both conditions with more than three competitors.

The Rule of Three and Four is a hypothesis. It is not subject to rigorous proof. It does seem to match well observable facts in fields as diverse as steam turbines, automobiles, baby food, soft drinks and airplanes. If even approximately true, the implications are important.

The underlying logic is straightforward. Cost is a function of market share as a result of the experience curve effect.

If two competitors have nearly equal shares, the one who increases relative share gains both volume and cost differential. The potential gain is high compared to the cost. For the leader, the opportunity diminishes as the share difference widens. A price reduction costs more and the potential gain is less. The 2 to 1 limit is approximate, but it seems to fit.

Yet when any two competitors actively compete, the most probable casualty is likely to be the weakest competitor in the arena. That, logically and typically, is the low share competitor.

The limiting share ratio of 4 to 1 is also approximate but seems to fit. If it is exceeded, then the probable cost differential produces very large profits for the leader at breakeven prices for the low share competitor. That differential, predicted by the experience curve, is enough to discourage further reinvestment and efforts to compete by the low share competitor unless the leader is willing to lose share by holding a price umbrella.

There are two exceptions to this result:
- A low share competitor can achieve a leadership position in a given market sector and dominate it cost-wise if there is enough shared experience between that sector and the rest of the market, and he is a leader in the rest of the market, or
- An otherwise prosperous company is willing for some reason to continually add more investment to a marginal minor product. This can be caused by accounting averaging, full line policy or mismanagement.

Whatever the reason, it appears that the Rule of Three and Four is a good prediction of the results of effective competition.

There are strategy implications:
- If there are large numbers of competitors, a shakeout is nearly inevitable in the absence of some external constraint or control on competition.
- All competitors who are to survive will have to grow faster than the market in order to

… The Rule of Three and Four

even maintain their relative market shares with fewer competitors.

- The eventual losers will have increasingly large negative cash flows if they try to grow at all.
- All except the two largest share competitors will be either losers and eventually eliminated or be marginal cash traps reporting profits periodically and reinvesting forever.
- Anything less than 30 percent of the relevant market or at least half the share of the leader is a high risk position if maintained.
- The quicker any investment is cashed out or a market position second only to the leader gained, then the lower the risk and the higher the probable return on investment.
- Definition of the relevant market and its boundary barriers becomes a major strategy evaluation.
- Knowledge and familiarity with the investment policies and market share attitudes of the market leader are very important since his policies control the rate of the inevitable shakeout.
- Shifts in market share at equivalent prices for equivalent products depend upon the relative willingness of each competitor to invest at rates higher than the sum of both physical market growth and the inflation rate. Anyone who is not willing to do so loses share. If everyone is willing to do so, then prices and margins will be forced down by overcapacity until someone begins to stop investing.

There are tactical implications which are equally important:

- If the low cost leader holds the price too high, the shakeout will be postponed, but he will lose market share until he is no longer the leader.
- The faster the industry growth, the faster the shakeout occurs.
- Near equality in share of the two market leaders tends to produce a shakeout of everyone else unless they jointly try to maintain the price level and lose share together.
- The price/experience curve is an excellent indicator of whether the shakeout has started. If the price curve slope is 90 percent or flatter, the leader is probably losing share and still holding up the price. If the curve has a sharp break from 90 percent or above to 80 percent or less, then the shakeout will continue until the Rule of Three and Four is satisfied.

The market leader controls the initiative. If he prices to hold share, there is no way to displace him unless he runs out of the money required to maintain his capacity share. However, many market leaders unwittingly sell off market share to maintain short term operating profit.

A challenger who expects to displace an entrenched leader must do it indirectly by capturing independent sectors, or be prepared to invest far more than the leader will need to invest to defend himself.

There are public policy implications:

- The lowest possible price will occur if there is only one competitor, provided that monopoly achieves full cost potential even without competition and passes it on to the customer.
- The next lowest potential price to the customer is with two competitors, one of which has one third and the other two thirds of the market. Then cost and price would probably be about 5 percent higher than the monopoly would require.

… The Rule of Three and Four

- The most probable, and perhaps the optimal relationship, would exist when there are three competitors, and the largest has no more than 60 percent of the market and the smallest no less than 15 percent.

A rigorous application of the Rule of Three and Four would require identification of discrete homogeneous market sectors in which all competitors are congruent in their competition. More typically, competitors' areas of competition overlap but are not identical. The barriers between sectors are sometimes surmountable, particularly if there are joint cost elements with scale effects. Yet it is a commonly observable fact that most companies have only two or three significant competitors on any product which is producing a net positive cash flow. Other competitors are unimportant factors.

The Rule of Three and Four is not easy to apply. It depends on an accurate definition of relevant market. It requires many years to reach equilibrium unless the leader chooses to hold his share during the high growth phase of product life. However, the rule appears to be inexorable.

If the Rule of Three and Four is inexorable, then common sense says: if you cannot be a leader in a product market sector, cash out as soon as practical. Take your writeoff. Take your tax loss. Take your cash value. Reinvest in products and markets where you can be a successful leader. Concentrate.

Bruce D. Henderson

© The Boston Consulting Group, Inc. 1976