

Mark Johnston Racing is teaming up with James Willoughby and Jason Hathorn who have launched a horse racing analytics consultancy service, to buy a number of horses at the forthcoming Breeze-Up sales season. James and Jason have brought to bear their many years of experience in horse racing, sports analytics, data analysis and finance to provide MJR with insight into identifying value in the bloodstock market. Here James explains the thinking behind this exciting new venture.



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Jason Hathorn

If you want value in the bloodstock market, you have to know the facts. Buying winners is like any other investment: the figures never lie. Bloodstock sales provide rich data sources for the kind of analysis which is commonplace in business. And in one type of sale, the evidence flies in the face of conventional wisdom: the Breeze-Ups.

When Jason Hathorn – a racehorse owner with a successful background in finance – and I set out to analyse bloodstock sales in the UK and Ireland, we collected millions of points of data stretching back over the last decade. Our analysis covered both the Autumn Yearling Sales and the Spring Breeze-Ups. Irrationality in both markets was obvious: not surprisingly, prices paid for young stock bore a messy relationship with the ability they went on to show.

Amid the noise, however, were clearly discernible patterns, systematic errors that purchasers made in evaluating the value of young stock judged by facts about their pedigree, consignor and sales venue.

Conventional wisdom about Breeze-Ups has it that “breezers run fast for just 2 furlongs”, “the preparation process boils their brains”, “breezers are unsound”, “fast breezers are very expensive”. Well it turns out the data doesn’t support these views. Let’s identify the main findings of our study:

Breezers improve at least as much for their first run as yearling sales graduates in general.

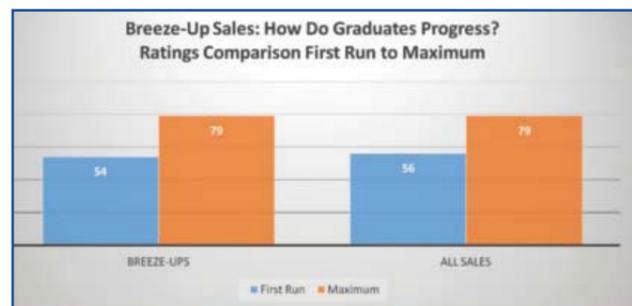


Figure 1: Breeze-Up Sales: How Do Graduates Progress?

As Figure 1 shows, the belief that Breeze-Up horses don’t progress is simply not justified by the facts. On the left, it can be seen that breezers improve from a median rating of 54 on their debut to 79 at the peak of their career. For all yearling sales graduates, the improvement is slightly less marked – 56 to 79. In statistical terms, we would say there

is no significant difference between the two groups.

Breezers run more often than yearling sales graduates.

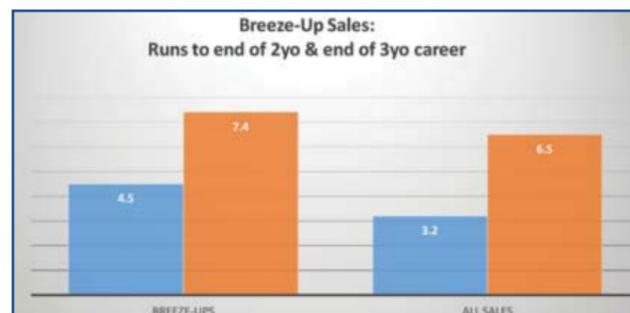


Figure 2: Breeze-Up Sales runs comparison

As Figure 2 shows, breezers get to the track more often as two-year-olds (shown in blue), and still average more runs when measured against all yearling sales graduates at the end of their three-year-old season (orange). So, this destroys the myth that breeze-up horses tend to be more fragile.

Fast Breezers are buyable at all price levels.



Figure 3: Breeze-Up Sales 2014: Lots sold by price and time

Figure 3 contains more information. We have split the sales into four price buckets, from the least expensive on the left to the sales-toppers on the right. The blue bars represent the number of lots sold in each price category, at Breeze-Up sales over the most recent couple of years, the accompanying orange bar the numbers of those lots who breezed fast. For example, there were 128 horses sold for between £30k and £60k of which no less than 85 recorded breeze times that we consider fast. So, the received wisdom that

fast breezers are very expensive is simply not always the case – fast horses can be purchased at all prices.

Jason and I have no particular axe to grind here. We believe there is value to be had both at the Yearling and Breeze-Up Sales, but to ignore one type of sale at the expense of the other is an oversight for owners in search of winners at buyable prices. We believe serious consideration should be given to buying at the Breeze-Ups.

At the Breeze-Ups, we record breeze times for every lot offered. Moreover, we know how these times complement the array of other variables stored in our database – times alone are not enough to complete the buying puzzle. As Figure 3 shows, horses who breeze quickly sell well - most of the highly-priced lots are those with the fastest times. But, without giving away our proprietary edge, what we found was how to best predict subsequent racecourse performance by viewing the breeze time in the context of all the other variables about the horse.

Once you understand how the maths works, it is clear that the market is often off in making a rational evaluation. Jason and I are well-versed in making the best statistical forecast from the evidence available, using the tools at our disposal to distil all the information about each lot offered into a forecast of expected performance and an evaluation of market price. So, having discovered an approach to identifying value at the Breeze-Ups, what next? It took me about half a second to think of Mark Johnston.

As an undergraduate in 1991, I had written more than 100 letters to trainers asking if I could be any use as a data analyst. Only one gave me a reply, and were it not for taking up a job at Timeform shortly after, I would have been analysing sales data at Kingsley House there and then. Working with Mark now completes the circle.

Mark Johnston has an enviable track record at training racehorses. One of the reasons for his success is a consistent ability to identify value at bloodstock sales. When we interrogated our proprietary database to examine the buying performance of bloodstock agents, trainers and the like at British and Irish bloodstock sales, his results stood out.

Not every individual has the resources to spend millions at the sales, so what is important is value. How do we define this? By considering the racecourse performance of every sales graduate in light of how much they cost. And the crucial measure is this: how efficiently does each individual spend their money compared with everyone else?



Figure 4: Maiden winners/runners by price bucket: Mark Johnston vs. the market

We considered two measures in evaluating racecourse performance of sales graduates: whether they won a maiden and what rating they achieved. Figure 4 shows the results for MJR purchases across the four price buckets discussed above. It can be seen that in the £30k to £60k bucket, 36.6% of all sales graduates won maidens, whereas 43.9% of MJR sales graduates achieved the same feat.

The second measure of value-added at the sales is ratings-based. In Figure 5, the bars show the median ratings achieved by MJR runners in each price bucket (orange) compared with the market as a whole (blue). A note here: relatively small differences in rating lead to surprisingly different outcomes on the track.

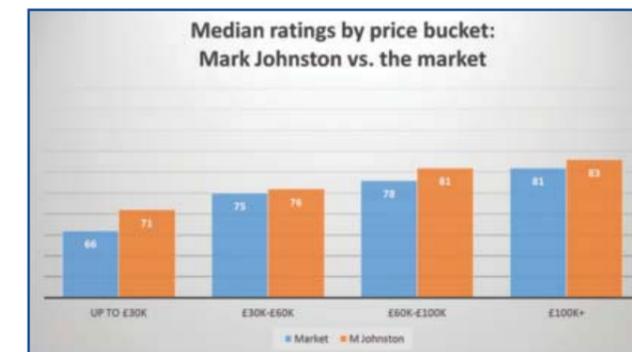


Figure 5: Median Ratings by price bucket: Mark Johnston vs. the market

Mark's results constitute clear evidence of the efficiency of his operation in obtaining value for his clients: the money his clients spend maximises the chances of success at all price levels.

Racing is a highly competitive environment, and anyone who sits on past successes is likely to lose their edge. What is particularly effective about this venture is the combination of MJR’s proven ability and our analytical skills; the client is therefore delivered the best of both worlds - an amalgamation of a tried-and-trusted approach to buying with the cutting-edge tools which increasingly characterise the most successful sporting ventures nowadays.

Mark has trained a number of Breeze-Up sales graduates over the years, achieving good results. Now, in conjunction with our data-driven analysis, he intends to target the forthcoming Breeze-Up sales season more actively. As the Breeze-Up sales season progresses, Mark's team will conduct all the usual practices that result in making MJR horses proven value for money and our numbers will show him how the decks are stacked according to data.

As the project goes on, conformation and soundness scores will be incorporated into Mark's in-house database, so it becomes clear how to refine the human skills of selecting a horse – and determine which traditional beliefs prove to be base metal and which are solid gold.

This is an exciting project for all of us. The Breeze-Up sales season starts at the beginning of April and continues for six weeks. We will be targeting value at all price levels.

* To find out more please contact Mark via mark@markjohnstonracing.com or telephone the MJR office on 01969 622 237.

