LOST CABIN CONSULTING

GAMING MATHEMATICS & PRODUCT INTELLIGENCE

COMPANION SLOT INTELLIGENCE SERIES · ODD MECHANICS

Odd Mechanics

Bonus buys, double-or-nothing gambles, video poker Double Up and wager savers: what each one costs, the exact odds, every maker's name for it, the rules that allow or forbid it in each market, and the narrow cases in which an advantage player can use one

By **Robert Adam Clifford**

ABOUT THIS COMPANION. A free companion to the Slot Intelligence Series. Four features let a player step outside the ordinary spin: buying the bonus outright, staking a win on a card, doubling a video poker win against the dealer, and staking a balance too small for one more spin on a chance at a full one. This companion prices each of them from the makers' own rules, names every maker's version, sets out what the regulators require from Nevada to New South Wales, and gathers what the series' twenty-six volumes have found. Its record includes the 1,420 manufacturer rule sheets that Loto-Québec publishes for the games in its halls, the makers' hosted game help and demonstration servers, and the regulators' own texts. Every source is named where it is used and graded by tier; every figure is recomputed in the build's math script.

Subject	Feature buys and paid bet modes (Bonus Buy, Buy Free Spins, Buy Pass, Instant Feature, Instant Bonus, Feature Drop, ante bets), gamble and double-up features (color, suit, ladder, half gamble, video poker Double Up), and the short-balance chance spin (Wager Saver, Lucky Chance Spin, Bet Keeper, Credit Playoff, Wager Whirl, Saver Spin, Rescue Play, Lucky Spin), with the persistent and pseudo-persistent mechanics around them
Primary Sources	GLI-11 v3.0 and GLI-19 v3.0 T1; Australian/New Zealand Gaming Machine National Standard 12.1 (2025) and the state appendices T1; UK Gambling Commission standards and notices T1; German, Austrian, Dutch, Swedish, Danish, Spanish and Brazilian texts T1; Nevada, New Jersey, Pennsylvania, Michigan, West Virginia, Connecticut, Delaware, Illinois, Maryland and Montana rules T1; Ontario's AGCO standards T1; makers' pages, hosted game help and rules T1; USPTO and patents T1
Series	Volumes I, IV, V, VII, IX, X, XIII, XIV, XV, XIX, XXII, XXIV, XXV and XXVI, and the Perceived Progression companion, cited by volume and section
Math	Exact arithmetic in fractions for every chance, return, ladder and price in this companion; each derived figure shows its working where it is printed
Prepared By	Robert Adam Clifford · Lost Cabin Consulting · November 2026

0%
HOUSE EDGE OF A CHANCE-SPIN WHEEL AT TRUE ODDS

100%
RETURN GLI AND THE ANZ STANDARD REQUIRE OF A GAMBLE

6,666×
HIGHEST MAKER-STATED BUY PRICE ON RECORD

1,420
MANUFACTURER RULE SHEETS READ IN LOTO-QUÉBEC'S INDEX

1 — EXECUTIVE OVERVIEW

The slot has turned from one pull into a menu of propositions. A mechanical reel sold one bet at one price. The virtual reel of 1984 separated the odds from what the strip could show, and the video era added lines, ways, features and persistent meters (the Perceived Progression companion, Section 2). The features in this companion go one step further: they let the player change the wager itself in the middle of play. A bonus buy sells the feature outright for a multiple of the bet, from 10 times to 6,666 times on the makers' own price lists. A gamble offers to double a win on a card. Video poker's Double Up stakes a winning hand against the dealer's card. A wager saver offers a balance too small for one more spin a chance at a full one. Each is a separate wager hung on a base game that carries a house edge, and each changes the size, speed and shape of the risk, which is why regulators treat them so differently.

The terms. *Return to player* (RTP) is the long-run share of money wagered that a game pays back; the house edge is 100% minus the RTP. *Expected value* (EV) is the average result of a wager. *Volatility* is the spread of results around that average, measured as variance. The *random number generator* (RNG) draws every outcome, and GLI-11 requires outcomes "independent of previously produced outcomes, except where specified by the game design" T1. *Advantage play* (AP) is

play only when EV is positive. *Persistent state* is anything stored between games that changes the odds or value of later games.

Three of the four are priced at true odds, and the fourth by the game's own math. A gamble must return 100% under GLI-11 §4.11.1(d), GLI-19 §4.8.5 and the ANZ standard 3.5(f) T1: a color call pays 2 for 1 at an even chance and a suit call 4 for 1 at 1 in 4, so every step is worth the win staked. Video poker's Double Up is the same fair bet in card-against-card form (Section 2C). The chance spin is offered at true odds wherever the maker prints its rule: Aristocrat, Konami, Aruze and Incredible Technologies all print that the chance is the balance divided by the cost of a game, so $100 left on a $500 bet buys a 1-in-5 chance, 20% T1. A bonus buy has no such rule. Its price and its return are set together by the game, and the makers who print both show buys returning from slightly below the base game's figure to a little above it: Pragmatic Play's Gates of Olympus sells free spins for 100 times the bet at 96.50%, the same as the base game, a loss of 3.5 bets a purchase T1.

Each maker that offers one of these features has its own name for it, and the names matter on the floor. Light & Wonder's WAGER SAVER was filed by WMS Gaming on May 11, 2012 and is now registered to Light & Wonder, Inc. T1; Aristocrat uses Lucky Chance Spin and Bet Keeper; IGT, Credit Playoff; Konami, Wager Whirl; Incredible Technologies, Saver Spin; Aruze, Rescue Play; Bluberi, Lucky Spin T1. Buys are Aristocrat's Instant Feature, AGS's Instant Bonus, Light & Wonder's Buy Pass, IGT's Buy a Bonus, Konami's direct buy on its Guardians games and the online studios' Bonus Buy and Buy Free Spins. Of the land makers in Table 3.1, only Ainsworth shows no chance spin and no buy or paid mode on the record read; its rules print the card gamble T1.

The law runs from open to closed, and rarely by name. In Great Britain the Gambling Commission found feature buy-ins on six operators' slots, reminded operators of its standards 3A and 14A in a notice of January 17, 2020, and recorded that all six had removed them T1. The Dutch regulator treats a pre-bought bonus that must then be played as forbidden automatic play T1. Germany's regulator expressly permits the gamble at an even chance T1. Australia's national standard names no buy; Tasmania bars betting extra credits during play to reach a feature, and online pokies may not be offered to Australians at all T1. In the United States only Illinois's route standard names purchased feature games, and only to say how they finish; no casino or online rule found names a buy, while licensed online lobbies in Michigan, New Jersey and Ontario sell buy titles openly; FanDuel's Michigan lobby lists about 168 T1; Illinois's route terminals must offer any double-up at 100% inside a $4 bet T1.

The advantage case is narrow. A fair wheel cannot be beaten, and buying discounted spins by feeding in short amounts buys nothing: at true odds the expected price of one full-bet spin is exactly the bet. A chance spin pays an advantage player only when the full-bet spin itself is worth more than the bet, as on a bounded persistent state near its ceiling, and it gives information: a small balance and the cancel button let a player read every bet level's meters (Volume XV, §8.4) T3. Section 5 lists the figures in circulation that this companion corrects.

Table 1.1 — From one pull to a menu: dated milestones

DATE	EVENT	SOURCE
October 15, 1980	Bonanza's Golden Poker DOUBLE UP advertised in Japan	Game Machine T2
1982	Risikospiel (risk game) patent application for German amusement-with-prize machines	Gauselmann, DE 3213400 A1 T1
October 1, 1996	Casino Data Systems files a wild-card poker patent with the earliest full description found of the house-card-plus-four Double Up	US 5,947,821 T1
August 25, 1999	Priority date of Aristocrat's buy-feature patent family	US 8,038,524 T1
November 10, 2000	GLI-11 v1.3 requires the gamble at 100% (kept in v3.0, 2016)	GLI T1
April 8, 2002	New Zealand gazettes gamble feature standards	NZ Gazette No. 32 T1
December 12, 2002	Ainsworth calls the double-up “a common part of many typical gaming machines”	US 2002/0187836 A1 T1
April 15, 2004	Aristocrat's residual-credit patent filed; lists “double up features” as prior art	US 7,749,075 T1
June 10, 2005	Walker Digital files for buying entry into a bonus round without qualifying (granted 2012; now IGT's)	US 8,142,272 T1
July 7, 2009	The Game King fault: IGT recommends that double up be disabled	IGT notice; court records T1
February 8, 2012	IGT's short-balance patent family begins	US 8,801,519 T1
May 11, 2012	WMS files WAGER SAVER; first use October 2, 2012	USPTO T1
February 18, 2014	BET KEEPER filed (Aristocrat)	USPTO T1
October 25, 2017	Big Time Gaming's White Rabbit launches FEATURE DROP	InterGame T2
January 17, 2020	UK notice on feature buy-ins	Gambling Commission T1
October 31, 2021	UK online slot design rules in force	Gambling Commission T1
November 21, 2023	Aristocrat calls Coin Trio, rolling out across Europe, its first product with a buy into Hold & Spin	Aristocrat T1
January 13, 2025	Konami files WAGER WHIRL	USPTO T1
May 2025	ANZ National Standard 12.1: auto gamble barred, 5x multiplier cap	ANZ GMNS 12.1 T1
July 1, 2026	Germany allows online stakes above one euro	GGL T1

2 — MECHANIC DEEP DIVES

2A — The Buy a Bonus (Feature Buy) Mechanic

How it works. The player pays a fixed multiple of the current bet and the game starts its feature at once, skipping the base game that would otherwise have to trigger it. Pragmatic Play's game help puts it in one line: “The FREE SPINS ROUND can be instantly triggered from the base game by buying it for 100x current total bet” T1. Hacksaw Gaming sells its buy as a way “to skip the wait at the saloon” T1. Most studios now sell several tiers at once: a cheaper round, a richer “super” round and sometimes a top tier priced in the thousands of bets.

The mathematics. A buy is one wager of size C bets whose return r is set by the game. Its expected loss is $C(1 - r)$, and its price times its return is the average value of the feature it sells. Gates of Olympus' buy loses $100 \times (1 - 0.965) = 3.5$ bets and is worth 96.5 bets on average T1; Nolimit City's top tier on Mental II, God Mode at 6,666 times the bet at 96.15%, loses 256.64 bets a purchase T1. The price also exposes a number the makers never publish: what the feature is worth. Ultimate Fire Link's Buy Pass sells the Fire Link feature for 42.9 times the bet at 94.01% on its 94% build and for 42 times at 96.02% on its 95.97% build; either way the feature averages 40.33 bets, so on the 95.97% build it cannot come more often than about 1 in 42 spins (Volume XXII, §§5.5–5.6) T1. One 100-times buy is the action of 100 one-bet spins: 4.17 minutes at Britain's 2.5-second minimum game, 8.33 minutes at Germany's five-second average (this companion's arithmetic), settled in a single feature with all of the feature's volatility and none of the base game's small wins.

A buy's return is its own. Makers that print both figures show a buy returning from slightly below the base game's figure to a little above it, more often above; about a quarter of the printed tiers return less, by at most 0.38 point (Hacksaw's Chaos Crew buy, 95.92% against 96.3%) T1. Greentube's Book of Ra deluxe Buy Bonus returns 95.00% against 93.70% for the base game; Nolimit City's Tombstone R.I.P. returns 96.47% and 97.03% on its two buys against 96.08%; Quickspin's Sakura Fortune 2 rises from 96.24% to 96.72% as the price rises from 55 to 320 times the bet T1. Hacksaw's Wanted Dead or a Wild runs both ways, 96.27% on its cheapest buy and 96.43% on its dearest against a 96.38% base T1. A database lists Dancing Drums Tower at 96.09%, and at 94% with the Buy Pass (Volume IX, §5.5) T3; no maker text confirms the pairing, and Light & Wonder's own rules pair Buy Pass returns of about 94% with its 94% builds (Prosperity, Volume IX, §5.5; Ultimate Fire Link, Volume XXII, §5.5) T1, so the 94% may belong to a second build.

Table 2.1 — Online feature buys: prices and returns on the record

GAME (MAKER)	WHAT IS SOLD AND THE PRICE	RETURN	SOURCE
Gates of Olympus (Pragmatic Play)	Buy Free Spins, 100×; Gates 1000 guarantees four scatters	96.50% buy and base	Game help; demo server T1
Sweet Bonanza 1000 / 2500 (Pragmatic Play)	100× free spins; 500× super; 1,000× super 2 (2500)	96.50–96.55% by tier	Game help; demo server T1
Wanted Dead or a Wild (Hacksaw)	80×, 200× or 400× for one of three bonus games	96.27, 96.33, 96.43% (base 96.38%)	Game rules T1
Mental II (Nolimit City)	100×, 250×, 1,800×, 6,666×; Lucky Draw 330×	96.10–96.16% (base 96.06%)	Game sheet; rules T1
Tombstone R.I.P. (Nolimit City)	70× or 3,000×	96.47% and 97.03% (base 96.08%)	Game rules T1
San Quentin xWays (Nolimit City)	100×, 400× or 2,000× for 3, 4 or 5 bonus symbols	96.26–96.95% (base 96.03%)	Game rules T1
Book of Ra deluxe Buy Bonus (Greentube)	100× for a guaranteed three-scatter spin	95.00% (base 93.70%)	Demo build T1
Cyber Wildz Buy Bonus (Greentube)	100× or a 200× VIP buy	Not stated	Maker page T1
Burgers; Castle of Terror 2 (Big Time Gaming)	100× for 12 free spins; 100× or 300× enhanced	Not stated	Maker pages T1
White Rabbit (Big Time Gaming)	FEATURE DROP: price falls with each BTG coin	Game 96.42%	Maker page T1
Sakura Fortune 2 (Quickspin)	55×, 70× or 320×	96.24, 96.44, 96.72% (base 96%)	Maker page T1
Big Bad Wolf Megaways (Quickspin)	90×	96.44%	Maker page T1
Starburst Galaxy (NetEnt)	Elevate menu: a 3× boost, then features at 10×, 50×, 100× and 500×	Game 96.00%	Maker page T1
Druids' Magic; Ms Robin Hood (NetEnt)	150×; 80×	Not stated	Maker pages T1
Disco Inferno (Red Tiger)	100× or 500×; Bonus Hunt spins at 2× or 3.5×	Game 96.16%	Maker page T1
3 Roaring Bells (Playson)	75× or 200×	Not stated	Maker page T1
Book of Waka Waka Buy Bonus (Amusnet)	90×	Game 96.23%	Maker release T1
Crimson Crown; Blue Marlin (Evoplay)	28×; 68× or 76×	Not stated	Maker pages T1
3 African Drums; Lady Fortune (3 Oaks)	100× or 250×; 100×, 200× or 300×	Not stated	Maker pages T1
40 Super 7 Hold & Respin (R. Franco)	100× for the Bonus Link	Game 94.00%	Maker page T1
Ultimate Fire Link (Light & Wonder), online	Buy Pass 38.1× to 42.9×	94.01–96.05%	Vol. XXII §5.5 T1

GAME (MAKER)	WHAT IS SOLD AND THE PRICE	RETURN	SOURCE
Huff N' More Puff (Light & Wonder), online	95× in help text reproduced by a review site (the maker lists a Buy Pass (EU)); almost 50× on Hard Rock Bet, build not named	96.00% at 95× (same help text)	Vol. IV §5.10 T3; Hard Rock Bet T2
Dancing Drums Tower (Light & Wonder), online	50×	94% with the buy; 96.09% game (database; build not stated)	Vol. IX §§4.11, 5.5 T2 T3

Prices are in multiples of the total bet. Hacksaw's figures were read at a €2.00 bet in the maker's game menu (€160, €400 and €800 are 80, 200 and 400 bets). Many studios print no price on their public pages; their buys are not in the table. Pragmatic Play's public page for Sweet Bonanza lists the game's 96.48% and names no buy, but the game's own help prices it: “purchase a FREE SPINS ROUND by paying a value equal to 100x total bet” T1.

On land the buy is newer, rarer and priced in credits. Aristocrat's Instant Feature was already rolling out across Europe on Coin Trio when the maker's London release of November 21, 2023 said “For the first time on an Aristocrat product, players can buy directly into the Hold & Spin bonus” T1. Its rules in Loto-Québec's halls price it at a minimum of 5,000 credits times the bet multiplier on Bank Buster, Coin Trio, Cashman Kingdom and Louie's Gold, and 6,000 on Buffalo Power Pay, which is $60 at a one-cent denomination, 60 times the $1.00 minimum bet CDC Gaming reports T1 T2; on Fortune Trails 5,000 credits is 56.82 times the 88-credit minimum (this companion's arithmetic). Eternal Legends is “the first Instant Feature game where players can continue to upgrade and earn additional features after they have started the bonus” T1. AGS sells an Instant Bonus at a minimum of 2,400 credits times the multiplier on Rakin' Bacon Fu Zhu Bao Bao and 4,500 on the Triple Oink titles (Loto-Québec rule sheets for the AGS titles) T1; Volume I, §4.7, documents the feature but not its price. Light & Wonder's Golden Drums sells four Buy Pass options at 3,500 to 12,500 credits, 35 to 125 bets at its 100-credit bet (Volume IX, §4.9) T1. No land maker prints the return of a bought feature.

The standards say little. GLI-11 has no slot clause on buying a feature. Its “non-wager purchase” rule does not reach a buy: a non-wager purchase is one that “does not influence the outcome of the game,” such as “an artistic attribute,” so a bought bonus is an ordinary wager under the 75% minimum, which “shall be met for all wagering configurations” (§4.8.1(b)) T1. GLI-11 and GLI-19 mention buying extra game features only for keno, bingo and lottery games, whose “Rules for purchase of additional features” must be explained (GLI-11 §4.6.6(f); GLI-19 §4.4.11(f)) T1, and GLI-19 requires that a player asked for extra funds during a feature “be provided an opportunity not to participate” (§4.8.3) T1. Illinois's route standard names “purchased feature games (e.g. fever mode),” bonus sequences that need extra wagers, but only to say how a terminal disabled mid-sequence must let them finish (§2.11.2) T1; GLI-11 §4.9.3 and GLI-19 §4.8.3 likewise cover features that require extra credits. None of these texts, and no other American text found, uses the term bonus buy.

The thinking behind it. The player buys time, since the dead spins between features are skipped; certainty of the scene the game is built around; and control over when the risk is taken. The maker buys a larger stake per decision, which is the concern of the British standard the Commission applied in 2020, RTS 14A: products “must not actively encourage customers to chase their losses, increase their stake or increase the amount they have decided to gamble” T1. Ontario's Standard 2.16 uses nearly the same words T1. The market around the buy runs on streamers: Nolimit City's own game pages show streamers' “Bonus Buy” clips beside a note that the feature “may however be removed in some regulated markets” T1. One maker argues the other way: Play'n GO's chief executive wrote in a 2024 submission to Finland's government, “I pledged as far back as 2021 that Play'n GO would never make a Bonus Buy game” T1. No controlled study of bonus buys and harm was found.

Ante bets and paid spin modes are the buy's quiet cousin. Instead of buying the feature, the player pays more on every spin to make the feature come more often. Here too the price reveals the feature. If a mode changes nothing but the feature rate, the base game's return b and the feature's f satisfy $b + f = r_0$ without it and $b + mf = s\,r_1$ with it, where the mode costs s base bets and multiplies the feature rate by m. Gates of Olympus' ante raises the bet 25% to double the free spins chance and keeps the return at 96.50%, so on that assumption the free spins carry a quarter of the return, 24.125 points T1; if a natural round is worth what a bought one is, the feature comes about once in 400 spins (this companion's arithmetic, on that assumption). Hacksaw's BonusHunt modes give a second look: at three bets a spin for a bonus five times as likely, RIP City's returns of 96.22% and 96.44% put 50.2% of the return in the bonus games, Le Bandit's 50%, and Chaos Crew 2's five-bet mode at ten times the rate 44.4% T1.

Table 2.2 — Ante bets and paid spin modes

MODE (MAKER)	PRICE	WHAT IT BUYS	SOURCE
Pragmatic Play: Ante Bet (DOUBLE CHANCE TO WIN FEATURE button)	+25% stake; buy disabled while on	Free spins chance doubled; 96.50%	Game help T1
Pragmatic Play: Ante 1, Ante 2, Super Spins (Sweet Bonanza 2500)	2.5×, 12×, 20× and 250× the stake	Free spins “close to 8 times higher” at 2.5×	Game help T1
Greentube: Double / Triple Bonus Chance	+25% or +50% (+20% or +40% on Lucky Lady's Charm)	Free Games chance ×2 or ×3	Maker pages T1
Hacksaw: BonusHunt FeatureSpins	3× or 5× a spin	Bonus 5 or 10 times as likely	Game rules T1
Nolimit City: xBet, Enhanced Bet	Enhanced Bet +10% on Tombstone R.I.P.	96.28% against 96.08%	Game sheet T1
Push Gaming: Ante Bet, Push Bet, Push-Up	+20% (Dino P.D.); 2.5× or 5× for more rows	Dino P.D. 96.38% to 96.50%	Maker pages T1
Big Time Gaming: Power Play	8× the stake (5× on Extra Chilli More Chilli)	Guaranteed minimum Megaways or bonus	Maker pages T1
Wazdan: Chance Level	×2, ×3 or ×5 the bet	Same multiple of bonus chance	Maker pages T1
Aristocrat (land): ante bets and Rumble Mode	5 Dragons ante; Coin Trio Buffalo 300 against 80 credits	More free games; more frequent bonuses	Maker pages; Québec rules T1

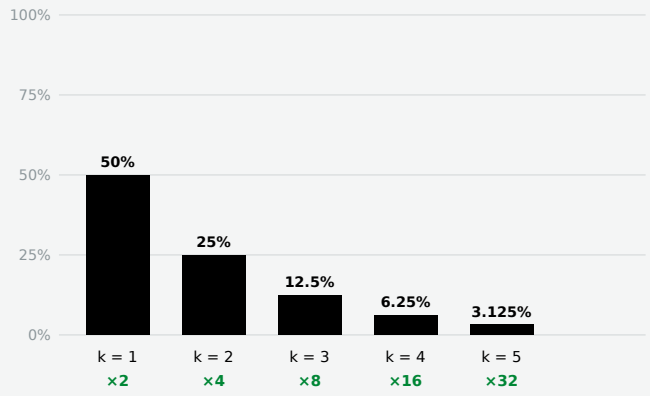
MODE (MAKER)	PRICE	WHAT IT BUYS	SOURCE
Konami (land): Extra Bet	10 to 50 extra credits (Mighty Dynamite; Wheel Boost prints none)	Wheel Boost: progressive trigger chance proportional to the extra bet; Mighty Dynamite: one active drum per extra-bet level	Maker pages T1
IGT (land): Zodiac Wheel on Zodiac Dragon	100 against 60 credits a spin	Locked frames that carry to the next game	Québec rules T1

The bonus-share figures assume that each mode changes nothing but the feature rate, which the makers do not confirm; they are this companion's arithmetic on the makers' printed returns. Pragmatic's help says its ante puts more scatter symbols on the reels, so the base game's return may shift too. Formula: $f = (s\,r_1 - r_0)/(m - 1)$. New South Wales long capped paid ante bets: “There is to be a maximum 30 credit ante bet limit on feature type games” (Prohibited Features Register, 2011, retired September 12, 2026) T1.

2B — Double or Nothing: the Gamble Feature

The rule. GLI-11 sets ten requirements for “games which offer some form of a double-up or gamble feature,” which “may use alternative terminology such as ‘Triple-Up’ or ‘Take-or-Risk’” T1. Entry “shall only occur upon completion of a winning base game”; the player “shall have a choice”; the feature “shall have a theoretical return to the player of one hundred percent (100%)”; the maximum number of gambles or the prize limit must be disclosed; and “Only credits won on the primary game shall be available for wagering on a double-up / gamble feature” (§4.11.1(b)–(f)). GLI-19 sets the same 100% for online games (§4.8.5) T1. The ANZ standard's 2025 text, version 12.1, allows “a maximum of five gamble attempts per single play following a win” (3.5(a)), requires a separate player activation for each attempt (3.5(b)), and adds: “Outcome for each gamble attempts must be displayed for a minimum of 2 seconds. The interval between gamble attempts must not be less than 3 seconds” (3.5(c)); none may follow a progressive win (3.5(e)), the return is 100% (3.5(f)), auto gamble is barred (3.3), and the largest multiplier offered is capped: “The maximum win multiplier is 5x” (5.121) T1.

The math of the 50/50 and the 25/75. Crown Perth's approved rules show the standard form: a card from a 52-card deck, face down; on a correct color call “the player shall win two Credits for each credit bet,” on a suit call “four Credits for each Credit bet”; and no gamble if the player “stands to win more than $10,000” or “has already exercised the gamble option five (5) times” T1. The color call is worth ½ × 2 = 1.000 times the stake and the suit call ¼ × 4 = 1.000, fair to the cent, as fair as the free odds at craps. The 25/75 call is fair only because it pays 4 for 1. Crown's video bingo rules add a third form, Trumps Double Up, in which the player calls either the color, at 2 for 1, or the suit, at 3 for 1 on the right suit and 1 for 1 (the stake back) on a wrong suit of the right color: the suit call is worth ¼ × 3 + ¼ × 1 + ½ × 0 = 1.000 T1. Chained, the chance of still holding the win after k color calls is 2^{-k} and the multiplier is 2^k, so every rung is worth exactly the starting win (Figure 1). Under the $10,000 ceiling a $400 win can be gambled 4 times, to $6,400; a fifth call would stand to win $12,800.



SUIT CALL (1 IN 4, PAYS 4 FOR 1)

Calls	Multiplier	Chance
1	×4	1 in 4
2	×16	1 in 16
3	×64	1 in 64
4	×256	1 in 256
5	×1,024	1 in 1,024

The usual cap is five calls a win (ANZ 3.5(a)), with a dollar ceiling on any one gamble (3.9).

Chance × multiplier = 1 at every step: the ladder is fair, and every rung is worth the starting win.

Figure 1 — The fair ladder. Chance of keeping the win after k calls, and the multiplier reached, for the color call (bars) and the suit call (table). The product is 1 at every step.

What the gamble does to a session. Because the gamble is fair, it moves no money in expectation; it moves the house edge measured per dollar risked. On a spin returning 90%, gambling every win once on color puts 1 + 0.90 = 1.90 bets at risk a spin for the same 0.10-bet loss, an edge of 5.26% on the action; gambling every win five times, since the expected stake at every rung is the starting win, puts 1 + 5 × 0.90 = 5.50 bets at risk, 1.82%. The dollars lost do not change; the volatility does. For Great Britain's online slots stake limit (£5 a game cycle, £2 under 25), the Gambling Commission's guidance does not count a gamble on a prize as a further stake: a player who “wins a prize offer which they can accept (and end the game cycle) or reject (for a chance to win a larger prize)” is “not being asked to stake any additional funds” T1. The ANZ standard keeps gamble amounts off the turnover meter (3.5(h)), and a half gamble that splits 101 credits sends 50 to the gamble and 51 to the credit meter (3.6) T1.

Ladders, and gambles that are not fair. The 100% rule belongs to GLI, the ANZ standard and the jurisdictions that adopt them. Saskatchewan's VLT standard allows a double-up at “one hundred percent (100%) or zero (0%)” T1. Brazil's 2024 online rules require only that a double-or-triple feature give the player a proportional theoretical increase in the win

(Portaria SPA/MF 1.207/2024, item 37, translated) T1. Germany's regulator permits a gamble at an even chance, card or ladder, if the rules explain it and the real probability is stated during play, and it requires a card gamble to tell the player that the colors of the cards already shown have no effect on the next card (GGL guidance, translated) T1. Great Britain's land machines need only return what the screen suggests: “Any Double-up or Gamble options must have a theoretical return to the player of that displayed or suggested by the game graphic” (Category B2 standard, §5.10) T1. A ladder whose rungs do not double is unfair at an even chance: with rungs 2, 3, 5, 8, 12, 20 and a 1-in-2 call at each step, the steps return 75%, 83.3%, 80%, 75%, 83.3%, and a climb from bottom to top 31.25%; a call that wins 45% of the time at 2 for 1 returns 90% a step and 59.05% over five (teaching models). The test on any ladder: the next rung divided by the current one must equal the inverse of the chance.

Table 2.3 — Gambles by maker

MAKER	FORM	LIMIT	SOURCE
Aristocrat (land)	Buffalo Gamble: red/black or suit	Not printed	Maker page T1
Crown Perth rules, WA (several makers)	Gamble and Half Gamble (Arishinko rules); Red or Black and Trumps Double Up (video bingo rules)	Five gambles; $10,000	Crown rules T1
Ainsworth (land)	Color doubles, suit quadruples, on 32 of 38 Ainsworth Québec sheets	Five times; most exclude progressive wins	Québec rules T1
Aruze (land)	Color doubles, suit quadruples, on all 8 Aruze Québec sheets	Five times	Québec rules T1
IGT (land)	Color or suit from a fresh 52-card deck; amount at risk adjustable	Limits printed as placeholders	Québec rules T1
Light & Wonder (land)	Color or suit on seven of eleven Dancing Drums rule sets; red/black “Quitte ou double” on Action Bank	Not after a Grand or Major; Action Bank stops at 16	Québec rules T1
Light & Wonder (online)	Gamble a win of at least 5× (2.5× on Secrets of Memnon) for more or for free spins	Not stated	Maker pages T1
Bluberi (land)	Gamble the Mini (“true odds, 0 RTP”); Atomic Duck free-games gamble, Class III only	Double, then quadruple	Maker pages T1
Greentube / Novomatic (online)	Sizzling Hot deluxe red or black, 50:50; off by default	€500 at a €1 stake (500×)	Demo rules T1
Play'n GO (online)	Color 1 in 2 to double, suit 1 in 4 to quadruple; Book of Dead and others	Five times; 2,500 coins	Hosted help T1
Nolimit City (online)	Double or nothing on a win	Five in a row; a euro cap	Rules library T1
Wazdan (online)	50/50 double; coin toss after a bonus on 12 Coins	Seven times	Maker pages T1
Endorphina (online)	Risk Game: the player's card must beat the dealer's	Ten times	Maker pages T1
Spadegaming (online)	Gamble Game on all wins	Four times on Golden Whale	Maker data T1
Gamomat; Amusnet; Synot (online)	Card gamble and risk ladder (Burn the Sevens); Gamble (40 Super Hot)	Not stated	Maker pages T1
NetEnt (online)	Heads-or-tails double-up on Jackpot 6000	Not stated	Maker page T1
Free-spins and feature gambles	Big Time Gaming, Push Gaming, Red Tiger, Quickspin, Yggdrasil, Habanero	Stake an award, or a win, for a bigger one	Maker pages T1

Some free-spins gambles stake an award of spins or a bonus rather than credits (Big Time Gaming's Extra Chilli, Red Tiger's Mystery Reels Megaways wheel, Quickspin's Sakura Fortune Epic Bloom and Cash Truck 3 Turbo), so the 100% test applies to the value of the award, which no maker prints; others stake credits: Push Gaming's Power Gamble risks a win of more than 2× for a shot at the free games or a larger cash win, and Habanero's Gladiator Royal and the Death Match mode of Yggdrasil's 3 Gladiators vs Caesar stake the credits won in free games. Big Time Gaming states its Extra Chilli ladder as 50/50 on the first step and 60/40 for the player after that, on up to 24 free spins T1. Play'n GO says its gamble “will not impact the overall RTP”; Greentube's rules say the published return “has factored in the average payout percentage of the optional gamble feature” T1.

History and what it offers. The gamble is older than the standards that govern it. Paul Gauselmann applied in 1982 for a German patent on a Risikospiel (risk game) for amusement-with-prize machines (DE 3213400; published 1983, granted 1991) T1. New Zealand's Gaming Machine Feature Standards, gazetted April 8, 2002, already required that “All references to gamble must use words, e.g. ‘gamble’ or ‘double up’ which cannot be misinterpreted to indicate some other feature” T1, and Ainsworth's 2002 patent application called it “a common part of many typical gaming machines” T1. What it offers a player follows from the math: its own payout carries no edge and buys no further spin; it turns a small win into a fair shot at a large one, it can be stopped at any rung, and the half gamble keeps part of the win. The one thing it cannot do is remember. Each card is a fresh draw, and a run of reds says nothing about the next card, which is why Germany's regulator makes the game say so.

2C — Video Poker Double Up

The bet. On a video poker win the player may stake the win on a card-against-card draw. IGT's Game King rules, in the French translation Loto-Québec publishes for its halls, set out the classic form: one 52-card deck, the house card face up and four cards face down; the player touches one; a higher card doubles the win, a lower card loses it, and an equal card returns the stake with no win or loss (IGT, translated) T1. Casino Data Systems' 1996 patent describes the same machine format, “dealing a first card 92 face up and a plurality of cards 94, preferably four, face down” T1, and IGT's patent 7,314,410 the same contest: “If the player's card beats the dealer's card, the player obtains double the award. If the dealer's card wins, the player gets nothing” T1. Game King ends Double Up when the player declines, loses, when the last win exceeds 10,000 credits, or after 10 rounds, and the whole section is marked “if available” T1.

The exact odds. With the player's card drawn from the 51 cards left after the house card, 3 match its rank and the other 48 split evenly above and below it across all house cards, so the player wins 24/51 = 47.06% of the time, loses 47.06% and

ties 5.88% (this companion's arithmetic, aces high; the same split is printed by a practitioner, “Match: 3/51 = .0588235 Win: 24/51 = .4705882 Lose: 24/51 = .4705882” T3). With the tie returning the stake the expected value is 24/51 × 2 + 3/51 × 1 = 1.000: exactly 100%. The tie rule is the whole edge. A machine that took the tie would return 48/51 = 94.12%, a house edge of 5.88%, and one player reports seeing many such machines in the past, “so since that made the bet a 6% house advantage, no surprise that they allowed it” T3. Ten straight wins, the most the 10-round cap allows, multiply a win by 1,024; the chance of winning all ten rounds is $(24/51)^{10}$, about 1 in 1,878, and on any win above 19 credits the 10,000-credit limit ends the run before a tenth round (this companion's arithmetic). Other machines let the operator set the number of doubles, usually four or five (Wizard of Odds) T3.

Table 2.4 — Video poker Double Up: the forms and their odds

FORM	RULE	WIN, LOSE, TIE	RETURN	SOURCE
Beat the Dealer (house card plus four)	Higher doubles; lower loses; equal returns the stake	24/51, 24/51, 3/51	100%	IGT Game King rules; CDS and IGT patents T1
1 Card Hi/Lo	Call low (2–7) or high (9–A); an 8 is a tie	24/52, 24/52, 4/52	100%	IGT rules (Atomic Fever, Dice Fever, Fast Fours) T1
3 Card Hi/Lo	Highest of three wins, lowest loses, middle ties	Win and loss equal; 1/3 each when the three ranks differ	100%	IGT rules T1
Red/Black	A correct color doubles	1/2, 1/2, none	100%	IGT rules T1
Two-card pick (Spielo/GTECH)	One of two cards always wins, one always loses	1/2, 1/2, none	100%	Wizard of Vegas article T3
Tie loses (older machines, one player's report)	Equal rank counts as a loss	24/51, 27/51	94.12%	Las Vegas Advisor reader T3
No Risk Double Up (WMS)	A fee equal to the bet; a miss still pays the base win	Pick aces from five cards	96.5–99.5% (whole game)	Wizard of Odds T3

Odds for the IGT forms are this companion's arithmetic on one 52-card deck, with ties returning the stake as IGT's text says; the 1 Card Hi/Lo form is 24/52 × 2 + 4/52 × 1 = 1 and the 3 Card form $p \times 2 + (1 - 2p) \times 1 = 1$, because a win and a loss are equally likely when a shared top rank and a shared bottom rank are treated alike ($p = ⅓$ when the three ranks differ, about 30.4% overall if any shared rank counts as a tie; IGT's text does not say how equal ranks are treated). IGT's Atomic Fever, Dice Fever and Fast Fours rules leave the caps as placeholders, [x] credits or [y] rounds T1. The No Risk Double Up figure is the whole game's return with the feature and its fee, on the Red Rock pay tables the Wizard of Odds printed. Loto-Québec's IGT All Star Poker II rules (Triple Play, Ultimate X, Spin Poker) and its WMS multi-hand rules carry no Double Up at all T1.

Operators control it. “Most machines, especially those manufactured by IGT, have the double-up option available, but most casinos don't turn it on” (Las Vegas Advisor, 2004), and the money risked in it usually earns no slot-club points T3; Nevada likewise keeps “intermediate winnings” from “‘double up’ games” out of the coin-in meter T1. Some states require approval: Pennsylvania fined the Meadows “$6,900 for improperly enabling a software feature without obtaining Board approval,” part of a $48,900 consent agreement in 2010 T1. The rules that name it set its limits. West Virginia lists “The double-up option in poker games” among options that do not break its $5 single-game limit T1; Maryland provides that “The $500 maximum bet in §A of this regulation does not apply to a double-up option on a winning wager” T1; Illinois requires that “The Double-up or Gamble options shall have a theoretical return to the player of one hundred percent (100%). Furthermore, the Double up feature must not allow the maximum wager limit ($4.00) to be breached” T1; New Zealand's class 4 machines default to five double-ups and a $500 limit T1. New Jersey's rule does not name it but allows a patron to risk an award only “if the award can be increased” T1.

Why players use it, and the advantage case. On its own the Double Up has no edge either way; the Wizard of Odds counts it with craps odds as “the only bets you can make with no house edge” (Volume X, §4.11) T3, though the slot gamble in 2B and a chance wheel at true odds (2D) carry no edge either. Its uses are outside the bet. A player who tips on every jackpot can double jackpots into fewer, larger ones: Bob Dancer's example doubles a $1,250 jackpot twice, “Three out of four times he'd end up with zero,” and one time in four with $5,000, cutting a $5 tip a jackpot to $1.25 T3. A casino promotion paid on jackpots, such as a 28% bonus on all W2Gs, can make the double worth more than its face T3. When players at Dotty's, a Nevada bar chain, used Double Up to manufacture jackpots for a weekly drawing, “these players were ‘abusing’ the program,” and Dotty's removed the feature T3.

History. The earliest dated Double Up found is a Japanese poker medal game: Bonanza's Golden Poker DOUBLE UP, advertised in Game Machine on October 15, 1980, with a big-or-small call on the next card that could be repeated while the player kept winning T2; its operator settings, as MAME records them for the 1981 sets, could make a 7 a loss rather than a tie, so the early versions were not necessarily fair T3. Ainsworth's 1991 Australian patents describe video draw poker machines already letting a player gamble a win on a face-down card, and add a suit call at four times T1. Casino Data Systems' patent for a wild-card poker game, filed October 1, 1996, gives the earliest full description found of the house-card-plus-four format, with a tie replayed rather than returned, which leaves the bet at the same 100% T1; GLI-11 has required 100% since at least its version 1.3 of November 10, 2000, and version 3.0 of 2016 keeps the rule T1.

The Game King case. In 2009 John Kane and Andre Nestor exploited a fault in IGT's Game King that let a player reach back to an earlier winning hand. The Nevada Gaming Control Board's laboratory found that “The ‘Double Up’ feature must be enabled on the machine to perform this exploit,” and IGT's customer notice of July 7, 2009 said, “As a precautionary measure, IGT is recommending that double up be disabled” T1. The magistrate judge described the fault: “Because of a series of programming errors, the machine re-evaluated the original game at the new, higher denomination” T1. In Pennsylvania the grand jury found that the Meadows' IGT Draw Poker machine paid “approximately $ 429,945 on 61 occasions” between June 22 and August 31, 2009 T1. The computer-fraud counts were dropped on the government's own motion on May 6, 2013, and the remaining conspiracy count on November 25, 2013 T1. The record shows a software fault, not a strategy: the Double Up itself stayed a fair card draw.

2D — Wager Savers, Bet Keepers and Lucky Chance Spins

How it works. When the credit meter holds less than the bet, the machine offers to stake the whole balance R on a chance at one game at the full bet B. Win, and the game plays at once at the selected bet; lose, and the balance is gone; decline, and the player can cash out or return to the game. Aristocrat's Fast Cash help is the clearest text on record: “The probability of winning LUCKY CHANCE SPIN is the remaining credit balance, including partial credits,” “divided by the cost of a game at the currently selected bet configuration” (Volume XXV, §4.11) T3. Thunder Empire's Bet Keeper: “The chance of being awarded the game is the ratio of your current credits to the cost of the attempted game” (Volume XIX, §4.10) T3. IGT's patent describes the general method: the player “risks an amount of the player's remaining credit balance for a chance to win an alternative award,” and if it is won the system “enables the player to play one or more plays of the wagering game at the designated wager amount” T1.

Table 2.5 — The chance spin, maker by maker

NAME	MAKER	RULE PRINTED	SOURCE
Wager Saver; Kong Saver, Rise Again, Lucky Jewel Spin (themed)	Light & Wonder (WMS, Bally, SG)	No odds rule in any of 215 Québec rule sheets; a WIN and LOSE wheel	USPTO Reg. 4,790,884 (filed May 11, 2012; renewed November 14, 2025; Light & Wonder, Inc.) T1
Lucky Chance Spin; Lucky Chance	Aristocrat	Balance ÷ cost of a game; Lightning Link, Lightning 10 Year Storm, Dragon Link, Buffalo Link, Phoenix Link, Dollar Storm, Lightning Dollar, Ultimate Fast Cash	Maker pages; Québec rules T1
Bet Keeper	Aristocrat	Credits ÷ cost of the attempted game; Thunder Empire, Fo Mo Mummy	USPTO Reg. 6,671,918 (2022); 4,762,889 (2015, canceled) T1
Credit Playoff; Round Wager Playoff	IGT	A disc whose green sector “represents the probability”; no formula; on about 185 rule sheets	Québec rules T1
Wager Whirl	Konami	Win zone = remaining balance ÷ bet; ten titles in five families	Québec rules; USPTO serial 98957220 (pending) T1
Saver Spin	Incredible Technologies	Balance ÷ cost of a game; on 20 of IT's 44 Québec rule sheets, all printing the ratio	Québec rules T1
Rescue Play	Aruze	A gauge of remaining credits to the cost of a game; X Wheel Chili and Tiki	Québec rules T1
Lucky Spin (“Try your luck”)	Bluberi	No odds printed; 12 base games, from Devil's Lock All In to Rocket Rumble	Québec rules T1
Alternative wager proposition	IGT (patent)	One or several propositions, each with its own chance and award	US 8,801,519 (2014); 9,466,174 (2016) T1

Loto-Québec publishes the manufacturers' rules, in French, for the games in its gaming halls: 1,420 rule sheets, one per title or version; the counts are from a full scan of that index on November 5, 2026, re-checked by a second reader T1. Sauve-mise is the French rendering on Light & Wonder-family, IGT and Aristocrat sheets alike. Bally's “Gamble to Win” is a different feature, offered only when fewer credits remain than the value of one credit. No USPTO mark LUCKY CHANCE SPIN was found. Players use “wager saver” for all of them: at the Atlantis in Reno a player meeting Bet Keeper said, “So, Aristocrat finally decided to do a wager saver, huh?” (Volume XIX) T3.

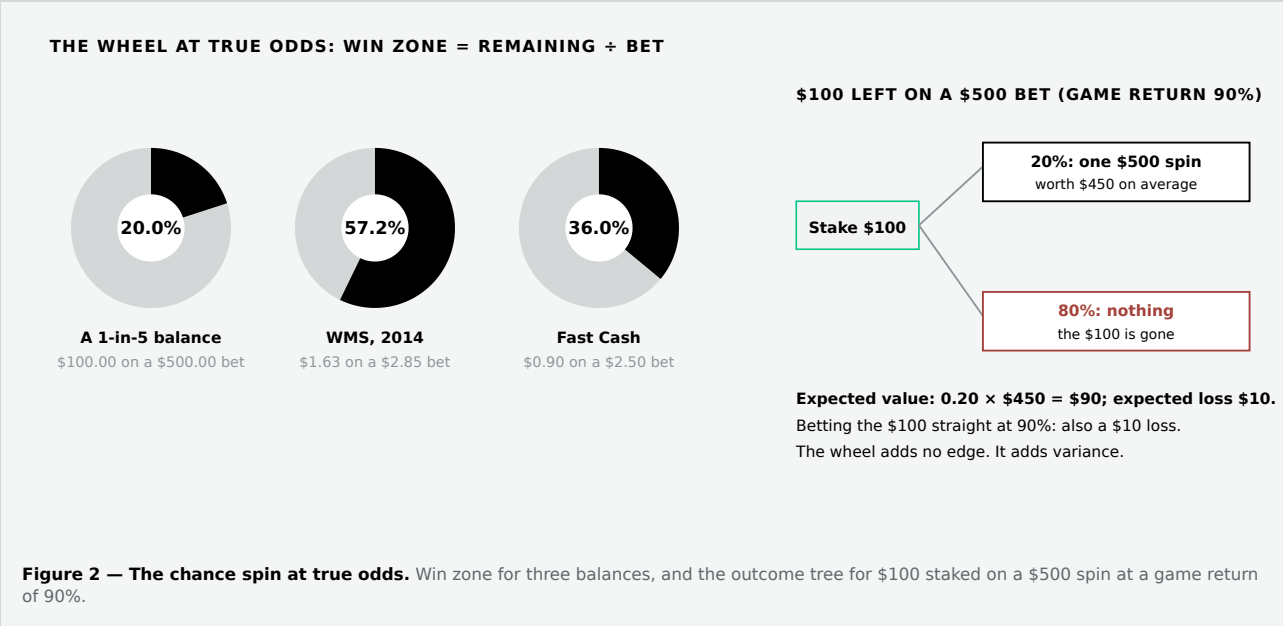


Figure 2 — The chance spin at true odds. Win zone for three balances, and the outcome tree for $100 staked on a $500 spin at a game return of 90%.

The math. The chance is $p = R/B$. With $100 left on a $500 bet, p = 100/500 = 1 in 5, 20% (Figure 2). The wheel by itself is a fair bet: the player wins $B - R$ of value with chance p and loses R with chance $1 - p$, and $p(B - R) - (1 - p)R = pB - R = 0$. What the player wins, though, is a spin, worth the game's return times the bet. At a 90% game the $500 spin is worth $450 on average, the wheel and the spin it buys together are worth 0.20 × $450 = $90, and the expected loss is $10: exactly what betting the $100 straight at 90% would lose. In general the wheel and its spin return $p \times \text{RTP} \times B = \text{RTP} \times R$. The house edge is the game's, on the balance; the change is volatility, since 80% of the time the player gets no spin at all.

Cashing out loses nothing. On the record the chance spin's coin-in is the balance staked, not the bet: Know Your Slots reports the player's card credited with the 50 cents “because that's what you actually put on the line” T3.

Table 2.6 — Chance spins on the record, priced at remaining ÷ bet

CASE	REMAINING	BET	CHANCE	SOURCE
A $500 spin	$100.00	$500.00	20.00%	Worked example, this companion
WMS penny game, 2014	$1.63	$2.85	57.19%	Wizard of Vegas forum T3
A $1 penny bet	$0.83	$1.00	83.00%	Las Vegas Advisor, October 23, 2024 T3
Dragon Link, Yaamava'	$100.00	$125.00	80.00%	Vol. VII §4.6 T3
Lightning 10 Year Storm, $1,000 game	$870.00	$1,000.00	87.00%	Vol. XV §8.4 T3
Fast Cash, Blade of Honor	$0.90	$2.50	36.00%	Vol. XXV §4.11 T3
Wager Whirl, 5¢ Fire Mountain	$2.25	$4.00	56.25% by the Québec rule	Vol. XXVI §10.7 T3

The 2014 forum case is the first priced on record: “I would have a $1.63/$2.85 = 57.2% chance of winning,” and a reply, “Looks to be 0 HE regardless of the amount wagered” T3. The Las Vegas Advisor calls the offer “almost always a negative proposition” T3, which is right of the whole: the wheel is fair and the spin carries the game's edge.

2D.1 Advantage Play and Wager Saver Scumming

There is no edge in a fair wheel, and no discount in a short stake. Some players deliberately insert less than the bet to make the machine offer the wheel, hoping to buy full-bet spins cheaply. At true odds the expected price of one full-bet spin is $R \div (R/B) = B$: the discount on the spins that are won is paid for by the stakes that are lost. The 2014 thread reached the same answer; one reply put it as a 0% edge chance “to make the same negative expectation wager you were making before” T3.

Two narrow uses. The first is a full-bet spin worth more than the bet. A bounded persistent state near its ceiling can make the next spin positive; in the Perceived Progression companion's 240-spin must-hit-by model the spin at count 230 triggers at 1 in 11 (Section 6). If the full-bet spin is worth 1.25 bets, $100 on the $500 wheel is worth 0.20 × 1.25 × $500 = $125, a gain of $25: the wheel lets a short bankroll buy a fair fraction of a positive spin. (Where the return rises with the bet, as American rules allow, the wheel gives a short stake the maximum bet's return, $92 against $88 played at the minimum at 92% and 88%; that is a smaller loss, $8 instead of $12, and still worse than cashing out.) The second is information. The series recorded a practitioner on Lightning 10 Year Storm who makes one minimum bet, then selects each bet level, reads its meters and cancels: “cancel the um wager saver or lucky spin or whatever it's called” (Volume XV, §8.4) T3; the Las Vegas Advisor describes a version with no bet at all on Buffalo Link, an 83-cent voucher on a $1 game and “Return to Game” to “check all the bets for potential advantage plays without sacrificing any spins on lousy numbers” T3.

Check that the wheel is fair. True odds are a design choice. IGT's patent risks 75 credits for awards of 200, 300 and 500 credits at 37.5%, 25% and 12.5%; the first two are 75/200 and 75/300 exactly, but 75/500 is 15%, so the third proposition returns 83.33% T1. Light & Wonder prints no odds rule on any of 215 rule sheets and Bluberi none on any of the 15 rule sheets that carry its try-your-luck spin; IGT says only that the green sector “represents the probability” T1. The drawing is not the rule either: on a filmed Wager Whirl screen the colored arc covered about half the ring while the balance was about 36% of the bet, though Konami's Québec rules state the zone is the balance divided by the bet (Volume XXVI, §10.7) T3 T1. No standard read governs a full-bet chance spin by name: GLI-11's residual-credit removal play, which must “return at least seventy-five percent (75%) to the player over the life of the game” (§4.14.3(e)), and the ANZ standard's (6.53–6.68) cover only balances too small to cash out, and fit a wager saver by analogy; in Nevada the general floor applies, 75% for each wager (Regulation 14.040) T1. The offer is optional, and a balance can always be cashed out; the Las Vegas Advisor says that playing a wager saver someone else left behind “is not allowed” T3.

2E — Other Odd and Emerging Mechanics

The series sorts mechanics that look like progress by one test: does the outcome read the display? The Perceived Progression companion sets out the classes, decoration, elapsed-play record and true persistent state; Table 2.7 applies them. Hold & Spin is state that lives only inside a feature (Volumes VII and XIV). Light & Wonder's online Cash Falls help says all FIREBALLS on a reel are held “for the next 3 wagered spins at the same bet level” (Volume XXII; on land by analogy) T1. Lightning 10 Year Storm's screen reads “MUST BE WON BEFORE 1888” T1; the Phoenix counter's 1,888 is the practitioners' reading (Volumes XIII and XV) T3. On a counter that advances one step a spin with its hit point even up to the ceiling, the next step's chance is 1/(ceiling + 1 − count), 1 in 231 early and 1 in 11 late in the companion's 240-spin model; on symbol counters the chance applies per symbol (Volume XV, §5.4). IGT's Bubble Blast Link carries prize bubbles up the screen between spins, paying “with repeat win options as it moves through the screen” T2. The 2025 ANZ standard now bars “pseudo-metamorphic” art, appearance changed “to indicate a feature is about to trigger, while having no association to when a feature will actually occur” T1, and Germany's jackpot ban bars online slots from accumulating stakes or wins beyond one spin to fund later wins T1; Brazil bars mystery prizes outright (item 38) and allows persistence games (items 41–43) T1.

Table 2.7 — Perceived progression across the odd mechanics

MECHANIC	WHAT THE PLAYER SEES	WHAT THE RULES SAY	CLASS ON THE RECORD
Chance-spin wheel art	A win zone on a wheel	Decoration where the help prints the ratio; a filmed Wager Whirl arc differed from the stated rule	Decoration
Gamble streak	Cards called in a row	Each draw independent; Germany requires the game to say so	Decoration

MECHANIC	WHAT THE PLAYER SEES	WHAT THE RULES SAY	CLASS ON THE RECORD
Gamble ladder rung	Position on the ladder	Read for the next prize within one win's gamble	True state, one sequence
Feature Drop price	Buy price lowered by BTG coins	Stored and read	True persistent state
Zodiac Dragon frames (IGT)	Locked frames on the reels	Kept for the next game at the same bet, after a cash-out too	True persistent state
Golden Drums counter (L&W)	A multiplier from ×2 to ×8	Kept for each denomination and bet option (Vol. IX)	True persistent state, bounded
Cash Raccoons bombs (Bluberi)	Bombs toward the Vault Bonus at 8	Unused bombs carry to the next free games	True persistent state
Guardians collection meter (Konami)	Symbols toward the Pick Game at 10	Kept for each bet option; the buy price reads the count	True persistent state, bounded
Fly! guarantee (Habanero)	Not described by the maker	Feature “guaranteed to trigger every 160 paid spins”	True persistent state, bounded (implied by the guarantee)
Must-hit-by meter	A count with a printed ceiling	“MUST BE WON BEFORE 1888” (Vol. XV)	True persistent state, bounded
Cash Falls fireballs (L&W)	Held fireballs	Held for three spins at the same bet level (online help; land by analogy, Vol. XXII)	True persistent state, three spins
Bubble Blast Link bubbles (IGT)	Prizes moving to catchers	Carried between spins; movement rule unpublished	Carried state, effect not established
Kong It Up! pile (Inspired)	A pile the maker calls pseudo-persistent	Carry-over rules unpublished	Not established

The row for this companion in the series' Perceived Progression table: the chance-spin art and the gamble streak are decoration; Feature Drop's price, the gamble ladder, Zodiac Dragon's frames and Cash Raccoons' bombs are true state; Bubble Blast Link's bubbles are state without a published effect, which a help screen giving their movement rule would settle. Fu Frenzy (Bluberi) is an odd case of a different kind: its Frenzy mode starts every 1.5 to 6 minutes, on the clock rather than on spins.

3 — MANUFACTURER ANALYSIS

Table 3.1 sets the land makers on the record against the four mechanics; Table 3.2 does the same for the online studios. The cabinets are the makers' current lines; the mechanics belong to titles, not cabinets, and no source ties a mechanic to a cabinet beyond the titles named.

Table 3.1 — Land makers and the four mechanics

MAKER	CHANCE SPIN	GAMBLE	FEATURE BUY OR PAID MODE	CURRENT CABINETS
Aristocrat	Lucky Chance Spin; Bet Keeper; ratio printed	Buffalo Gamble; card gambles on its titles under Crown Perth's rules	Instant Feature from 5,000 credits (Coin Trio, Bank Buster, Cashman Kingdom, Buffalo Power Pay, Eternal Legends)	Helix, Helix X, MarsX, Baron, Neptune (Vols. V, XIV)
Light & Wonder	Wager Saver and themed names; no ratio	Color or suit; Action Bank “Quitte ou double”	Buy Pass on Golden Drums; Buy-A-Bonus on Wu Jin Pen	Cosmic, Kascada, Mural, Horizon (Vols. IV, IX)
IGT	Credit Playoff; Round Wager Playoff	Color or suit; video poker Double Up	Buy a Bonus on Jin Ling Link (Emperor's Throne, Ruby Throne); a buy-a-bonus option on Egyptian Link Wealthy Wilds; Extra Draw Keno at 1× the bet	Not tied to a mechanic on the record
Konami	Wager Whirl, ratio printed; a cash-out residual mini-game	Not found	Direct buy of the symbols still needed for the Pick Game (Guardians of Giza, Guardians of the Aztec); Extra Bet 10 to 50 credits	Solstice 27, Solstice 49C, DIMENSION 49J
Ainsworth	Not found in 38 Québec documents	Color or suit, five times	Not found	A-Star Raptor A849, A832, A865; RAPTOR 32
Bluberi	Lucky Spin, “Try your luck”	Gamble the Mini; Atomic Duck free-games gamble	Not found	Beacon+, Beacon Elite, Beacon Jumbo, Beacon+ Lighthouse, Novus b49
AGS	Not found	Not found	Instant Bonus from 2,400 credits (Fu Zhu Bao Bao, Triple Oink, Piñata Pays Grande)	Spectra SL49+ (Vol. I)
Incredible Technologies	Saver Spin on 20 of its 44 Québec sheets, all printing the ratio	Not found	Not found	Not tied to a mechanic on the record
Aruze	Rescue Play, ratio printed (X Wheel Chili, Tiki)	Color doubles, suit quadruples, up to five times, on all 8 Québec sheets	Not found	Not tied to a mechanic on the record
Everi	Not found	Not found	Bet levels buy reels (Cash Machine); Everi Bet buttons raise the return (Fabled Four, Secrets of the Jaguar)	Not tied to a mechanic on the record

Sources: makers' pages and the Québec-hosted rules (T1), USPTO TSDR (T1), the series volumes named; Egyptian Link Wealthy Wilds from an Indian Gaming new-games listing (T2). Aristocrat's ratio rule appears in its Québec rules for Lightning Link, Lightning 10 Year Storm, Dragon Link, Buffalo Link, Phoenix Link, Dollar Storm, Lightning Dollar and Ultimate Fast Cash titles; Konami's and Aruze's in theirs; Incredible Technologies' on all 20 of its sheets that carry Saver Spin (of 44).

Aristocrat has the widest record. The Lucky Chance Spin is its Lightning Link family's one side bet, listed on Bengal Treasures as an “Insufficient credits wager” and on Moon Race and Sahara Gold as a way to “wager away those annoying insufficient credits in this exciting cash out option” T1; its Québec rules print the ratio on Lightning Link (Moon Race, Sahara Gold, Best Bet), Lightning 10 Year Storm, Dragon Link, Buffalo Link, Phoenix Link, Dollar Storm, Lightning Dollar and Ultimate Fast Cash titles T1. Bet Keeper, on Thunder Empire and Fo Mo Mummy, is a mark in two USPTO records, the live one registered March 15, 2022, both held by Aristocrat Technologies Australia T1; Aristocrat's patent 11,631,300 B2 describes the same draw, its abstract a “random trial having a probability of success proportional to a ratio of the residual credit balance to the desired wager amount” (Volume XIX, §4.10) T1. Its Instant Feature, which Aristocrat called the first buy on any of its products in November 2023, is the largest family of land buys on record, and its buy-feature patent family, with a 1999 priority (US 8,038,524, filed in the United States in 2008), shows the idea is old T1. Its gamble is on Buffalo Gamble's EMEA build and on Australian floors, where an Aussie Boomer in Brisbane shows “Gamble not offered if gamble win will exceed $10000.00” (Volume XXIV, §4.9) T3.

Light & Wonder owns the generic name. WMS Gaming filed WAGER SAVER on May 11, 2012 for “Computer software and firmware for games of chance” on “video based slot machines, reel based slot machines, and video lottery terminals,” claimed first use on October 2, 2012, and the mark passed through Bally Gaming and SG Gaming to Light & Wonder, Inc., which renewed it on November 14, 2025 T1. A 2014 forum report places it on “a new WMS penny machine” T3. Its Wager Saver text, on 215 Québec rule sheets under five corporate names, never prints the odds T1. Its land Buy Pass (Golden Drums) and online Buy Pass (Ultimate Fire Link, Huff N' Puff titles) are the series' best-documented buys, and its online catalog adds Premium Play at 1.5 times the stake and gambles on wins of at least 5 times the stake (2.5 times on Secrets of Memnon) T1.

Konami named its own: Wager Whirl, offered “IF THE REMAINING CASH AMOUNT IS LESS THAN THE AMOUNT REQUIRED TO PLAY A PRIMARY GAME AT THE SELECTED BET” (Volume XXVI, §10.7) T3, on ten Québec titles in five families (Bull Blitz Rampage, Diggin' Bros., Dragon Firecracker, Red Fortune Rail, Unwooly Super Riches), with the true-odds rule printed T1. The application is intent-to-use, allowed October 7, 2025, with a second extension to file a statement of use granted October 8, 2026 T1. No Konami gamble was found. Its one buy is on two Guardians games, Guardians of Giza and Guardians of the Aztec: with 7 or more of the 10 collected symbols, a player can buy the rest at a price set by the bet and the count, and the count is kept for each bet option T1. Its Extra Bet raises the progressive trigger chance in proportion to the extra bet on Wheel Boost and sets the number of active drums on Mighty Dynamite T1.

Ainsworth prints the card gamble and nothing else of the three: 32 of its 38 Québec rule sheets carry a color-or-suit gamble capped at five times, and none has a chance spin or a buy T1. Novomatic agreed to buy control in February 2016 and completed it in January 2018 with 53.58% T1; it held 52.9% when it agreed in April 2025 to buy the rest at A$1.00 a share, and its takeover offer closed on February 6, 2026 with Novomatic holding 66.84% of the voting power, short of the 75% at which it planned to delist Ainsworth; Ainsworth ended the agreement on February 11 and remains listed T1. The founder's son Kjerulf Ainsworth held 10.56% by September 2026 after two partial offers at A$1.30 T1. Ainsworth licensed Aristocrat's Australian Hold & Spin patents for A$8.5 million in August 2026 (Volume XIV) T1.

Bluberi, founded in 1994, moved into Class II gaming in 2006 and Class III in 2012 and reports more than 12,000 units in North America led by Devil's Lock (2022) T1. The Nevada Gaming Commission approved it as manufacturer and distributor on September 25, 2025; Bluberi announced the license on January 8, 2026 and placed its first Southern Nevada games in late December 2025 T1. Its chance spin is Lucky Spin, a “Try your luck” button with no odds printed T1. Its gambles are bonus gambles: on Fu Frenzy, “Players will have a true odds, 0 RTP chance at doubling their Mini,” and on Atomic Duck a Class III player may risk the free-games award for 50% more, up to 75 T1. Devil's Lock's “lock” is a free-games lock, not persistent state; Cash Raccoons' unused bombs do carry to the next free games T1.

Table 3.2 — Online studios and the four mechanics

STUDIO	FEATURE BUY	ANTE OR PAID MODE	GAMBLE	ODD DETAIL
Pragmatic Play	Buy Free Spins 100×; Super tiers 500× and 1,000×	Ante +25%; Sweet Bonanza 2500 modes	Not found	Buy and base returns equal or within 0.1 point
Hacksaw Gaming	Tiered buys 80× to 500×	BonusHunt 3× or 5×; FeatureSpins 20× to 200×	Bonus-entry gamble on Le Digger (gamble or 10 free spins); odds not printed	Buy returns printed per tier
Nolimit City	Bonus Buy 60× to 6,666×; Lucky Draw	xBet, Enhanced Bet, Boosters to 4,000×	A five-in-a-row double in the shared rules library, no title named; gamble into bonus in a footnote on two game pages	xRIP pays nothing below the bet
Push Gaming	Bonus Buy (10 Swords 50×)	Ante +20%; Push Bet; Push-Up	Gamble Wheel for free spins	Dino P.D. ante 96.50%
Big Time Gaming	Feature Drop; buys 35× to 300×	Power Play 8×	Free-spins gamble; VIP Gamble	Win Exchange: swap a win for a spins chance
Greentube (Novomatic)	Buy Bonus 50× to 200×; menu buys	Ante +25%/+50%; Pro Play 10×	Red or black 50:50; €500 cap at a €1 stake	Book of Ra deluxe buy 95.00% against 93.70%
Play'n GO	Not offered, by policy	Not found	Color or suit, five times	“would never make a Bonus Buy game”
NetEnt; Red Tiger	Feature Buy 20× to 500×; Elevate menu	XXXtreme Spins 10× and 95×	Heads-or-tails (Jackpot 6000); free-spins wheel	Supermeter on Mega Joker
Quickspin; Playson; Evoplay	Buys 28× to 500× with stated tiers	Extra Bet 2×; Double Chance	Free-spins gamble (Quickspin)	Sakura Fortune 2 buy return rises with price
Wazdan; BGaming; Endorphina	Buy Feature at low bets; Buy Bonus 100×	Chance Level ×2 to ×5; Chance x2	Seven or ten times; card gamble	BGaming Safe Landing 50×

STUDIO	FEATURE BUY	ANTE OR PAID MODE	GAMBLE	ODD DETAIL
Asia and Latin America studios	PG Soft, Spadegaming, Habanero, 3 Oaks, R. Franco buys	Sure Win Bet; Super Bet; Ante	Spadegaming four times; R. Franco Doble o nada	Habanero guarantees a feature by spin count

All from the studios' own pages, hosted rules or demonstration clients (T1), except Wazdan's limit of its buy to lower bets, reported by Gaming Intelligence on June 4, 2020 (T2). No online studio showed a short-balance chance spin; online balances are cash, and an online player can simply lower the bet.

4 — GEOGRAPHIC AND PREMISE DISTRIBUTION

Table 4.1 — The mechanics by market

MARKET	FEATURE BUY	GAMBLE AND DOUBLE-UP	CHANCE SPIN AND AUTOPLAY
United States, land (Nevada and GLI states)	No rule names it; Aristocrat, AGS, L&W and IGT land buys	GLI-11 §4.11 at 100%; video poker Double Up; slot gambles in Québec builds	Common: Aristocrat, L&W, IGT, Konami and smaller makers; none found for Ainsworth, AGS or Everi
United States, route and VLT	No rule names a buy; Illinois names “purchased feature games” only to say how they finish if a terminal is disabled; Montana bonuses only after a defined outcome	Illinois 100% inside $4; West Virginia poker double-up; Maryland exempts double-up from $500	Illinois short-balance rule for features
United States, online (seven live; Maine authorized)	No rule names it; Bonus Buy lobbies at FanDuel Michigan and DraftKings New Jersey	GLI-19 §4.8.5 at 100% (adopted in Michigan); Delaware and Pennsylvania name it	Not seen; autoplay barred unless authorized
Ontario	No rule names it; buy titles in licensed lobbies	Not named	Autoplay barred (Standard 2.16)
Canada, Québec halls and VLTs; Saskatchewan	Aristocrat, AGS, IGT, Konami and L&W buys in the halls' rules; bar VLTs $2.50 a bet	Color or suit in the halls; Saskatchewan 100% or 0%	Seven makers' chance spins in the halls
Great Britain, online	Removed by the six operators contacted (UKGC notice citing RTS 3A/14A, January 2020); £5 a game cycle, £2 under 25	A gamble on a prize is not a further stake	Not seen; autoplay barred
Great Britain, land machines	Extra credits in a game cycle must stay within the category's maximum stake (5.12)	Return “displayed or suggested by the game graphic”	Not on the record read
Germany	No clause names it; €1 a game, €3 or €5 with approval since July 1, 2026	Permitted at 50%, card or ladder, with disclosure	Not on the record read
Austria, slot halls and single sites (not casinos)	Not on the record read	Companion games within the €10 or €1 per-game maximum	Not on the record read
Netherlands	A pre-bought bonus that must be played is forbidden automatic play	Not on the record read	Autoplay barred (Regeling art. 3.8)
Sweden; Denmark; Spain	No clause names it	Sweden lists double as a player choice; otherwise not named	Three-second games; Spain caps autoplay at 100
Australia	No clause names it; Tasmania bars extra credits to reach a feature	Five attempts, 100%, 5× cap, no auto gamble	Residual-credit play only
New Zealand	Class 4: $2.50 a play; online regulations name no buy	Every win in a play, gamble included, capped at $500	Residual-credit play only
Brazil (online)	No slot clause names it; draw games must explain purchases	Proportional theoretical increase (item 37)	Not on the record read

Sources are given in Sections 4.1 to 4.5. “Not on the record read” means the regulator's texts read were silent; it is not a finding that the feature is absent or barred.

4.1 Great Britain and Europe

Great Britain did not pass a bonus-buy ban; the six operators its regulator contacted under existing standards removed their buy-ins. On January 17, 2020 the Commission reported that “six operators were offering products providing ‘feature buy-in’ facilities on slots style games,” one game “charging more than £3,000 to enter the bonus feature,” reminded operators of RTS 3A and 14A, and recorded that “All six operators contacted regarding use of the ‘feature buy in’ element have now removed it from their sites” T1. The notice records no formal finding. The October 31, 2021 rules, announced February 2, 2021, barred autoplay, spins faster than 2.5 seconds, features that speed up play or give the illusion of control, and celebration of a return at or below the stake, and required a display of net position T1. The stake cap of April 9 and May 21, 2025 would bind a buy on its own: at 100 times the bet, a £5 game cycle allows a base stake of £0.05, and a £2 cycle £0.02 (this companion's arithmetic). Makers ship separate British builds; Light & Wonder's Buy Pass is “(EU)” on More Puff (Volume IV). On land machines, a player may stake additional credits in a game cycle only if “the total stake wagered within the game does not exceed the relevant statutory maximum” (Category B2 standard, 5.12) T1.

Germany regulates the gamble by name and the buy not at all. The 2021 treaty requires a game to last “durchschnittlich mindestens fünf Sekunden” (at least five seconds on average) and sets the stake: “Der Einsatz darf einen Euro je Spiel nicht übersteigen” (the stake may not exceed one euro a game) T1. Since July 1, 2026 the regulator lets approved operators go to €3 a game for players aged 21 and over and €5 after a 90-day qualifying period, until December 31, 2027 T1. A 100-times buy therefore fits only at a base stake of €0.01, €0.03 or €0.05 (this companion's arithmetic). The regulator's guidance permits optional gambles at a 50% chance, card or ladder, counted in the game's return T1. Germany's land machines carry their own caps, a stake of at most €0.20 and a win of at most €2 at the five-second

minimum game, and net losses of at most €60 an hour (SpielV § 13) T1; Austria lets a companion game raise neither stake nor win above the per-game maximum, €10 and €10,000 in slot halls (GSpG § 5) T1.

The Netherlands treats a pre-bought bonus as automatic play. The regulator's own questions and answers ask whether bonus buys are allowed and answer that buying games in advance that must then be played is a form of automatic play, contrary to Article 3.8 of the Regeling kansspelen op afstand (Kansspelautoriteit, translated) T1; its June 26, 2025 warning to Unibet's Dutch operator applied that view to a BonusBuy switched on in error for two hours T1. A ban on every buy is not shown. Sweden's technical rules set a three-second minimum game, and their general advice lists buy and double among a player's voluntary choices without naming a feature buy; Denmark's require three seconds between settlements and allow autoplay; Spain's 2014 order caps autoplay at 100 games and sets three-second games; none names a buy T1. France allows no online slots, and Ireland's 2024 Act names none of the three mechanics T1.

4.2 Australia and New Zealand

Version 12.1 of the national standard (May 2025) applies in New South Wales from March 12, 2026 and in Victoria from August 1, 2026, and Tasmania's current standards (October 2, 2026) adopt it T1. It names no feature buy; its only purchase clause is the keno rule, “Rules for the purchase of additional features of the game, if any, are to be explained,” and its new 4.20 reads “There shall be no qualifying bet requirement to win a top prize or a jackpot prize or game feature” T1. Tasmania adds the rule closest to a ban: “Games must not permit the betting of additional credits during game play to access an additional feature, or multiple game features within a feature” T1. The wager ceilings cap a buy's price rather than barring it: $10 in New South Wales clubs and hotels and in the ACT, $5 in Victorian, South Australian, Queensland, Northern Territory and Tasmanian clubs and hotels, $10 on Crown Perth's main floor, so a 100-times buy would fit only at 5 or 10 cents (this companion's arithmetic) T1. No Australian land buy is on the record read. Online, the Interactive Gambling Act 2001 makes it, in the Department of Infrastructure's summary, an offense to “provide a prohibited interactive gambling service to customers in Australia,” and the prohibited services include “pokies or slot machines” T1. Queensland bars gamble on progressive prizes and auto gamble T1; the 2025 standard now bars auto gamble everywhere it is adopted (3.3).

New Zealand's class 4 venues cap a single play at $2.50 and every win in a play at $500: “Maximum accumulated win per game play, including all wins from primary/feature/bonus games/stand-alone progressive prize and gamble option, is $500” T1. Its class 4 minimum standard of 2026 adopts version 12.1, effective September 30, 2026 and applying from February 8, 2027 T1. New Zealand's online casino regulations of 2026 bar autoplay and any design that encourages “excessive, continuous, or impulsive gambling,” and name no buy T1.

4.3 The United States and Canada

Nevada's rules name neither buys nor wager savers; the general floor of 75% for each wager reaches both (Volume XXVI, §10.7) T1. The state rules for online play name the gamble and autoplay, not the buy. Michigan adopts GLI-19 v3.0 by reference, so its 100% gamble rule binds there T1; New Jersey allows no autoplay “unless authorized by the Division,” Pennsylvania none unless authorized and then at most 50 spins, and Michigan, West Virginia and Connecticut likewise T1. Seven states run live online casinos (New Jersey, Delaware, Pennsylvania, West Virginia, Michigan, Connecticut and Rhode Island, live since March 1, 2024); Maine's tribal online casino law became law without the Governor's signature on January 11, 2026, and its rules were still being proposed in October 2026 T1. The buy is sold openly: FanDuel's Michigan lobby has a Bonus Buy category of about 168 titles (“Jump right to the bonus round in these slot games with Bonus Buy features”), DraftKings' New Jersey site a bonus-buy category, Light & Wonder's Pennsylvania help index prices its Buy Pass (Volume XXII, §5.5), and FanDuel's Ontario lobby buy versions of its titles T1. Ontario's standards name no buy but bar slot autoplay, turbo and slam stop and set 2.5-second games; the regulator fined a supplier $70,000 on August 20, 2026 for autoplay T1.

The slot-only premises are where the rules are most specific. Illinois's video gaming terminals must offer any double-up at 100% inside the $4 bet, must keep the $4 cap against “double up, double down, splits, extra credits wagered during bonus,” and, if disabled during purchased feature games, must finish the current game and hold the rest for reactivation T1; a 100-times buy, if one were offered, would fit only at a 4-cent base (this companion's arithmetic). Montana allows a bonus only after “a defined outcome” and “at no risk to the player” T1. Class II bingo machines must show fractional credits below one credit (25 CFR 547.9) T1. In Canada, Québec's bar VLTs cap a bet at $2.50 T1, while its gaming halls carry seven makers' chance spins, the Ainsworth, Aruze, IGT and Light & Wonder gambles, and Aristocrat, AGS, IGT, Konami and Light & Wonder buys in their published rules T1.

4.4 Premises

Table 4.2 — The mechanics by premise

PREMISE	WHAT IS FOUND THERE	SOURCE
Full-scale casinos	Every mechanic: chance spins from Aristocrat, Light & Wonder, IGT, Konami and others, land buys from Aristocrat, AGS, IGT, Konami and L&W, video poker Double Up where enabled, card gambles in Australia and Québec	Sections 2–3 T1
Slot-only halls, clubs, hotels and routes	Gambles under lower wager ceilings in Australia and New Zealand; Québec's halls with the widest published rule set; Illinois route terminals with a 100% double-up inside $4; West Virginia bars with the poker double-up	ANZ; Illinois; WV; Québec T1
Online	The home of the buy and the ante, sold in Michigan, New Jersey, Pennsylvania, Ontario and Europe; removed in Britain; Australia closed; no chance spin	Makers; operators; regulators T1
Social and sweepstakes apps	Play-money (social) and prize-redeemable (sweepstakes) versions of the same games; the Lightning Link app booked US$343.2 million in fiscal 2025 (Volume XIV); rules on buys not read	Vol. XIV §9.5 T1

4.5 Expanding Markets

Brazil's Law 14,790 of December 29, 2023 set up a licensed market for fixed-odds betting and online games, which opened on January 1, 2025 T2; its technical ordinance 1.207 of July 29, 2024 regulates the double-or-triple feature, bars mystery prizes, sets an 85% minimum return and names purchases only for draw games T1. In the United Arab Emirates the gaming regulator established in 2023 had issued supplier licenses to 14 vendors by July 2025, among them Konami, Light & Wonder, Novomatic, IGT and Aristocrat, ahead of Wynn Al Marjan Island's planned 2027 opening T2; its technical standards were not read. Brazil, open since January 1, 2025, and Ontario, open since April 4, 2022, are the newest large markets whose rules this companion read T1.

5 — FIELD METHOD AND THE FIGURES THIS COMPANION CORRECTS

1. **On a chance spin, read the rule before the wheel.** “Remaining credit balance … divided by the cost of a game” or “the ratio of your current credits to the cost of the attempted game” means true odds; a wheel with no printed rule is art.
2. **Price it as the game, not as a bargain.** At true odds the wheel and its spin return the game's return on the balance. Cashing out returns all of it.
3. **Use it only on a positive spin, or for information.** If the full-bet spin is worth more than the bet, the wheel buys a fair fraction of it; on games with per-bet meters, a small balance and the cancel button read every level.
4. **On a gamble or Double Up, check the payout against the chance.** Color at 2 for 1, suit at 4 for 1, card against card with ties returned. A ladder whose next rung is less than the current rung times the inverse of the chance has an edge.
5. **On a buy, multiply.** Price × (1 − return) is the loss per purchase; price × return is the feature's average value; price ÷ bet is the number of one-bet spins of equal action.

Table 5.1 — Figures and claims in circulation, and what the record shows

CLAIM	WHAT THE RECORD SHOWS	SOURCE
“The UK banned bonus buys in 2019,” or “on October 31, 2021”	The Commission's notice of January 17, 2020 reminded operators of RTS 3A and 14A after finding feature buy-ins on six operators' sites, all removed. The October 31, 2021 rules covered autoplay, speed, slam stops, loss celebration and net position. RTS 14 names no feature buy.	UKGC T1
“The Netherlands banned bonus buys”	The regulator treats a pre-bought bonus that must be played as forbidden automatic play (Article 3.8); a ban on every buy is not shown.	Ksa T1
“Australia has strict limits on feature buys”	No clause of the national standard names one. Tasmania bars extra credits during play to reach a feature; ceilings of $5 or $10 in clubs and hotels cap a buy's price; online pokies are prohibited.	GMNS 12.1; Tasmania; IGA T1
“The 25/75 suit pick” as a worse gamble	At 4 for 1 it returns exactly 100%; it is as fair as color, with more volatility.	GLI-11; ANZ T1
GLI-11's purchase clause as a rule on buys	GLI-11's non-wager purchase “does not influence the outcome of the game”; a buy is an ordinary wager.	GLI-11 T1
“Wager Saver,” “Bet Keeper” and “Lucky Chance” as one maker's names	Wager Saver is Light & Wonder's; Lucky Chance Spin and Bet Keeper are Aristocrat's; IGT's is Credit Playoff, Konami's Wager Whirl, Bluberi's Lucky Spin.	USPTO; Québec rules T1
“The wheel is always at true odds”	Aristocrat, Konami, Aruze and Incredible Technologies print the ratio; Light & Wonder and Bluberi print nothing; IGT's patent prices one proposition at 12.5% where true odds are 15%.	Québec rules; patent T1
Sweet Bonanza's 100× buy as affiliate content	The maker's game help states it; the maker's public page does not.	Pragmatic Play T1
“Novomatic's gamble has no limit”	Greentube's online Sizzling Hot deluxe caps the amount, €500 at a €1 stake; its rules template sets a number of gambles per build.	Greentube T1
Novomatic control of Ainsworth “since 2016”	Agreed in 2016, completed January 2018; the 2025 takeover offer lapsed February 6, 2026 at 66.84%.	Bidder's statement; ASX T1
Bluberi licensed in Nevada “in January 2026”	Approved September 25, 2025; announced January 8, 2026.	Nevada Gaming Commission T1
Huff N' More Puff's buy at 95×	Help text reproduced by a review site gives 95× at 96.00%, the likelier figure (Volume IV); Hard Rock Bet's US page says almost 50× without naming a build; the maker's page lists a Buy Pass (EU) with no price.	Vol. IV T3; Hard Rock Bet T2

> **The rule in one paragraph.** Under GLI and ANZ rules a gamble is a fair coin with a cap and a video poker Double Up a fair card draw; a chance spin at true odds is a fair wheel attached to the game's spin; a bonus buy is one large wager at its own stated return, usually near the base game's. None of them changes the expected loss per base-game bet unless the buy's return differs; they change how fast and how violently money is won and lost. The only openings for a player are a spin worth more than its price, which the wheel lets a short stack buy at a fair fraction, and the information a canceled offer reveals. What is still open: an Ainsworth chance spin or buy, a Bluberi buy, Novomatic's land gamble text, Light & Wonder's and Bluberi's chance-spin odds, Feature Drop's price schedule, the return of any land buy, and the movement rule of Bubble Blast Link's bubbles.

LOST CABIN CONSULTING

GAMING MATHEMATICS & PRODUCT INTELLIGENCE

About the Slot Intelligence Series

Casino game mathematics is treated as unknowable by almost everyone who writes about it. Most of it is. A surprising amount is not — it sits in manufacturer specification sheets, published game rules, regulatory filings, court records and licensed-operator disclosures that nobody bothers to read side by side. The series reads them side by side, one game family at a time, twenty-six volumes to date. Every source is graded by tier, every derived figure shows its arithmetic, every bad number in circulation is named, and where a figure is not public the volume says so. This companion prices the side propositions a modern slot and video poker machine can offer: the bought bonus, the gamble, the Double Up and the chance spin.

About the Author

Robert Adam Clifford is an oil and gas consultant, an international arms dealer at Pathfinder Defense LLC, and a part-time passionate gambler. He writes and publishes through Lost Cabin Consulting LLC, where he produces mathematically rigorous, independently verified research on casino games, slot machine mathematics, table game theory, sports and pari-mutuel wagering, and prediction markets.

Complete catalog: amazon.com/author/raclifford

Also From This Author

THE COMPLETE FIELD MANUAL COLLECTION

Casino Game Theory & Advantage Play

Robert Adam Clifford · ISBN 9798193576495

Seven field manuals in one volume, built to the same standard as this companion: mathematically rigorous, independently verified, and written for people who actually sit down at the game. FM 21-SK covers slots and video keno: PAR-sheet structure, volatility and jurisdictional limits.

TITLE	FORMAT · ISBN
The Complete Blackjack Strategist	7×10 · ISBN 9798174942851
The Complete Baccarat Strategist	6×9 · ISBN 9798174123878
The Complete Craps Strategist	7×10 · ISBN 9798175682589
The Complete Hold'em Strategist	6×9 · ISBN 9798173339614
The Complete Roulette Strategist	See amazon.com/author/raclifford
The Expert at the Card Table	See amazon.com/author/raclifford
Slot Intelligence Series	Twenty-six volumes to date, one slot family each, with the Payline Layout Key and Perceived Progression
Strategy cards	Printed strategy cards, in single, Letter and Tabloid sheets
Oilfield titles	The author's oil and gas books, at amazon.com/author/raclifford

Free companion simulators for blackjack, baccarat, Ultimate Texas Hold'em, video poker, craps and roulette, built on the math of the field manuals and of this series, on request: **aclifford@lostcabinconsultingllc.com**

Series	Slot Intelligence Series — Companion
Document	Odd Mechanics · Bonus Buys, Gambles and Wager Savers
Author	Robert Adam Clifford
Publisher	Lost Cabin Consulting LLC
Contact	aclifford@lostcabinconsultingllc.com
Catalog	amazon.com/author/raclifford
Edition	First Edition, First Printing · November 2026
Format	Letter, duplex (print both sides). Mirrored 32 mm binding gutter, 14 mm outer trim — the gutter alternates to the inside edge so a 3-hole punch clears text on either face. House standard across all Lost Cabin titles.

This companion is an independent analyst compilation for research and reference. It is not published, endorsed or reviewed by any maker, operator, laboratory, regulator or publication it cites. All game names and trademarks — WAGER SAVER, LUCKY CHANCE SPIN, BET KEEPER, CREDIT PLAYOFF, WAGER WHIRL, SAVER SPIN, RESCUE PLAY, LUCKY SPIN, INSTANT FEATURE, INSTANT BONUS, BUY PASS, FEATURE DROP, MEGAWAYS, GAME KING and the names of the games mentioned — are the property of their respective owners. The teaching models in Section 2 and the stake-cap arithmetic in Section 4 are illustrations, not any maker's game; no figure describes the setting of any particular machine. The help screen of the machine in front of you governs that machine, and figures should be checked against it and against the regulator's current rules before use in any operational, contractual or investment decision.

© 2026 Lost Cabin Consulting LLC. This companion may be reproduced and circulated in full for non-commercial reference use.