**A Targeted Statistical Analysis of Thoroughbred Auction Markets**

By Peter Chinloy, Assen Assenov, and Robert Losey

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Summary

Chinloy, Assenov and Losey[[1]](#footnote-1) (CAL) analyze multiple years of two thoroughbred sales, the two-week Keeneland September yearling sale and the one-night Adena Springs November sale of broodmares/seasons. They report the following findings.

1. Prices exhibit three patterns
2. All market participants are aware that prices at the Keeneland September sale tend to fall on average for each successive day of the Keeneland sale. This is consistent with Keeneland’s efforts to offer the best horses early in the sale.
3. Less obvious are that Intraday prices tend to start out low during the first quarter of a day’s offerings, trend upward through mid-sale, then fall back the last quarter of each sale day. Our research found this to be true for both the Keeneland and Adena Springs sales. Sales companies recognize this, and in order to be fair to consignors, they almost invariably rotate sales offerings by changing the letter of the alphabet that starts the sale so that it follows a cycle over several years.
4. The first day, and the day after the break at Keeneland show an accentuated effect of the pattern from B above, with prices relatively lower during the first quarter of the day than during other sale days. Sellers dislike the first day (this observation is based on discussions with Keeneland officials and with sales participants) because of this phenomenon. Keeneland has changed to alphabetizing over more than one day (three days in 2011, four in the 2013 and 2014 auctions) during the day sessions of the first week, and as discussed above, will continue to rotate the starting letter of the alphabet in future years in order to not consistently disadvantage horses with names starting with “A.”
5. At Keeneland the incidence of RNAs (reserves not attained, or buybacks) tends to occur more frequently during the early days of the sale and diminish each successive day.
6. At Keeneland the incidence of “outs” or scratches from the sale tends to start at low levels during the first days of the sale and increase each day until it reaches a peak during the last day of the sale.

Discussion

1A – This declining day-to- day price trend is easily explained by Keeneland’s quality control efforts.

1B – There are multiple possible explanations why prices show an inverted “smile” shaped pattern, including

1. A learning curve phenomenon by potential buyers that causes them to want to see how the market is performing before risking significant sums of money.
2. Money management effects combined with efforts to find “bargains”
3. Attendance effects
4. Other explanations?

1C – The accentuated inverted “smile” pricing phenomenon (prices start lower, then

increase, then drop back) the first day and after an off day, may be explained by an

accentuated version of a learning curve phenomenon in which potential buyers are

especially cautious because the state of the market is less known on the first day and

after a pause in the market.

2) Buying back the higher-priced offerings from early sale days entail lower percentage costs of resale as well as lower percentage expenses to carry forward to the next sale, hence a greater chance of being able to profit from buybacks.

3) Scratches by consignors occur more frequently later in the sale because

a. consignors are more likely to be disappointed with the quality signal of a late

day placement by Keeneland. If they think that their horses deserve a better

day and will not sell well on the assigned day, they are more likely to pull the

horse out of the sale, making it an “out.”

b. There is more chance that attending buyers have “shopped ahead” and bought

horses out of later days before they go through the auction ring? (We doubt

that this is a significant factor.)

1. Peter Chinloy and Assen Assenov of American University, and Robert Losey from the Racing Resource Group. [↑](#footnote-ref-1)