Why Everyone Got the Tablet Market Wrong, And How You Can Avoid Making the Same Mistake

Almost every technology market research firm predicted growth for the US Tablet market in 2015. As results come in, it seems that the actual final number may be as much as a **-16% decline!** How could so many experienced analysts get this so wrong? The answer is quite simple - they were using the wrong forecasting methodology, or a critical wrong assumption, or both.

The three most commonly used methodologies are:
1. Guidance from Vendors
2. Unit Shipment Trend Analysis
3. Market Penetration Analysis

Guidance from Vendors, in many cases, is not objective and is often meant to influence constituencies including customers, prospects, investors, competitors, and employees. Furthermore, the vendor's estimate of future unit shipments may be derived from flawed analysis, or represent plans and goals, more than unbiased forecasts.

Unit Shipment Trend Analysis is based on the critical assumption that the process and influences that created the past will be identical to those that create the future. History has shown that this is more likely to be wrong than right.
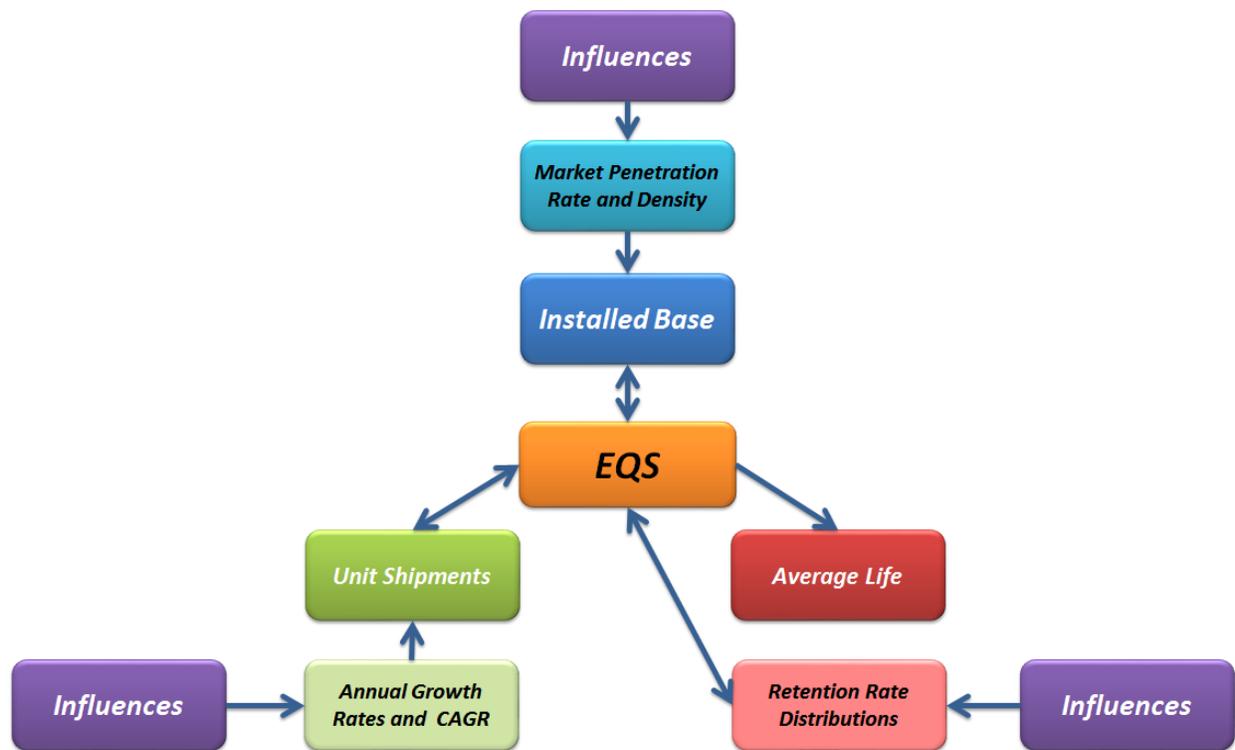
Finally, Market Penetration Analysis requires a sufficient amount of historical data, as well as correct assumptions about model form and parameters, and does not reflect replacement cycles. Each of these methodologies used separately will almost certainly produce a weak forecast. When multiple methods are employed, the forecast do gain confidence.

However, in this case (2015 US Tablets), even for those market research firms and analysts using multiple methodologies, the critical mistake was overestimating the size of the long-term Total Available Market (TAM). **Many assumed it was over 90% of the US 18+ population when it fact it may actually be only 2/3rds of that.**

The following analysis utilized the new **DRG EquilibriumSolver™ (EQS)** methodology and application. The objective was to solve for Unit Shipments Forecasts given an accurate estimate of the historic and future US Tablet Installed base, and reasonable assumptions about the parameters governing Tablet replacement cycles.

EQS is an Excel/VBA application that simultaneously computes the history and forecast of Unit Shipments, Installed Base, and Average Life for any product or service. The central component of **EQS** is an installed base algorithm that computes the number of units exiting the installed base as a function of a Retention Rate Distribution (RRD), and unit ages. The RRD is a table that specifies (for each annual cohort of Unit Shipments added to the installed base in each year) the percent that will remain in the installed base at the end of each subsequent year. The distribution is computed from inputs for the Mean, Standard Deviation, and Maximum Life of the product or services. The parameters of the RRD, primarily the mean, vary over time, reflecting economic, demographic, technological, and market condition change.
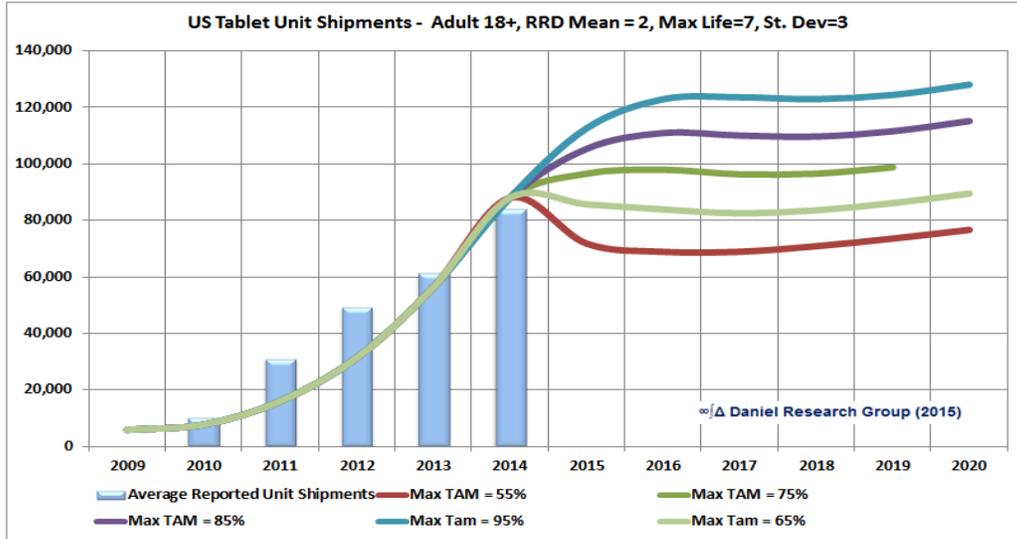
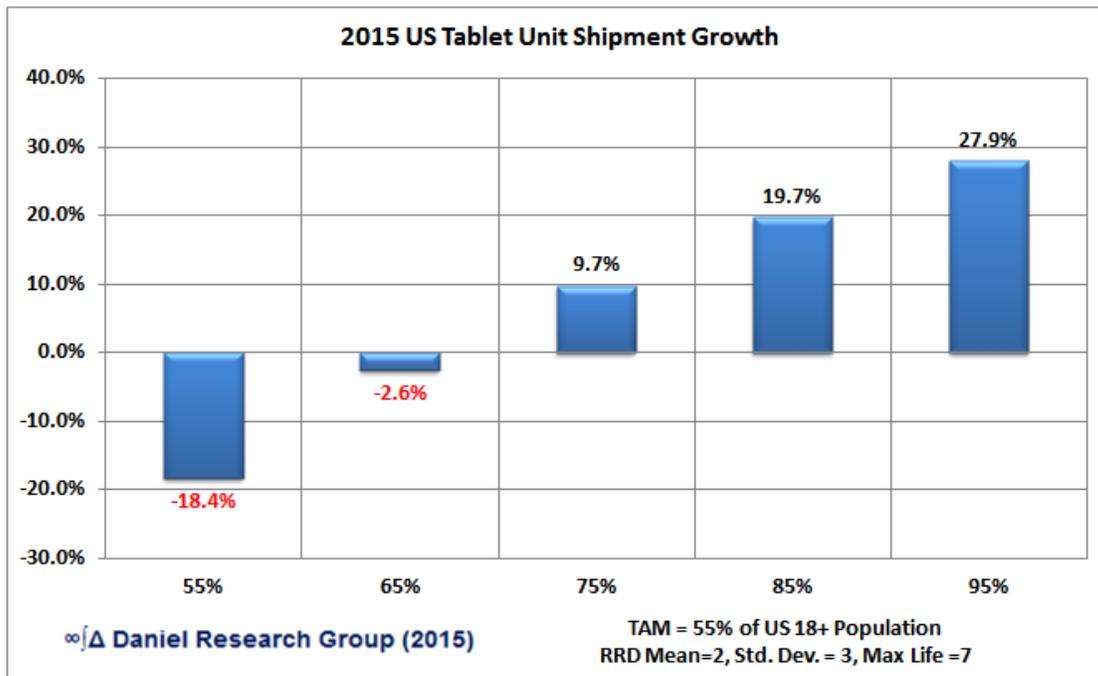∞∫Δ **Daniel Research Group EquilibriumSolver**

A total pf 1250 scenarios where tested
- 2 Pew Research Center Studies for 18+ and 16+ Tablet Penetration
- 5 Maximum TAM assumptions - 55% to 95%
- 5 Retention Rate Distribution Means - 2 to 6
- 5 Retention Rate Distribution Standard Deviations - 1 to 5
- 5 Retention Rate Distribution Maximum Life - 6 to 10

The best fit to the historical average actual Unit Shipment data was for the scenario derived from a RRD with Mean = 2 years, Standard Deviation = 3 years, and Maximum Life = 7 years, all consistent with reasonable *a priori* assumptions about Tablet usage. The unit shipments forecasts produced by these parameters for the five Maximum TAM choices are shown in the chart below.

The 55% Maximum TAM model predicted a 2015 decline in US Tablet Unit Shipments of -18.4%, while the 65% Maximum TAM model predicted a -2.6% decline.

Conclusion – the assumption that the maximum total available market for Tablets was close to 90% of the 18+ population is wrong. The actual maximum total available market for Tablets is closer to 60% of the 18+ population. Given this market size, and reasonable assumptions about replacement cycles, a decline in unit shipments for 2015 could, and should, have been anticipated. Actual Year-to-Date results for the first half of 2015 project to a full year decline of **-15.8%,** consistent with the predictions of this model.

More Information

EquilibriumSolver™ was developed by **Daniel Research Group,** a leading expert and consultant in the field of forecasting technology products, services, and markets. For 30 years, **Daniel Research Group** has worked with major technology market research firms and organizations, as well as mid-sized and boutique firms, and individual consultants, helping them improve the quality and accuracy of their forecasts, while significantly reducing their invested analyst and management time.

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