



SLOTS DESIGN REPORT

Competitive Research and Data Insights for Slots Designers

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APRIL

2020

NEW INNOVATIONS



CASINO > CONTENT > SOCIAL

EXPANDING REELS PROGRESSION

The King of Swing in *House of Fun*

MECHANIC TEARDOWN

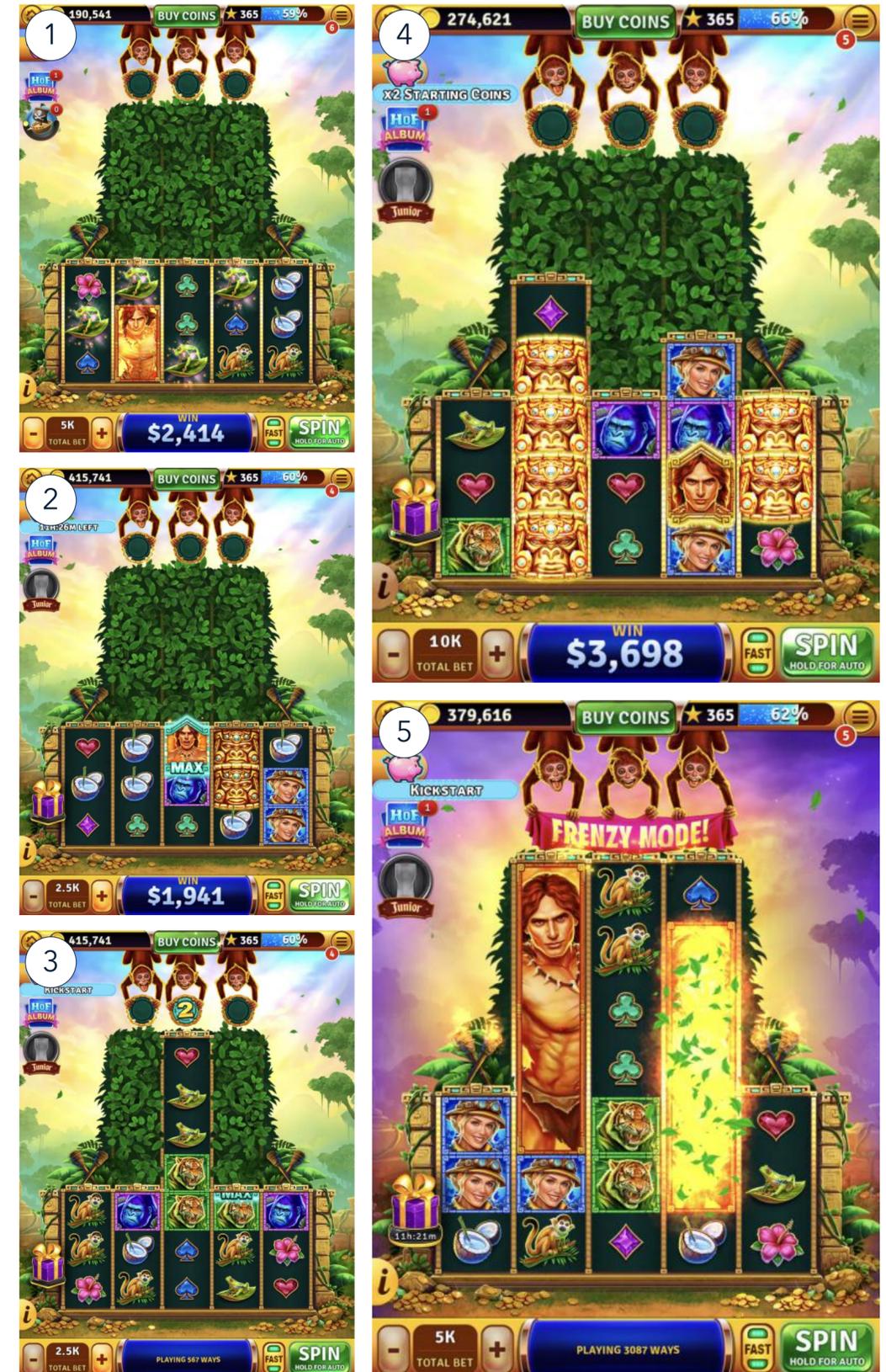
Three types of wild symbols expand within reels or expand the reels themselves. Free spins and a randomly triggered Frenzy Mode fully expand reels.

Feature Details

- Normal Tarzan wilds on reels 2-4 randomly expand within reels (1).
- Gold Tarzan wilds on reels 2-4 expand the reel they land on one position.
- Max Tarzan wilds fully expand the reel they land on (2).
- Partially expanded reels persist until fully expanded.
- Fully expanded reels remain for three spins (video).
 - Monkeys show the number of spins left for expanded reels (3).
 - If another reel fully expands, all counters reset to three.
- Landing six or more monkey statues triggers seven free spins (4).
 - Each additional triggering monkey statue awards more free spins, up to 100.
 - During free spins, reels 2-4 are fully expanded.
 - Gold and max Tarzan wilds do not appear.
 - Free spins can be retriggered during the feature.
- Base game spins can trigger Frenzy Mode—a random duration of fully expanded reels (5 and video).
 - Bets are locked during Frenzy Mode.

Additional Information

- See more images and videos in the [The King of Swing](#) Library.



EXPERT INSIGHTS

Display empty expansion spaces to create anticipation, motivate players, and increase pleasure.

Insight Details

- **Build anticipation by showing empty expansion areas.** [The King of Swing](#) draws attention to the space where reels will expand but covers it up with overgrown vines (1). Extensive research has demonstrated that people anticipate the presence of missing objects within visual contexts.¹ For another example of anticipation mechanics, look at the way *DoubleU Casino's Geisha Secret* highlights reels during [synchronized free spins](#).
- **Anticipation is a key component in motivating goal-directed behavior.** In a study on primates, Stanford neurologist Robert Sapolsky found that blocking anticipatory dopamine prevented subjects from working to earn rewards.² Other research has shown that the pleasure of anticipation is most pronounced in subjects who are responsive to rewards, imagery, and behavioral activation³—three common qualities among arousal-driven slots players like Gambler Gail and Sensation Serena.⁴
- **Provide feedback for more stages of progressions to maximize intrinsic motivation.** Studies have shown that early rewards and frequent feedback throughout progressions increase intrinsic motivation.^{5 6} As players progress toward expanding all three reels in *The King of Swing*, each step provides a built-in reward in the form of an expanded reel—plus an animation of Tarzan swinging across the machine for additional feedback (2).
- **Make sure to end progressions with distinct rewards.** Players likely expect a big reward for expanding all the reels in *The King of Swing*. However, expanding the third reel provides the same benefits as the first two: three spins. People experience the absence of expected rewards as a punishment, potentially leading to churn among frustrated players.⁷ This could be fixed by awarding a multiplier, wilds, or even just a greater number of expanded spins.

¹ [Anticipation in Real-World Scenes: The Role of Visual Context and Visual Memory](#)

² [Dopamine Jackpot! Sapolsky on the Science of Pleasure](#), 1:10

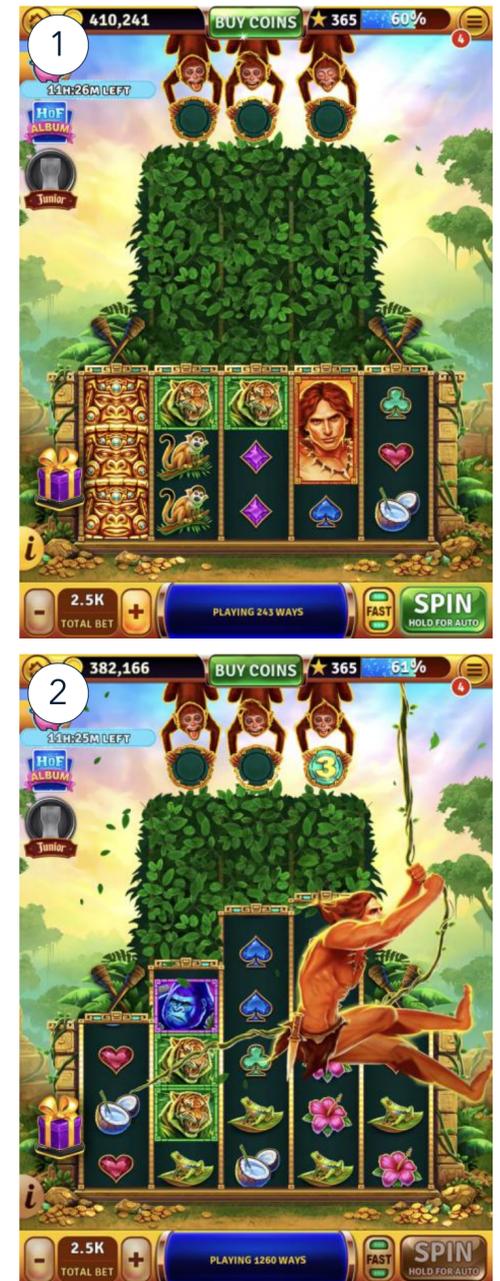
³ [Anticipatory and consummatory components of the experience of pleasure: A scale development study](#), p. 1099-1100

⁴ [Liquid & Grit Slots Personas Report](#)

⁵ [It's about time: Earlier rewards increase intrinsic motivation](#)

⁶ [How feedback boosts motivation and play in a brain-training game](#), p. 101

⁷ [The Gamer's Brain, Part 3: The UX of Engagement and Immersion \(or Retention\)](#), 13:00



CASINO > CONTENT > SOCIAL

PET COLLECTION

Happy Paws in *Slotomania*

MECHANIC TEARDOWN

Players complete a challenge to earn event currency for collectible pet items. Completed collections award free spins with giant symbols.

Feature Details

- During the base game, players collect specific symbols to fill a meter within a certain number of spins (1).
- Filling the meter triggers a wheel spin for event currency (2).
- Event currency is used to purchase bundles of collectible pet items (3).
 - A message pops up when players have enough event currency to purchase a pet bundle.
 - A special premium currency offer lets players increase the size of the bundle and guarantee a rare item.
 - Players who don't purchase the special offer are shown the items they would have won (4).
 - Completing a collection page awards free spins in which colossal pet and wild symbols replace reels 2-4 (5).
 - Duplicate items fill a collection-specific meter to increase the number of free spins awarded for completing that collection page.
- Three or more scatter symbols trigger free spins.
 - Players choose a pet to replace all other pet symbols (video).
 - Each pet awards a different number of free spins.

Additional Information

- See more images and videos in the [Happy Paws](#) Library.

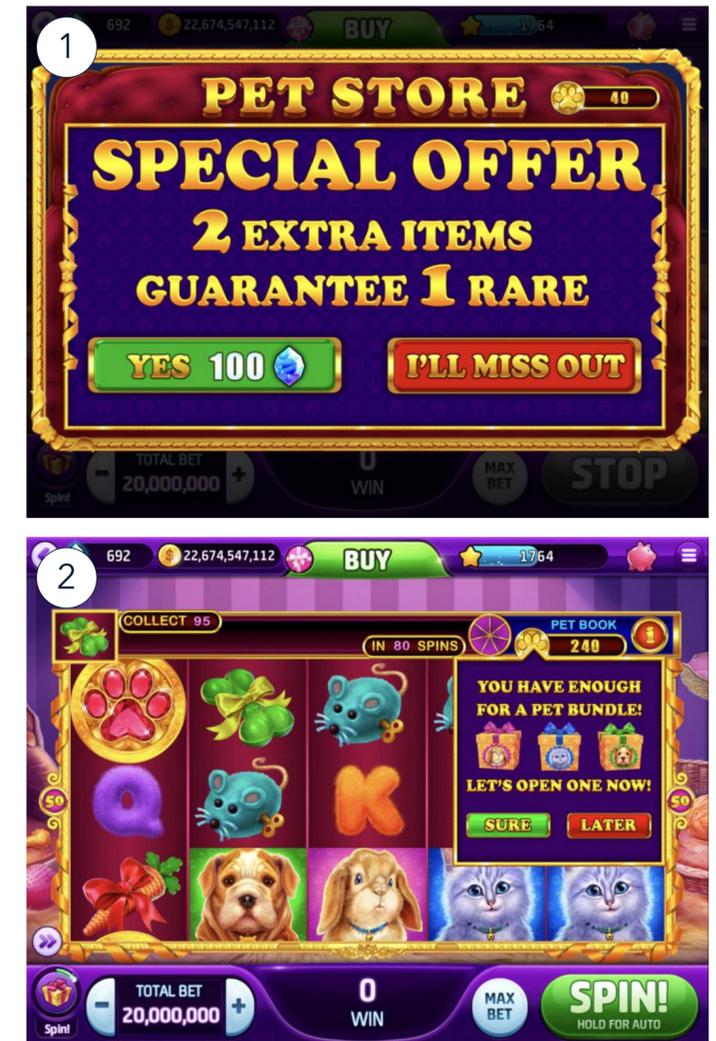


EXPERT INSIGHTS

Use rare events to create an organic feeling of scarcity, and increase conversions by showing players the premium rewards they're missing out on.

Insight Details

- **Integrate sale offers into uncommon events to create natural-seeming scarcity.** The scarcity sale is a well-established technique that uses loss aversion and fear of missing out to drive sales.⁸ At the same time, research has shown that when scarcity is perceived as artificial, it reduces the likelihood of a purchase and causes negative feelings toward the seller.⁹ This presents a challenge for virtual goods, which lack the “natural” scarcity of material goods. [Happy Paws](#) solves this problem by intermittently offering a sale only when players have earned enough event currency to purchase a collectible bundle (1). Because this is a relatively rare event, it creates built-in scarcity without seeming arbitrary to players.
- **Show players who pass on purchases what they missed—especially when rare items are involved.** In our [February 2020 Slots Design Report](#), we examined how loss aversion causes players to feel losses more acutely than equivalent gains in *POP! Slots' Bubble Madness Deluxe*. Happy Paws takes advantage of loss aversion by showing players what they would have received in premium collectible bundles. This effect is especially pronounced in decisions involving high-value risks, like rare items.¹⁰ And because loss aversion is one of the main factors behind the impact of scarcity sales, combining the two is likely to increase conversions even more.
- **Drive conversions by testing copy for calls to action (CTAs).** When players have enough event currency to purchase a collectible bundle, Happy Paws presents a purchase notification with two somewhat unusual options: “Sure” and “Later” (2). Although it is difficult to predict the most effective text, there’s no doubt that a few words can have a huge impact. In one case study, changing button text from “Start your free 30 day trial” to “Start my free 30 day trial” increased clicks by 90%.¹¹ Testing different CTAs on *your* players is always the best way to optimize your dialogues. Keep in mind that what works in one context will not necessarily work in another.



⁸ [Scarcity in UX: The psychological bias that became the norm](#)

⁹ [The Effects of Scarcity Appeal on Product Evaluation: Consumers' Cognitive Resources and Company Reputation](#)

¹⁰ [Is loss-aversion magnitude-dependent? Measuring prospective affective judgments regarding gains and losses](#), p. 87

¹¹ [10 Call-to-Action Case Studies w/ Takeaways & Examples from Real Button Tests](#)

SLOTS TRENDS

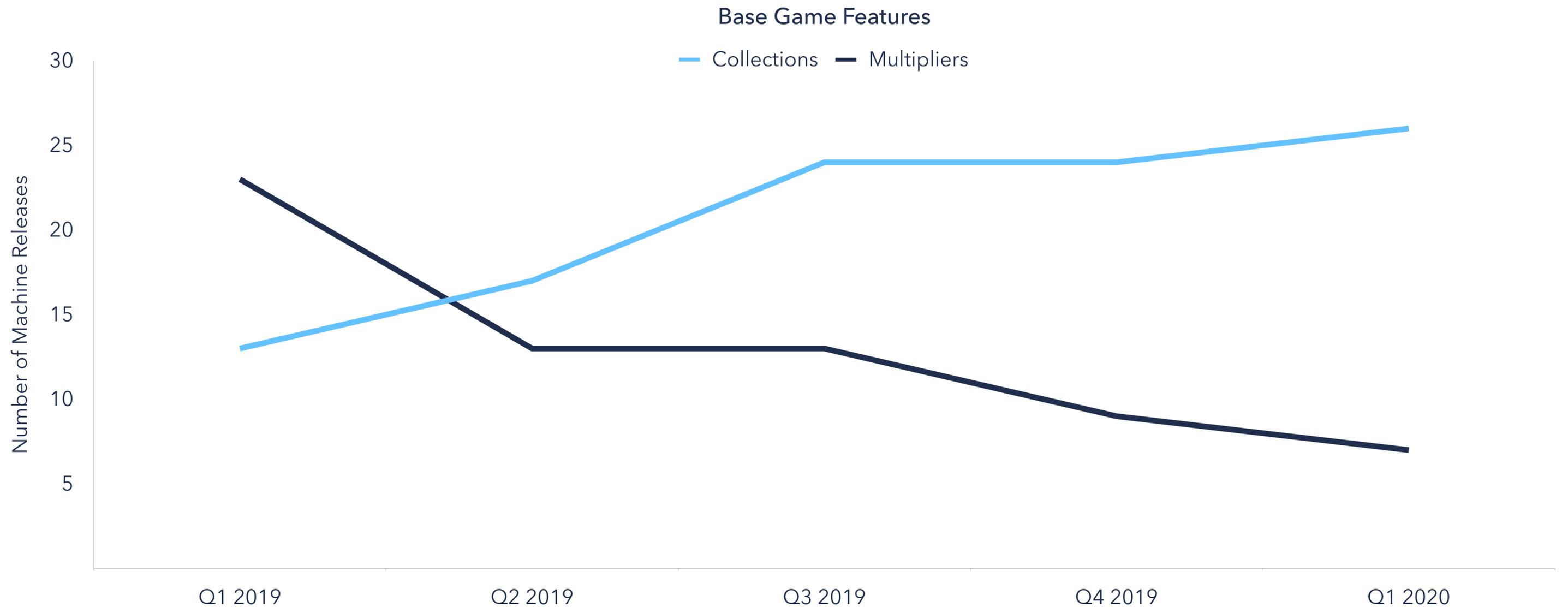


Tracked slots apps:

Big Fish Casino, Caesars Slots, Cash Frenzy, Cashman Casino, DoubleDown Casino, DoubleU Casino, Game of Thrones Slots, Gold Fish Casino, Heart of Vegas, Hit It Rich!, House of Fun, Huuuge Casino, Jackpot Magic Slots, Jackpot Party, Lightning Link Casino, Lotsa Slots, my KONAMI, myVEGAS, POP! Slots, Quick Hit Slots, Scatter Slots, Slotomania, and Wizard of Oz: Casino Slots

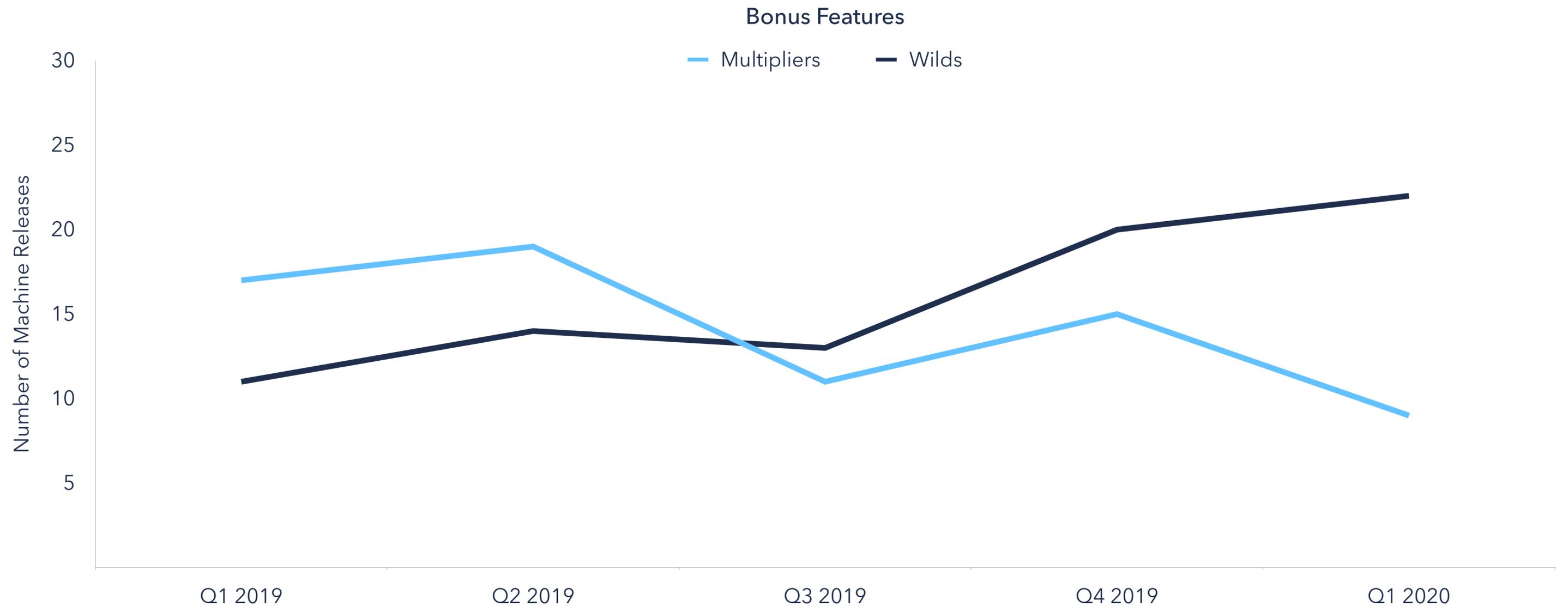
BASE GAME FEATURES

Since Q1 2019, base game multiplier features have decreased an average of 24% per quarter—dropping from the second most common feature to the second least common by Q1 2020. Collections are currently the top base game feature, followed closely by respins.



BONUS FEATURES

Multipliers, the leading bonus feature in Q1 2019, have trended downward an average of 8.5% QoQ. As of Q1 2020, wilds are the most popular bonus feature.

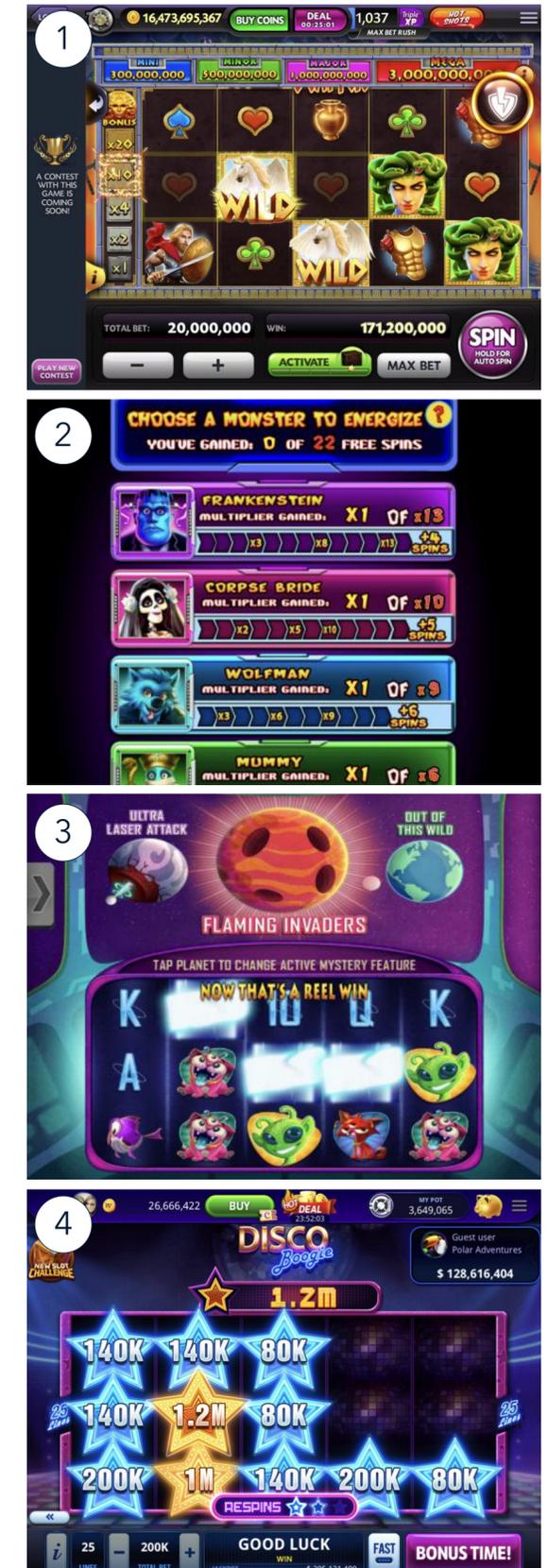


MARKET WATCH



NOTABLE RELEASES I

App	Machine	Description
Caesars Slots	Queen of Snakes	<ul style="list-style-type: none"> Consecutive wins increase a multiplier on a meter (1 and video). Five consecutive wins trigger a jackpot pick'em. Three or more scatter symbols trigger free spins (video). <ul style="list-style-type: none"> The current multiplier applies to all free spins, with an increased multiplier at the end.
Cash Frenzy	Monster Cash	<ul style="list-style-type: none"> Coin symbols fill a meter. <ul style="list-style-type: none"> Filling the meter allows players to increase one of four monster meters and triggers free spins. Each meter increases multipliers at milestones and increases free spins when filled (2). Players spin a wheel to activate one of four monster boards for free spins. If that monster board lands the most symbols, players win payouts from all four boards. Electric tower symbols activate one of three tower bonus features for the next spin (video). <ul style="list-style-type: none"> Towers require three activations during the base game or one during free spins.
Cashman Casino	Outer Riches	<ul style="list-style-type: none"> Players select a planet to enable one of three randomly activated bonuses: <ul style="list-style-type: none"> Low-value symbols are removed from reels (video). High-value symbols are converted to the same symbol (video). 1-4 reels turn into wilds (video). The enabled bonus can be changed between spins (3). During free spins, all three bonuses are enabled.
DoubleU Casino	Disco Boogie	<ul style="list-style-type: none"> Six or more blue star symbols trigger three respins. <ul style="list-style-type: none"> Payouts from blue stars accumulate in a separate pot. Gold stars are assigned the value of the separate pot upon landing (4). Blue and gold stars reset the respins counter. Three scatter symbols trigger seven free spins followed by respins. <ul style="list-style-type: none"> Payouts from blue stars landed during free spins accumulate in a separate pot. Respins start with the pot accumulated from free spins.

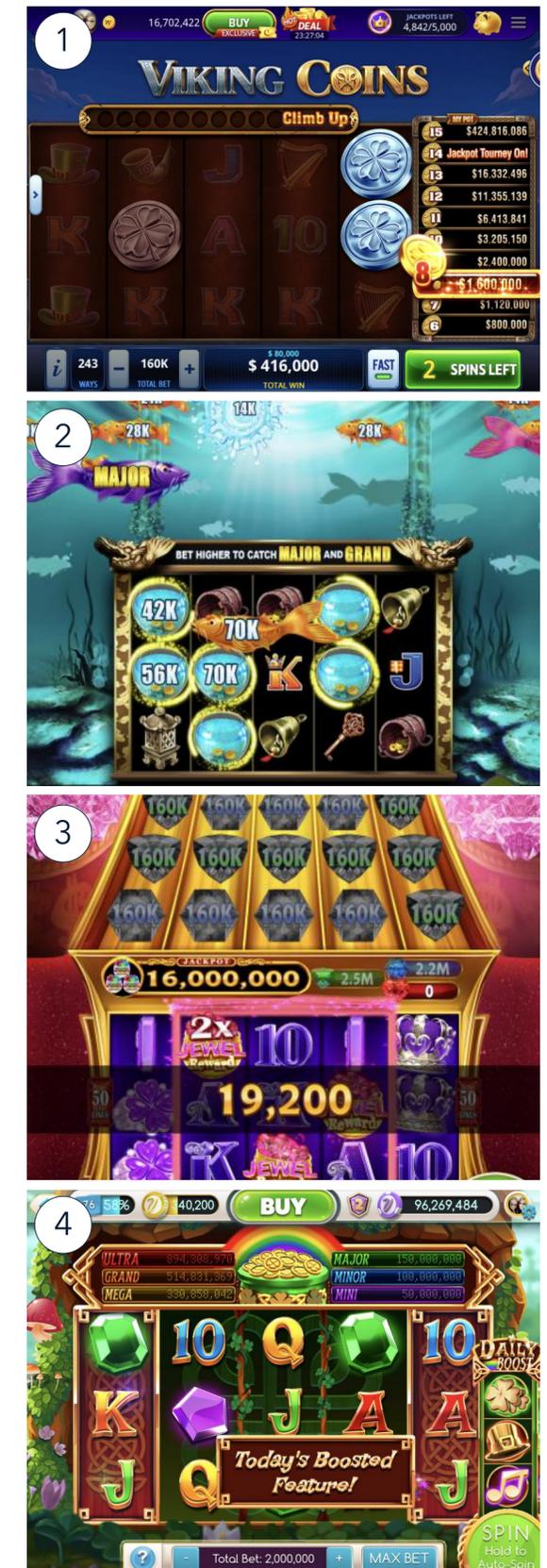


NOTABLE RELEASES II

App	Machine	Description
DoubleU Casino	Viking Coins	<ul style="list-style-type: none"> Gold coin symbols contain values or free spins. Landing six gold coins awards a jackpot and triggers the indicated number of free spins. During free spins, silver coins fill a meter. Filling the meter advances players up a jackpot ladder (1).
Heart of Vegas	Prize Fishin'	<ul style="list-style-type: none"> Three or more scatter symbols trigger up to 24 free spins. Six or more fishbowl symbols trigger an equivalent number of respins with sticky fishbowls. <ul style="list-style-type: none"> Fish with payout values swim above the reels (video). Fishbowls are filled with a fish upon landing (2). Landing fishbowls in all positions awards a 2x multiplier.
my KONAMI	Jewel Reward	<ul style="list-style-type: none"> Colored jewels above the reels each contain values. Landing three same-colored jewel symbols awards the total value of corresponding jewels above the reels (3 and video). Awarded jewels are removed and new jewels cascade down (video).
myVEGAS	Jigs'N Jackpots	<ul style="list-style-type: none"> One of four bonuses receives a boost each day (4). Players can increase bets to boost the other bonuses.

Quickly review all features and machines

Filter the [Library Tool](#) by month and year to see all new releases.



APPENDIX



LIQUID & GRIT SLOTS PERSONAS

Participants from the U.K. and U.S. (N=1,299) were surveyed about their mobile gaming use. The data produced five personas with distinct patterns of slots preferences and playing habits.

	Demographics				
	Fame Frank	Money Mike	Daydreamer Denise	Gambler Gail	Sensation Serena
Size	21%	22%	27%	19%	11%
Women	50%	51%	66%	60%	55%
Age	32 mean / 30 median	34 mean / 32 median	35 mean / 34 median	35 mean / 33 median	35 mean / 32 median
Education	3.5	3.3	3.5	3.2	3.3
Money Spent	4.2	4.9	3.5	5.4	5.8
Play Time	5.0	4.5	5.0	4.9	6.5



* The education, money spent, and play time numbers represent the relative value of each category compared to other player personas.

PREMIUM PARTNERSHIPS

Liquid & Grit partners with these premier market research and analytics companies to infuse our reports with the most relevant and detailed gaming user personas, data, and statistics available.

Quadrant Strategies

Market Research

[Quadrant Strategies](#)

Quadrant Strategies is a market research consultancy that uses research to help the world's most prominent technology, gaming, and entertainment companies develop strategies for building their user base, increasing user engagement and spend, and strengthening their marketing and brand plans.

We do that using a range of quantitative and qualitative methodologies, including gamer segmentation and persona development, feature testing, message creation, and loyalty and engagement modeling. The work of our senior leadership goes back many years, and includes long-term engagements for console and gaming-PC hardware-makers, individual games in a range of genres, and across consoles, PCs, and mobile, and for some of the top game franchises.



Kinrate Analytics

Player Personas

[Kinrate Analytics](#)

Kinrate Analytics offers game developers, consultants, publishers, and cloud gaming operators the best cross-platform game recommendation engine for targeted marketing, as well as a novel profiling-as-a-service solution for intelligent market segmentation and social networking.

Other services include advanced market prediction analyses for identifying emergent gaming trends and access to unique AI-enhanced data of 140 thousand game titles and 48 million game players.

The products of Kinrate Analytics have been developed in university-led research projects in collaboration with economists, psychologists, game scholars, and data scientists.



Sensor Tower

Mobile App Store Intelligence

[Sensor Tower](#)

Sensor Tower is relied upon by financial analysts, VCs, and publishers who need to leverage data to identify the fastest-growing apps, emerging markets, and more.

Clients harness Sensor Tower's suite of app intelligence tools to:

- ▶ Evaluate app economies and app vitality.
- ▶ Drive organic growth with the leading App Store Optimization platform.
- ▶ Get the best global download and revenue estimates for the App Store and Google Play.
- ▶ Discover top creatives and better shape user acquisition strategy.



“When I stand in front of a canvas, I never know what I’m going to do—and nobody is more surprised than I at what comes out.”

– Joan Miró

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