

Unbridled Losses: Harnessing Machine Learning for Tax Analysis

by Benjamin Alarie, Kim Condon, and Nasreen Rahman

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In this article, the authors revisit the predictions made by Blue J Legal's machine-learning algorithm in *Skolnick*, which the Third Circuit recently affirmed in upholding the Tax Court's finding that the taxpayers did not engage in a horse breeding business for profit and were not entitled to deductions under section 183.

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Introduction

The Third Circuit's recent decision in *Skolnick*¹ once again demonstrates the predictive power of artificial intelligence in forecasting the outcome of tax appeals. Previous Blue J Predicts commentary² analyzed the opinion of the Tax Court in that case, which held that the taxpayers' horse breeding and racing activities were not engaged in for profit. In the earlier analysis, relying on machine learning, we predicted with 81 percent confidence that the Tax Court's ruling would be sustained on appeal. Our prediction proved accurate when the Third Circuit sustained the judgment of the Tax Court on March 8.

In this month's installment of Blue J Predicts we revisit *Skolnick*, section 183, and the regulations that set out the rules for deductibility of business losses and the test for an "activity not engaged in for profit." We also review the facts that gave rise to the dispute in *Skolnick* and recap the Tax Court's reasons for siding with the IRS. We outline which factors the algorithm indicated would be decisive for the Third Circuit, review Blue J's original prediction, and assess the extent to which the factors identified using machine-learning techniques were the same as those decisive on appeal.

Section 183 and Deducting Losses

The term "trade or business" is found in over 50 code sections and 800 subsections.³ Whether an activity is a trade or business has significant

¹ *Skolnick v. Commissioner*, No. 22-1501 (3d Cir. 2023), *aff'g* T.C. Memo. 2021-139.

² Benjamin Alarie and Kathrin Gardhouse, "Situational Awareness: Accurate Financial Recordkeeping and Business Deductions," *Tax Notes Federal*, Aug. 1, 2022, p. 713.

³ *Commissioner v. Groetzinger*, 480 U.S. 23, 27 (1987).

implications for the tax treatment of that activity. As just one example, under section 162(a), taxpayers may deduct “all the ordinary and necessary expenses paid or incurred during the taxable year in carrying on any trade or business.” Despite its centrality in determining eligibility for deductions, the code does not provide an explicit definition of what constitutes a trade or business.

Some guidance can be found in section 183 and reg. section 1.183-2, as well as in case law. Subsection 183(a) provides as a general rule that, for activities engaged in by an individual or an S corporation, no deduction will be allowed for the activity except as provided in section 183 if the activity is not engaged in for profit. The term “activity not engaged in for profit” is defined in section 183(c) to mean any activity other than one for which deductions are allowable under section 162 or paragraphs (1) or (2) of section 212. Thus, whether an activity amounts to carrying on a trade or business under section 162 depends on whether it was engaged in with a genuine intention of earning a profit.⁴ A “reasonable expectation of profit is not required.”⁵ However, a taxpayer cannot be seen as possessing a genuine and honest intention of earning a profit when no expectation of profit exists at all.⁶

In determining whether a taxpayer had an honest intention of generating profit from an activity, courts undergo a fact-driven analysis in which objective factors — as opposed to the taxpayer’s subjective intentions — are weighed more heavily.⁷ Reg. section 1.183-2(b) sets out nine relevant factors that courts should consider in assessing whether a taxpayer engaged in an activity with an intent to earn profit:

1. the manner in which the taxpayer carries on the activity;
2. the expertise of the taxpayer or his advisers;
3. the time and effort expended by the taxpayer in carrying on the activity;
4. the expectation that assets used in the activity may appreciate in value;

5. the success of the taxpayer in carrying on other similar or dissimilar activities;
6. the taxpayer’s history of income or losses regarding the activity;
7. the amount of occasional profits, if any, from the activity;
8. the financial status of the taxpayer; and
9. elements of personal pleasure or recreation.⁸

This is a multifactorial analysis, in which no single factor is decisive. The courts have stated that some factors may be weighed more heavily than others in any given case based on the unique facts of a particular situation.⁹

Although we focus on the taxpayers’ intention to earn a profit, it is helpful to note that the analysis of whether the taxpayer is engaged in a trade or business also involves a determination of whether the activity was engaged in with “continuity and regularity.”¹⁰ That test is an important one because in some instances, an activity can be engaged in for profit but still not found to constitute a trade or business if it fails this second test.¹¹ Thus, deductions for activities “carried on primarily as a sport, hobby, or for recreation” are not allowable under section 162.¹²

Section 183(d) also provides a safe harbor for taxpayers engaged in activities that primarily consist of horse breeding, training, showing, or racing, in which it is assumed that the activity was engaged in for profit if the gross income derived from the activity exceeded the deductions attributable to the activity in two out of seven consecutive tax years ending with the tax year at issue. Given the taxpayers’ history of substantial losses between 1998 and 2013, this presumption had no applicability in *Skolnick*.

Recap: The Facts of *Skolnick*

Taxpayers Mitchel Skolnick and Eric Freeman first became involved in the Standardbred horse industry in the 1990s through Skolnick’s father.

⁸ Reg. section 1.183-2(b).

⁹ “No one factor is determinative and the analysis does not depend on a preponderance of the nine factors.” *Skolnick*, No. 22-1501, at 10.

¹⁰ *Stanton v. Commissioner*, 399 F.2d 326, 329 (5th Cir. 1968); *Groetzing*, 480 U.S. 23, 35.

¹¹ *Stanton*, 399 F.2d 326; *Groetzing*, 480 U.S. 23.

¹² Reg. section 1.183-2(a).

⁴ *Hirsch v. Commissioner*, 315 F.2d 731, 736 (9th Cir. 1963).

⁵ Reg. section 1.183-2(a).

⁶ *Thacher v. Lowe*, 288 F. 994, 995 (S.D.N.Y. 1922).

⁷ *Skolnick*, No. 22-1501, at 10.

The taxpayers later co-founded Bluestone Farms and purchased a \$559,000 property in New Jersey to undertake their new venture.

Beginning in 2004, legislation and other changes both in and outside the state contributed to the increase in unfavorable competitive pressures on New Jersey horse farms. The end of subsidies for New Jersey horse farms prompted the taxpayers to relocate many of their horses out of state to participate in more profitable races.¹³ In 2009 the taxpayers entered into an arrangement with Cane Run Farm in Kentucky as a way for the two farms to co-own horses as opposed to competing against one another, with the expectation that the co-owned horses would be financially more successful than horses solely owned by Bluestone.¹⁴

Despite incurring six- to seven-figure losses in the tax years at issue, Skolnick managed to keep the farm afloat with nearly \$10 million from a trust set up by his parents.¹⁵ In the tax years at issue, 2010-2013, the taxpayers claimed business losses significant enough to reduce their taxable income to zero or near zero.

In 2014 the IRS selected Skolnick's 2012 tax returns for examination. That initial audit eventually encompassed Skolnick's and Freeman's returns for 2010-2013. Ultimately the taxpayers were assessed for deficiencies as well as accuracy-related penalties. The main issue in dispute was whether the taxpayers' horse activity was engaged in for profit so that the horse-related losses could be used to offset their income.

The Decision of the Tax Court

The Tax Court found that several factors weighed against the taxpayers. The manner in which the activity was carried on (factor 1) indicated a lack of a genuine profit motive.¹⁶ The taxpayers had voluminous business records, but they were poorly kept. Capital was not contributed in proportion to the partners' ownership interests, and the taxpayers appeared to be largely insensitive to costs. Most

importantly, there was no evidence that the taxpayers used their business records to develop plans to reduce expenses or generate profit. The court noted that the taxpayers could have generated income, reduced costs, and downsized operations by selling underused farmland, but they declined a purchase offer from a major developer, and made no serious effort to generate income from that land.¹⁷

The taxpayers' previous experience in the Standardbred industry and the number and quality of the industry experts they consulted (factor 2) weighed somewhat in the taxpayers' favor, as did their devotion of considerable time and effort to the activity (factor 3).¹⁸ However, in light of Skolnick's considerable trust fund income, the Tax Court did not give significant weight to this factor.

Regarding the expectation that assets used in the activity would appreciate in value (factor 4), the taxpayers claimed that they expected the value of both Bluestone's farmland and its horses to appreciate.¹⁹ But the Tax Court found that the evidence on this point was unconvincing.²⁰ Given the arrangement with Cane Run and the taxpayers' practice of boarding horses out of state, the number of horses residing at Bluestone was small. The original land did appreciate in value, but this appreciation was insignificant when weighed against Bluestone's annual operating losses. Thus, an expectation of real estate appreciation did not support a finding that the taxpayers' horse activity as a whole was conducted with the genuine intent to make a profit. The Tax Court also found no plausible basis to expect that the value of Bluestone's horses would increase over time. This factor was held to be neutral at best.²¹

More importantly for the Tax Court were the large and sustained losses that continued after the initial startup phase and which could not be attributed to unexpected adverse events (factor 6 — taxpayer's history of income or losses for the

¹³ *Skolnick*, No. 22-1501, at 7.

¹⁴ *Id.* at 13.

¹⁵ *Id.* at 6.

¹⁶ *Skolnick*, T.C. Memo. 2021-139, at 37.

¹⁷ *Id.* at 13.

¹⁸ *Id.* at 42-45.

¹⁹ *Id.* at 45.

²⁰ *Id.* at 52-53.

²¹ *Id.* at 53.

Four Important Factors in *Skolnick*

Hypothetical	Factor 1: Was There a Change in Practice to Increase Profits?	Factor 2: Were the Financial Records Accurate?	Factor 3: Were Any Losses Caused by Unforeseen Circumstances?	Factor 4: Did Assets Used in the Course of the Business Appreciate in Value?	Predicted Likelihood of a Finding in Favor of a Trade or Business
1 (original prediction)	No	No	No	No	19%
2	Yes	No	No	No	83%
3	No	Yes	No	No	77%
4	No	No	Yes	No	39%
5	No	No	No	Yes	34%
6	No	No	Yes	Yes	66%

activity).²² The taxpayers lost more than \$11.4 million between 1998 and 2013 without a single profitable year during that period. The Tax Court regarded this as the most significant factor in favor of the IRS’s position.²³

Revisiting Blue J’s Prediction

The August 2022 installment of Blue J Predicts forecast with 81 percent confidence that the Third Circuit would find that the taxpayers’ horse breeding activity in *Skolnick* was an activity not engaged in for profit under section 183.²⁴ Therefore, it could not amount to a trade or business for which deductions are permitted under section 162. Our prediction was based on an analysis of the relevant facts and circumstances using Blue J’s machine-learning model, trained on the facts and results of over 750 tax decisions that directly assess whether an activity engaged in by a taxpayer is a trade or business under section 162 and decided between 1987 and the moment we conducted the analysis.

Out of the more than 750 opinions on this issue, courts found that taxpayers had maintained inadequate financial records in 243 cases. In our previous column, we paid particular attention to the absence of adequate financial records in the taxpayers’ case, after finding that this factor was

more important in arriving at the outcome in *Skolnick* than in any other case in which financial records were found to be inadequate.²⁵ We found that the effect of this factor alone on the outcome was substantial; so much so, with all else being equal, that Blue J’s scenario testing revealed with 77 percent confidence that had the taxpayers kept complete and accurate books and records, a court would probably have found the taxpayers’ horse breeding activity to be a trade or business.²⁶

In addition to the importance of maintaining adequate books and records, we also discussed the effect of the three other factors that we identified through algorithmic analysis as having the greatest effect on the outcome among the nine factors listed by reg. section 1.183-2(b) as being both reasonably disputed and most strongly relied on by the taxpayers in their appellate brief. These three factors were:

- changes to the way the taxpayers conducted the activity to increase profits;
- loss caused by unforeseen events; and
- appreciation in the value of assets used in the activity.²⁷

Previously, we demonstrated through scenario testing that a variety of factors can influence the outcome of a case. For example, out of the factors that we analyzed above, the most

²² *Id.* at 53-55.

²³ *Id.* at 55.

²⁴ Alarie and Gardhouse, *supra* note 2, at 714.

²⁵ *Id.*

²⁶ *Id.*

²⁷ *Id.* at 716.

significant proved to be whether changes were made by the taxpayer in conducting the activity for the purposes of increasing profits. Blue J's model predicted an outcome in favor of the taxpayer with 83 percent confidence had the taxpayer been successful regarding this factor. On the other hand, losses caused by unforeseen events and the appreciation of the value of assets used in the activity were factors that would be unlikely to independently flip the outcome to finding a trade or business. However, Blue J's predictive module predicted with 66 percent confidence that the outcome would be a trade or business had the taxpayer been successful on these two factors together.

The Decision of the Third Circuit

As predicted, the Third Circuit dismissed the taxpayers' appeal, finding that they failed to show clear error in the Tax Court's ruling that the activities were not engaged in for profit. The appellate court considered each of the nine relevant factors set forth in reg. section 1.183-2(b) and focused heavily on the two strongest factors favoring the IRS: factor 1, the manner in which the taxpayers carried on the activity; and factor 6, the taxpayers' history of income or losses for the activity.

Factor 6 was the most important consideration in the decision of the Tax Court. By 2010, Bluestone had been in operation for 12 years but from 2010 through 2013 lost more than \$3.5 million.²⁸ It did not have a single profitable year until 2016 — after the IRS had selected the taxpayers' return for examination. The Third Circuit was unpersuaded by the fact that Bluestone managed to earn a small profit after the tax years at issue. The taxpayers tried to show that Bluestone's inability to turn a profit during the relevant years was caused by adverse events beyond their control, including the 2008 financial crisis, but failed to convince the court on this point.²⁹

The manner in which the taxpayers carried on the activity (factor 1), also favored the IRS. The taxpayers' business records were rife with

inaccuracies and gaps. The lack of a business plan after 2004, plus the lack of employee budgets, supported a finding that the activity was not conducted in a businesslike manner.³⁰ The line between personal and business elements was blurred. In one example, Bluestone paid for Skolnick's personal expenses, including reconstruction of the farmhouse on the property where he lived rent-free with his wife, Brianna, and for extensive landscaping of the property that was carried out for their wedding.³¹

Skolnick's and Freeman's financial status (factor 8) also weighed strongly in the IRS's favor. The Tax Court correctly considered the taxpayers' substantial income from outside sources as evidence that their horse breeding activity was not their primary source of income. The sole factor that favored the taxpayers in the opinion of the Third Circuit was the expertise of the taxpayers and their advisers (factor 2).³² But this was not enough to shift the outcome in their favor. Overall, the Third Circuit found that the weight of the evidence strongly favored the IRS and affirmed the decision of the Tax Court.³³

Conclusion

The result of the appeal in *Skolnick* showcases the proven value of machine-learning-powered predictions, not only for evaluating how a court may decide an appeal but also as an effective way to assess the relative weight of the critical factors that shape the outcome. Our previous analysis of the Tax Court's decision in *Skolnick* focused on the requirement to maintain complete and accurate financial records as a key factor in determining the manner in which the taxpayer carries on the activity (factor 1). The evidence on this point formed a key part of the appellants' argument in their brief. Our analysis explained that if the appellants were successful in convincing the Third Circuit that the Tax Court erred on that one point, our machine-learning algorithm predicted a shift in the outcome from favoring the IRS to a result in favor of the taxpayers.

³⁰ *Id.* at 12.

³¹ *Id.* at 12-13.

³² *Id.* at 19.

³³ *Id.* at 22.

²⁸ *Skolnick*, No. 22-1501, at 11.

²⁹ *Id.*

As it turned out, the Third Circuit did devote a significant portion of its opinion to considering the appellants' evidence regarding business records, ultimately holding that the Tax Court did not err in weighing that factor in favor of the IRS. Also significant was the taxpayers' substantial history of losses, which the court agreed strongly favored the IRS.³⁴ The court noted that "the start-up phase for horse activity is five to ten years. *Engdahl v. Comm'r*, 72 T.C. 659, 669 (1979). But [Bluestone's] losses continued essentially unabated after that timeframe."³⁵ Adverse events beyond the taxpayers' control, such as the 2008 financial crisis, could not explain Bluestone's prolonged and sustained unprofitability.

The taxpayers pointed to the fact that their activity had generated a small profit in 2016, the year in which they sold their interest in a successful racehorse named Always B Miki. However, because this occurred after the tax years at issue, it did not assist the taxpayers' position. As noted by the Third Circuit, at that point, the taxpayers' returns had already been selected for review by the IRS, giving the taxpayers a persuasive non-business-related motive to demonstrate their profitability. Our algorithm does not weigh this factor in favor of the taxpayers for the same reason.

Since we began writing this column in 2021, we have predicted the outcome of 14 separate tax appeals. Of those 14, Blue J has successfully forecast the outcome of every case for which an opinion has since been filed.³⁶ Our experiment to test whether an algorithm could predict the outcome of tax appeals has once again demonstrated the reliability and effectiveness of AI-powered tools when employed by experienced and informed tax practitioners. The release of the Third Circuit's opinion in *Skolnick* is just one more example of how predictive algorithms can help lawyers prepare and strategize tax appeals. ■

³⁴ *Id.* at 10-11.

³⁵ *Id.*

³⁶ See Alarie, "The Rise of the Robotic Tax Analyst," *Tax Notes Federal*, Jan. 2, 2023, p. 57.

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