



# PENNY BREAKAGE

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The Thoroughbred Idea Foundation (TIF) was recently launched to provide an active forum for the exchange, curation and advocacy of ideas which will improve thoroughbred racing for all stakeholders, and specifically its primary financial participants – horseplayers and owners.

Implicit in this process will be the discussion of various industry policies and positions which may have existed, unchanged, for decades. The topic discussed in this paper is one of those. TIF believes the industry must thoughtfully address matters which can help stem the downward trends experienced within the last decade. Foal crops are at all-time lows, handle dropped precipitously and has since flat-lined, while industry consolidation is an unavoidable result.

Racing, as a whole, is incredibly reliant on past

performance. For the sake of the industry's future, we suggest that such reliance be limited to the analysis of horses. The sport's existing model was developed decades ago, where elements of pricing, transparency and innovation were far less important to the sustainability of the business, especially while racing enjoyed a near-monopoly in the legal sports betting environment. Our intent is not to shift pieces of the proverbial pie from one group to another, but rather to grow the pie for all.

Given improvements in technology, changes in the way horseplayers bet on races and increased competition from other forms of wagering, it is imperative the industry updates its model to keep pace with the current environment and then focus on getting ahead of the curve.

The recommendations offered in this and

subsequent papers aim to serve as a starting point for industry change. TIF welcomes your feedback via our website – [RacingThinkTank.com](http://RacingThinkTank.com).

## INTRODUCTION

The Jockey Club's Round Table Conference on Matters Pertaining to Racing in August 2018 featured a presentation from McKinsey consultants in which they identified 15.8% as the "racetrack revenue-maximizing" takeout rate for win, place and show pools (WPS). Unfortunately, for both horseplayers and the racetracks, the average takeout in WPS pools across more than 60 tracks studied is 17.3%.

But the reality is far worse for bettors in those pools when factoring in breakage.

Serving as an additional rake on winning bets, breakage increases the effective takeout to near 20% or higher in some jurisdictions, reducing the return to bettors and thus reducing the amount of money that could be churned back into the pools, increasing handle.

As handle on North American racing has essentially stagnated over the last five years, and is down more than 20% for the last decade, racing operators and regulators need to find ways to stimulate wagering. One way to help the entire system would be to return the rightly earned winnings to bettors, without the burden of breakage.

## WHAT IS BREAKAGE?

Breakage is the difference between what horseplayers **should** receive on a winning bet and what they **actually** receive.

Essentially, breakage is a rounding down of a winning dividend in order to present a tidy payout, eliminating the need for tellers to count and return pennies to winning on-track bettors. The concept has been ever-present in racing since the pari-mutuel tote system was implemented. Breakage impacts every pool in pari-mutuel wagering and can never be fully eliminated as there will always be some rounding required to the nearest penny.

Penny breakage exists in various aspects of daily life. The total you owe once filling your gas tank is broken to the penny based on a cost per gallon and the exact filled amount, using decimals beyond two points. The price of produce, meat or fish

might be based on a pound, but the scale used to measure how much you are actually buying is often calibrated to two or three decimals. The break on your payment goes to the penny.

Unlike fuel or produce, North American horse racing does not break to the penny, but in most cases, the nearest dime on every dollar. For horseplayers, breakage is most notable in pools where winnings are smaller – such as WPS – as opposed to exotic pools with higher payoffs.

Here is a basic example of the impact of breakage in pari-mutuel tote pools.

Take a race with \$100,000 bet in the win pool where the takeout rate is the aforementioned industry average of 17.3%. That means that the total amount to be returned to winning bettors is \$82,700 (\$100,000 minus the \$17,300 takeout).

bet to win, which converts to an even money chance (1-1). Take the returnable winning pool of \$82,700 divided by \$39,530 and the raw return for every \$1 wager would be \$2.0921. Since it is impossible to pay \$0.0021, the rounded amount bettors would be entitled to would be \$2.09 for every \$1 wagered. With a \$2 minimum bet, this horse should return \$4.18, but yet nearly all jurisdictions in racing return just \$4.00 to the winning bettor.

In this example, \$3,640 is retained in breakage from the race. When added to the \$17,300 already withheld as takeout, the total amount which did not get back into the hands of the winning bettors totaled \$20,940 – **creating an effective win pool takeout rate of 20.94%** from the original \$100,000 wagered. (See Exhibit A in the Appendix for more details)

This effective rate is also 32% higher than the 15.8% rate suggested to racetracks by McKinsey in their recent report to The Jockey Club.

Now consider that breakage happens in every race across North America. The effect of breakage varies depending upon the particular rounding characteristics of a race's pools, but the impact is the same – **horseplayers do not receive their fair share of winning dividends.**

Based on a review of various racing commission reports delineating breakage, the Thoroughbred Idea Foundation estimates breakage at roughly 0.45% of total handle. That suggests breakage totals at least **\$50 million per year**. With this money returned to horseplayers, **we estimate the betting churn from breakage to total at least an additional \$200 million in annual handle.**

# BREAKAGE IN THE 2018 TRIPLE CROWN

The 2018 Triple Crown serves as a useful example of the impact of breakage.

Justify returned victorious in all three legs as the favorite. Each of the win payouts on Justify were impacted by breakage, with **just over \$1 million retained in total breakage for the three wins.**

Effective takeout was highest at Pimlico, not merely because the Maryland track has the highest win-pool takeout of the three Triple Crown venues, but also because Justify’s actual payout was lowest. The lower the payout, the greater the impact of breakage because the more money bet on a winning return will increase the number of occasions on which breakage is retained.

Race	Win Payout	Pay Without Breakage	Total Breakage
Derby	\$ 7.80	\$ 7.86	\$ 264,413
Preakness	\$ 2.80	\$ 2.88	\$ 355,755
Belmont	\$ 3.60	\$ 3.68	\$ 384,863
<b>Triple Crown Win Pool Breakage</b>			<b>\$ 1,005,031</b>

Race	Win Takeout	Effective Takeout
Derby	17.5%	18.17%
Preakness	18%	20.69%
Belmont	16%	18.12%

Should you have wagered \$20 to win on Justify in the Preakness, the return was \$28.00, not \$28.80. A \$200 wager would have yielded \$280, not \$288.

The difference is breakage. See Exhibit C in the appendix for additional details on the calculation of win-pool breakage from the Preakness.

The impact stretches to the place and show pools as well. Below, find the place and show payouts from the Preakness, along with what the payouts would have been with breaks to the penny. Notably, Justify returned \$2.80 to win and place in the Preakness, but if penny breakage was implemented, he rightfully would have rewarded place backers more than those in the win pool.

<b>Preakness Win Pool Breakage</b>			<b>\$ 355,755</b>
Horse	Place Payout	Pay Without Breakage	Total Breakage
Justify	\$ 2.80	\$ 2.94	\$ 86,860
Bravazo	\$ 7.60	\$ 7.72	\$ 15,815
Tenfold			
<b>Preakness Place Pool Breakage</b>			<b>\$ 102,675</b>
Horse	Show Payout	Pay Without Breakage	Total Breakage
Justify	\$ 2.60	\$ 2.64	\$ 19,556
Bravazo	\$ 4.80	\$ 4.88	\$ 11,475
Tenfold	\$ 6.80	\$ 6.98	\$ 15,704
<b>Preakness Show Pool Breakage</b>			<b>\$ 46,735</b>
<b>TOTAL PREAKNESS WPS BREAKAGE</b>			<b>\$ 505,165</b>

Breakage in the WPS pools for the Preakness totaled more than \$500,000 – the equivalent of 2.45% of the \$20.59 million bet in those pools. While the advertised takeout for WPS bets at Pimlico is 18%, the total amount withheld from horseplayers in those combined pools was nearly 14% higher - a blended WPS takeout of 20.45%.

## WHERE DOES BREAKAGE GO?

As with many issues related to North American thoroughbred racing, individual state or provincial regulations dictate the recipients of breakage. Some are fairly straightforward, others are more complex. (See Exhibit B in the Appendix for a selection of breakage policies)

As betting on horse races in North America has changed, so too have the recipients of breakage. In reality, breakage no longer flows to its once intended beneficiaries - it is no longer serving its original legislative intent.

While on-track breakage is allocated as regulators intended, often to different parties within a particular jurisdiction, the breakage accumulated

by internet-based Advanced Deposit Wagering (ADW) entities is retained by the ADWs. What was once a significant total, the breakage from all bets on live racing from an on-track audience, the origin of a race's bets have been spread far and wide thanks to the proliferation of legal internet wagering. If anything, this should provide an impetus for racetracks and their regulators to pursue much-needed changes.

**Breakage is retained by the bet-taker. While racetracks adhere to their jurisdiction's rules regarding the distribution of that breakage, ADWs retain all of the breakage from their customers' bets.**

A \$2 win bet on the 2018 Preakness Stakes won by Justify returns the same \$2.80 no matter where it was made, but the \$0.08 breakage is retained by the bet-taker. Place that bet via an ADW and the ADW retains the breakage. Place that bet at Keeneland and Kentucky's breakage rules apply.

Actions taken to return breakage to its rightful owner, the horseplayers, could generate some negative sentiment from its current recipients. However, the total breakage for a particular track's races are now divided across a far larger set of bet-takers, suggesting that the significant portion of breakage that may have once trickled-down to purse funds or horsemen's groups from on-track wagers is far smaller in the present than the past.

In 2017, wagers via three of the largest ADWs (TVG, TwinSpires and Xpressbet) totaled over \$3.57 billion<sup>1</sup>, or nearly 33% of all American handle. While these entities enjoy the spoils of breakage from their winning customers, they would also reap the benefits of increased churn from those customers enjoying a more sizable winning dividend. In other words, bet-takers are currently dividing a pool of \$50 million annually. Were that money returned to horseplayers, the churn could yield more than \$200 million in new handle. It is beyond time to examine racing's breakage model.

## ACTIONS AND RECOMMENDATIONS

**The Thoroughbred Idea Foundation suggests states amend their breakage policies such that all breaks revert to the nearest penny.**

Current policies in most states dictate breaks revert to the nearest dime, although New York

breaks to the nearest nickel for winnings under \$10. In the earlier example used, a winning return of \$2.0921 would be rounded down to \$2.09. This is a just and equitable result for horseplayers. Breakage will never be completely eliminated as fractions of pennies still accrue, and these could continue to be divided as the states see fit.

The battle to revert to penny breakage has been a long one, and a review of several points from the past lend crucial perspective to this quest.

A noteworthy element in the rationale for converting to penny breakage is that the cited reasoning for implementing breakage – customer service, moving betting lines and helping the racetracks – is no longer relevant given the nature of wagering in the current day.

## FIGHTING FOR PENNY BREAKAGE

Herbert Bayard Swope, a Pulitzer Prize winning journalist and former chairman of the New York State Racing Commission, lobbied the New York legislature to revert to penny breakage. His comments were recorded in the New York Times of March 27, 1940.

*"The public should not be illegally plucked of its pennies by a scheme invented several years ago and given the specious label of efficiency on the plea of saving time and not encumbering bettors with cent pieces. Why not? And what legitimate claims have the State or the tracks on these moneys?*

*None whatsoever."*

Steven Crist, former chief executive of the Daily Racing Form, made the only noticeable improvement on breakage in the 1990s when a member of New York Governor Mario Cuomo's Advisory Commission on Racing in the 21st Century. Among the recommendations floated by the Commission included a shift in the breakage formula.

Crist strongly advocated for penny breakage, but the group settled on a change whereby breakage on bets returning between \$2 and \$10 would go to the nearest nickel per \$1 bet, as opposed to the nearest dime. This result is reflected in the returns one sees in New York – mutuels of \$3.90 or \$5.10, for example. In nearly all other jurisdictions, such returns would reflect as \$3.80 and \$5.00. The

switch has yielded millions more returned to winning horseplayers in New York over nearly 25 years.

Still, Crist suggested in 2014 that penny breakage was the obvious, righteous path.

*"The first state that switches to penny breakage will reap a huge bounty of goodwill and loyalty from its customers. Imagine betting a race tomorrow and getting across-the-board payoffs of \$9.78, \$4.31, and \$2.79 instead of \$9.60, \$4.20, and \$2.60."*

Among the details in a six-page decision from the 1947 case of State v. Garden State Racing Association, the broad purpose of breakage was outlined.

*"It is apparent that this method of computation and payment is for the convenience of the permit holder [racetrack] in the operation of the pari-mutuel system of wagering."*

The retention of breakage remains unchanged to this day, but the way a bet is made, either on track, off-track or electronically, has very much changed since the above comments from the 1940s and even from Crist's work in the 1990s. In other words, breakage policies have not been formally revisited in the internet era.

The vast majority of handle now comes from remote sources. On-track attendance has dwindled and even those making bets at the racetrack often do so with cash equivalents, such as betting vouchers via self-service wagering machines, rarely involving a human teller doling out pennies to queued customers. Nearly all ADW betting is entirely cash-less, with transactions effected through bank transfers. Players in live-money handicapping contests such as the Breeders' Cup Betting Challenge bet millions in a day without ever handling cash. Computer-assisted wagering teams often have direct electronic access to the tote pools and can place hundreds of bets in an instance.

**The state of modern racing wagering is such that the "convenience" created by the advent of "this method of computation and payment" – breakage – is no longer justified.**

The advent of \$0.10 minimums for superfecta wagers has exhibited racetracks' willingness to begin paying down to the penny. A superfecta returning \$125.60 for a \$2 bet would yield \$6.28 to the winning \$0.10 bettor. If the industry can accept paying a portion of its customers to the penny, it should accept paying all of its customers as such.

## IMPACT OF PENNY BREAKAGE

The effect of breakage on a single winning bet is small, but because breakage occurs in every pool, in every race, the annual total is significant. As place and show bets return smaller overall dividends to winning bettors, breakage in those pools represents a higher percentage of the overall pool.

**As stated, we believe total breakage equates to roughly one half of one percent of total handle in America, at least \$50 million per year on roughly \$10 billion. The win pool from the Triple Crown races previously cited generated \$1 million in breakage alone.**

**At \$50 million per year, we believe horseplayers could churn through subsequent bets worth more than an additional \$200 million annually,<sup>2</sup> a figure which represents an increase of more than 2% of nationwide handle.** The handle generated through additional betting churn would represent the largest single year percentage rise in handle over the last 15 years.

A shift to penny breakage will also enhance the attractiveness of place and show betting, increasing the probability of having a winning day at the races – an essential when it comes to retaining newer, casual racing fans – and incentivizing more professional players to dip into these pools. Place and show pool payouts are naturally smaller than their exotic counterparts as the chances of winning are much greater. Breakage in its current form savages the profits of these smaller payouts, reducing churn even further, and essentially serves as a regressive tax on newer or casual horseplayers.

The churn created by returning breakage produces diversified revenue for more stakeholders as a result of additional gambling by horseplayers – more revenue for racing operators (through takeout), for horse owners (through additional funding for prize money via takeout) and for regulators (through taxes via takeout).

At a time when all betting was conducted on track, and thus all breakage was divided as the host track's regulators dictated, some jurisdictions where purse funds or state breeding programs gained a cut of the breakage benefitted from such funding. A shift to penny breakage would eliminate most of such funding. However, with an ever-growing percentage of wagering shifting to ADWs, which retain their customers' breakage, these programs should be expected to experience ongoing declines,

particularly in jurisdictions with lower handle which have experienced the industry's greatest handle declines.

The state of New Mexico splits breakage with half being retained by racetracks and the other half going to New Mexico-bred purse supplements. From 2014 to 2016, the state of New Mexico saw total breakage revenue drop 31%, from \$881,663 to \$608,751.3 Maiden special weight races for New Mexico-bred horses at Sunland Park in January 2017 offered a purse of \$24,500 compared to \$23,400 one year later, a 4.4% decline in prize money. While this cause and effect is not direct, the trend is hardly positive for the future.

## NEGATIVE BREAKAGE

A by-product of a shift to penny breakage could also yield the elimination of requirements to offer a guaranteed minimum return – often \$2.10 or \$2.20, depending on the jurisdiction.

As it stands under current protocols, when the calculated, pre-payout dividend falls under \$2.10 or \$2.20 (a result of an incredibly short-odds favorite winning or landing a first-three placing), the winning payoff must be rounded-up to this pre-set minimum, leaving bet takers to foot the bill for this anomaly.

Negative breakage is also known as a “minus pool” – where the amount required to pay the minimum return as dictated by the jurisdiction exceeds the size of the pool to make the payout.

Steve Crist's logic, offered in his previously cited 2014 article, serves as the standard on negative breakage whilst advocating for a change to penny breakage.

*Going to penny payoffs would mean the end of the 'bridge-jumping' era, as a minimum payoff of \$2.01 instead of \$2.10 would make show bets on supposedly sure things unattractive. You would have to be right 200 times out of 201, instead of the current 20 times out of 21, just to break even.*

*"It's an era worth ending. There is absolutely no logic to having an artificial, guaranteed minimum which, in fact, violates the whole point of the pari-mutuel system and the neutrality of the stakeholder.*

*"Some players may lament the absence of the occasional opportunity to play against a bridge-jumped horse, but they will do far better in the long run by getting the payoffs they deserve on every race."*

The elimination of minus pools is a meaningful

benefit to bet-takers following a switch to penny breakage and the subsequent elimination of a mandatory minimum payout.

In 2017, the three tracks of the New York Racing Association (NYRA) generated \$3,061,894 in breakage revenue for the host, but of which only \$1,948,392 was received by NYRA after state taxes. In the same year, NYRA paid out \$1,846,438 in minus pools, or negative breakage.<sup>5</sup> The net revenue to the track (after-tax breakage less the minus pool payouts) was only \$101,954, or just 3.3% of the original breakage collected.

Smaller tracks cannot bear the higher burden of a particularly large minus pool. The same New York State Gaming Commission report which provided the NYRA figures above showed two of the state's smaller standardbred tracks paid out more in minus pools than they collected in breakage in both 2016 and 2017. The perceived positive benefits of breakage to racetracks may not be as significant as once considered in light of their need to fund minus pools, which could be eliminated with penny breakage and a cancellation of mandatory minimum payout requirements.

## OPERATIONAL ADJUSTMENTS WITH PENNY BREAKAGE

Without doubt, on-track operations require an adjustment should penny breakage be adopted. While lower bet limits, such as the \$0.10 superfecta, have yielded some payouts to the nearest penny, most tellers in on or off-track wagering facilities do not carry pennies and choose to round these payouts, on their own, to the nearest nickel or dime. Anecdotally, we are confident some customers have no issues with this status quo.

Should penny breakage be adopted, brick-and-mortar facilities on or off-track handling cash could adjust their mutuels operations in several ways:

Pennies could be added to the cash drawers (this exists in some jurisdictions already);

Select windows with coin dispensing machines, similar to those in use at retail points, could be used to facilitate payments of coins;

Tracks could pay odd cents in vouchers, enabling customers to collect them throughout the day for later collation, betting or eventual payment, potentially from a designated window;

A “cash-out” machine, similar to those in use by casinos, could be enabled to cash vouchers, perhaps limited to those only under \$1.00 or even for larger payouts.

Options are available to the industry to adopt

minor adjustments to the payout process without a substantial disruption to the status quo. As cited previously, a growing percentage of customers' wagering via ADWs will dull the operational impact of penny breakage.

## ALTERNATIVE TO PENNY BREAKAGE

An alternate course of action to adopting penny breakage could be the establishment of rounding accounts, which serve as a middle ground for breakage.

When the raw dividend for a horse falls at a certain point or below, the rounding account accepts the breakage. When the raw dividend is at or above a certain point, the dividend is rounded up with the difference coming from the rounding account. This breakage accounting method is applied in Hong Kong,<sup>6</sup> without controversy, where all bets are broken to the nearest HK\$0.50 (US\$0.06).

If the regulatory environment renders it impossible to shift to penny breakage, rounding accounts could take all raw payouts as follows:

\$ .0001 - \$.0499 = round down to \$0.00 (this portion = positive breakage for the bet-taker)

\$ .0500 - \$.0999 = round up to \$0.10 (this portion = positive breakage for the bettor)

The technological development required to effect the fluctuations of a rounding account would likely require more investment than an outright shift to penny breakage, and thus may be considered an inferior alternative. Still, the rounding account should be given consideration as a viable option given its effective use overseas and representative of some degree of compromise between bet-takers and bettors.

## ADDITIONAL CONSIDERATIONS

The current system of breakage has long been implanted to the business model of bet-takers. A shift to penny breakage would likely impact some of the current operating practices of ADWs, likely more so than traditional brick-and-mortar locations. Rebates received by some customers could be reduced. Signal fees may change. These side effects have not gone unnoticed, but should be measured in light of the increasingly competitive legal wagering marketplace.

The rising presence of fixed-odds sports wagering, and the existence of exchange wagering

in racing, albeit with limited distribution at present – both products without breakage – should serve as bright alternatives to price-sensitive players enabled to access such markets.

The overall takeout on both forms of wagering is lower, and while the legal exchange wagering offering via Betfair does offer a funding model back to the industry, the path is less clear at present with fixed odds wagering.

## PENNY BREAKAGE - THE WAY FORWARD

Racing's pricing model is far from ideal. Overhead for operating the sport is significant. But when compared to the pricing model of alternate forms of gambling – particularly sports betting, with an approximate takeout rate 4.76% (with no breakage), and which is poised to explode across America – a modernized approach to eliminating breakage should be a priority to enhance racing's attractiveness and sustainability to bettors.

A variety of options to minimize or eliminate breakage are available to racing operators and their regulators for consideration. Given the prominence of ADWs, which by their very nature do not require the counting or physical delivery of cash, most wagers are often just numbers on a screen.

Retaining breakage in its current form is an opaque practice at a time when pricing transparency is essential to customers. It is also an antiquated concept in an age where the modern customer experience has little to do with standing in line to collect cash. Switching to penny breakage is an obvious, but much needed change.

Racing operators and regulators should pave the way advocating for breakage reform. Early actors would likely gain some short-term benefit given these actions. In the long-term, however, racing as a whole will benefit by a concerted effort from all involved to address long-standing but solvable challenges that a modern sport, benefitted by modern technology, should tackle.

All stakeholders in racing should desire an increase in handle and revenue. Adopting these recommendations seeks to grow the pie for the industry, not just shifting slices between stakeholders. Penny breakage gives more money to horseplayers to churn, increasing handle. Modernization in racing is a necessity, advocating for and adopting penny breakage would be a meaningful step in that long-overdue process.

# APPENDIX

## EXHIBIT A: SAMPLE RACE BREAKAGE CALCULATION

<b>A</b>	Total win pool handle	<b>\$100,000</b>
<b>B</b>	Average win pool takeout rate	<b>\$17,300</b>
<b>C</b>	Total pool remaining to calculate dividend	<b>\$82,700</b>
<b>D</b>	Total win pool on Horse XYZ	<b>\$39,530</b>
<b>E</b>	Raw return on every \$1 bet on Horse XYZ (C/D)	<b>\$2.09</b>
<b>F</b>	Actual return on every \$1 bet on Horse XYZ	<b>\$2.00</b>
<b>G</b>	Breakage per \$1 bet on Horse XYZ	<b>\$0.09</b>
<b>H</b>	Total breakage (D*G)	<b>\$3,640</b>
<b>J</b>	Takeout + Breakage (B+H)	<b>\$20,940</b>
<b>K</b>	Effective Takeout Rate (J/A)	<b>20.94%</b>

## EXHIBIT B: BREAKAGE DISTRIBUTION BY SELECT STATES

State	Distribution of Breakage
<b>California</b>	Equally divided between state, track & purse fund
<b>Colorado</b>	50% to track, 50% to purses
<b>Florida</b>	100% to track
<b>Illinois</b>	75% to track, 25% to horsemen
<b>Indiana</b>	46% to the IN Thoroughbred Breed Development, 46% to the Standardbred Breed Development, 8% to the Quarter Horse Breed Development
<b>Kentucky</b>	50% to track, 50% to purses
<b>Louisiana</b>	50% to track, 50% to LA Bred Purse Fund
<b>Maryland</b>	50% to track, 50% to fund MD Sire Stakes Program
<b>New Jersey</b>	50% to track, 50% to NJ Racing Industry Special fund
<b>New York</b>	50% to track, 50% to state
<b>Ohio</b>	40% to purses, 35% to track, 25% to horsemen's health & retirement fund
<b>Pennsylvania</b>	62.5% to track, 37.5% to state
<b>Texas</b>	78.4% to horse breed registry via incentives to owners & breeders, 9.8% to tracks for Texas-bred stakes purses, 9.8% to state commission for breed registry programs, 2% to an equine research fund
<b>West Virginia</b>	50% to track, 50% to horse fund

*\*Details in above table were collected from varied publicly available online sources. Some details may have changed since the time such sources were originally published. Breakage from ADWs is retained by the ADW.*

## EXHIBIT C: PREAKNESS WIN POOL BREAKAGE CALCULATION

<b>A</b>	Total Preakness win pool	<b>\$13,226,989</b>
<b>B</b>	Pimlico win pool takeout (A*18%)	<b>\$2,380,858</b>
<b>C</b>	Total pool remaining to calculate dividend (A-B)	<b>\$10,846,131</b>
<b>D</b>	Total win pool on Justify	<b>\$7,493,126</b>
<b>E</b>	Raw return on every \$1 bet on Justify (C/D)	<b>\$1.4475</b>
<b>F</b>	Actual return on every \$1 bet on Justify	<b>\$1.40</b>
<b>G</b>	Breakage per \$1 bet on Justify (E-F)	<b>\$0.0475</b>
<b>H</b>	Total breakage (D*G)	<b>\$355,755</b>
<b>J</b>	Total retained out of Preakness win pool (B+H)	<b>\$2,746,613</b>
<b>K</b>	Effective Takeout Rate (J/A)	<b>20.69%</b>

*Note Lines E&G – Raw return has \$.0075 remaining. Even with penny breakage, the return would round down to \$1.44 and the \$.0075 would remain as breakage.*

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## EXECUTIVE SUMMARY

The topic of breakage in North America's horse racing tote pools has gone largely untouched for nearly a quarter-century, and before that, relatively unchallenged. Many casual racing bettors, and even many horsepeople, are unaware of its existence.

Breakage is the difference between what horseplayers should receive on a winning bet and what they actually receive. The concept has been ever-present in racing since the pari-mutuel tote



system was implemented – with bet-takers (in the early 20th century) claiming breakage was necessary to keep the flow of customers moving, helping betting churn, saving tellers from having to pay odd amounts (\$2.98), instead relying on a rounded figure (\$2.80).

If this seems unfamiliar to you, or you have never noticed this before, you aren't alone. Few realize that the calculated dividend a winning horseplayer receives is rounded down, in many cases, to the nearest dime per dollar wagered. In ordinary life, breaks to the penny are common. Think about filling your car's gas tank, paying for produce or just about anything that required payment based on weight. In horse racing, breaks to the penny have thus far only been a dream.

From the 2018 Triple Crown races, Justify's three wins yielded total win pool breakage of more than \$1 million. The Preakness alone generated more than \$500,000 in breakage from the win, place and show pools (WPS).

Breakage occurs in almost every pool, but the impact of rounding is much greater when payouts are smaller – the percentage withheld is large when the return to the customer is small. This impacts place and show pools more than others, making such wagers largely unattractive to big players.

The Thoroughbred Idea Foundation (TIF) estimates annual breakage in America is worth roughly \$50 million – or 0.45% of the \$10.9 billion wagered in 2017. If breakage was returned to horseplayers and churned through the tote pools, even at a blended takeout rate of 20%, TIF believes this could yield an extra \$200 million handle, or an approximate 2% increase in handle at current levels. That equates to the largest single year percentage increase in handle over the last 15 years.

Breakage is retained by the bet-taker. If the bet-taker is an advanced deposit wagering outlet (ADW) online, the ADW keeps the breakage. If the bet-taker is a brick-and-mortar location, like a racetrack, breakage is withheld and distributed according to the individual jurisdiction's regulations. Most states split breakage amongst several eventual sources – often between racetracks, the state, purse funds, state-bred incentives or other programs.

The regulations about breakage were designed prior to the internet era, and even before racetracks employed self-service machines. They have remained the same, essentially, for as long as a pari-mutuel tote system has been employed in North America. Handle continues to shift away from traditional cash channels and more to online ADWs. Breakage no longer reaches its originally intended sources to the degree it once did.

TIF suggests the industry should take steps to shift to penny breakage. Instead of rounding down a win mutuel of \$3.78 to \$3.60 for a 3-5 winner,

the full \$3.78 would be paid. Concurrent with the shift to penny breakage, long-held requirements for mandatory minimum payouts – typically either \$2.10 or \$2.20 – should also be abolished in favor of penny breaks. The newest minimum payment would be \$2.02 – the equivalent of a penny of breakage for each dollar bet.

Taking this step would eliminate the need for tracks to seed "minus pools," occurrences when a horse has a supermajority of the action in a pool and the total amount of the pool, after takeout is deducted, is insufficient to pay the winners to the current mandatory minimum required. In 2017, the New York Racing Association netted just 3% of the breakage they retained breakage after deducting taxes from the accrued breakage and their \$1.8 million in payments to settle minus pools. The impact of breakage to tracks might not be as significant as speculated.

Breakage represents an opaque practice in an era where pricing transparency is essential to the wagering customer, particularly in the face of a growing competitive marketplace with far lower takeout rates. Economists and industry consultants agree racing's declared takeout is too high, yet breakage only adds to the burden, yielding effective rates that can push nearly 21% in the win, place and show pools, far higher than what is advertised.

The nature of racing wagering has changed. Most bets are placed away from host tracks, often online. Many on-track wagers have shifted to the use of cash vouchers. Technological advancements and evolution have rendered antiquated the concept of retaining breakage. Racing is in great need of modernization in many facets while seeking means of increasing wagering from its customers. Industry stakeholders should advocate with their regulators for a shift to penny breakage. **TIF**