



Slots Design Report

Competitive Research and Data Insights for Slots Designers

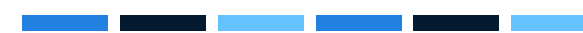
TABLE OF CONTENTS

NEW INNOVATIONS	4
Bonus Customizations	
<i>Return to Giant’s Treasure</i> in House of Fun	
Bank Adaptations	
<i>Time to Cash</i> in Slotomania	
Boost Symbols	
<i>The Lady Devil</i> in DoubleU Casino	
KEY TRENDS	14
Class	
Reels	
Progression	
MARKET WATCH	18
Notable Releases I & II	
APPENDIX	21
Product Council	
L&G Slots Personas	
Premium Partnerships	

APRIL

2019

EXECUTIVE SUMMARY



“You study, you learn, but you guard the original naïveté. It has to be within you, as desire for drink is within the drunkard or love is within the lover.”

– Henri Matisse

New Innovations

House of Fun released another machine with its own currency. The currency is used to purchase *Enhancements* in a bonus game, allowing players to customize the bonus game and trigger it at any moment (once unlocked). Examine this section to capitalize on the recent machine-specific currency trend and to implement opt-in personalization.

After hitting a *Super Win* in Slotomania’s *Time to Cash*, players can spend secondary currency to advance two steps in a progression and set the progression’s bonus to the *Super Win* amount. Every 24 hours, players lose a step in the progression. Review this section to implement Bank feature adaptations within a slots machine.

Certain symbols in DoubleU Casino’s *The Lady Devil* award the sum of the symbols already landed and locked. Other symbols add a free spin. Check out this analysis to either include powerful symbols to the base game or to make another variation on *Lightning Link* respins.

Key Trends

Stepper machines have declined dramatically from 15% a year ago ... to only 2% last month. Four reel configurations (3 x 5, 4 x 5, n x n, and multi-matrix) make up 84% of the reels released in the past 15 months. And, machines with *progression systems only* appear to be trending.

Market Watch

Cashman Casino’s *White Tiger* has a jackpot mechanic integrated into reel 3. DoubleDown Casino’s *Green Luck* transforms adjacent stacked symbols. And, Jackpot Party’s *Jackpot Block Party* has a pick’em with three unlocking sections.

Brett Nowak
CEO

NEW INNOVATIONS



BONUS CUSTOMIZATIONS

Return to Giant's Treasure in House of Fun

MECHANIC ANALYSIS

Return to Giant's Treasure lets players earn *Beans* through base and bonus play. *Beans* are then used to purchase *Enhancements* in a customizable bonus game.

Feature Details

- Every spin advances players up the *Beanstalk* (1).
- Players can click 'Map' to check their progress (2).
- As players advance, they unlock the *Beanstalk Bonus*, a pick'em that only awards *Beans* (3).
- *Beans* are also collected when non-wild symbols land with numbered *Bean* icons (4).
- Randomly, the *Giant* triggers events. One of the three events will award additional *Beans* (5).
- Larger bets increase the number of *Beans* awarded during play.
- Reaching the top of the *Beanstalk* unlocks the *Return to Giant's Treasure Bonus*, a pick'em that awards credits and *Enhancements* for the *Build A Bonus* (6).
- In *Build A Bonus*, players purchase *Enhancements* with *Beans* to customize their bonus game (7).
- More *Enhancements* become available as players progress along the *Beanstalk*.
- Once unlocked, players can trigger the *Build A Bonus* anytime through the *Build A Bonus* store (8).

More Information on the Machine

- [Giant's Smash](#)
- [Beanstalk Bonus](#)
- [Return to Giant's Treasure Bonus](#)
- [Build A Bonus](#)

Related Machines

- [Pride and Glory](#) - House of Fun
- [Wilds and the Beanstalk](#) - GamePlay (RMG)
- [Plant Rocks](#) - Felix Gaming (RMG)



EXPERT INSIGHTS

Many players are now familiar with machine-specific currency. Take advantage by releasing more complex currency systems to make the currency more impactful to the experience.

Key Insights

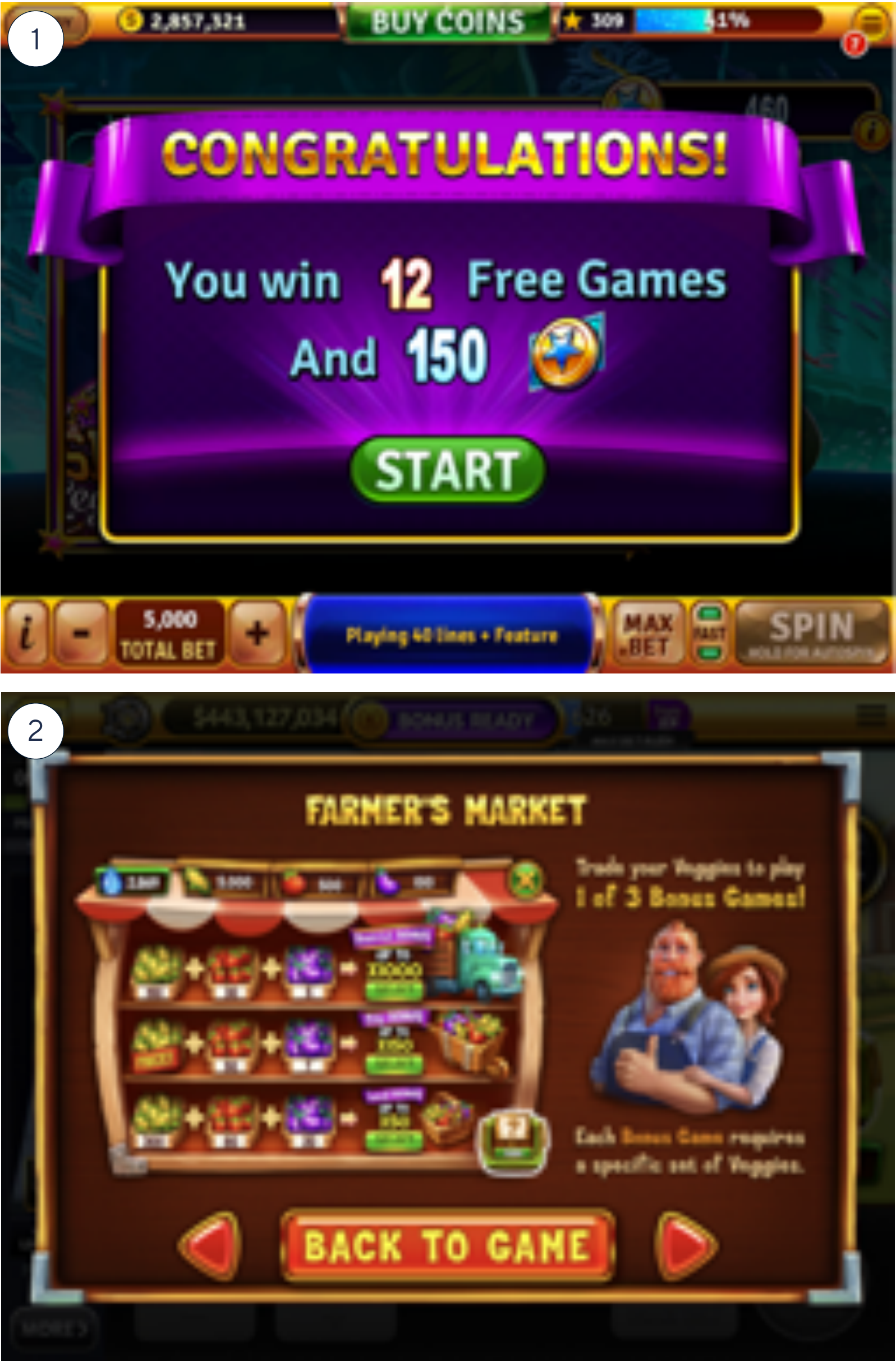
- **Player familiarity:** In the past three months, nine tracked machines were released with machine-specific currency. Review *Character Collections* in the [3/19 Slots Design Report](#) for another analysis on machine-specific currency.
- **Complexity options:** Consider multiple currencies, a currency that spans across machines, or a currency that purchases rebates and boosts.
- **Opt-in personalization:** Opt-in personalization is functionality that lets players *choose* their preferred route. For players who want to remain in the zone, allow them to quickly trigger the bonus. For players who are more preference-driven, give them the ability to select a bonus from multiple options. In [Farming Fortunes](#), for example, players can either pick a 'Distinct Bonus' or the '? Farm' (2).

Player Persona Information

- **Target player:** *Daydreamer Denise*
- **Core motivation:** Escape
- **Core desires:** Slots takes her mind off everyday concerns and anxiety, relieves stress and pressure, and is more interesting than other boring life tasks.
- **Relative to other personas:** *Daydreamer Denise* is more interested in mechanics layered on top of slots machines than *Fame Frank* and *Money Mike*.
- Download the full [L&G Slots Persona Report](#) for more information

Additional Information Online

- More images and videos of [Return to Giant's Treasure](#)
- For all the machines with Collections in the Base Game, filter on Casino > Content > [Social](#) > Base Game Feature > Collections
- Use the [Data Tool](#) to export a .csv file and discover new Base Game Feature trends



BANK ADAPTATIONS

Time to Cash in Slotomania

MECHANIC ANALYSIS

Players earn one *Energy* by filling a meter. When players hit a *Super Win*, they can spend secondary currency to gain two *Energy* and set the *Time Travel* bonus to the *Super Win* amount.

Feature Details

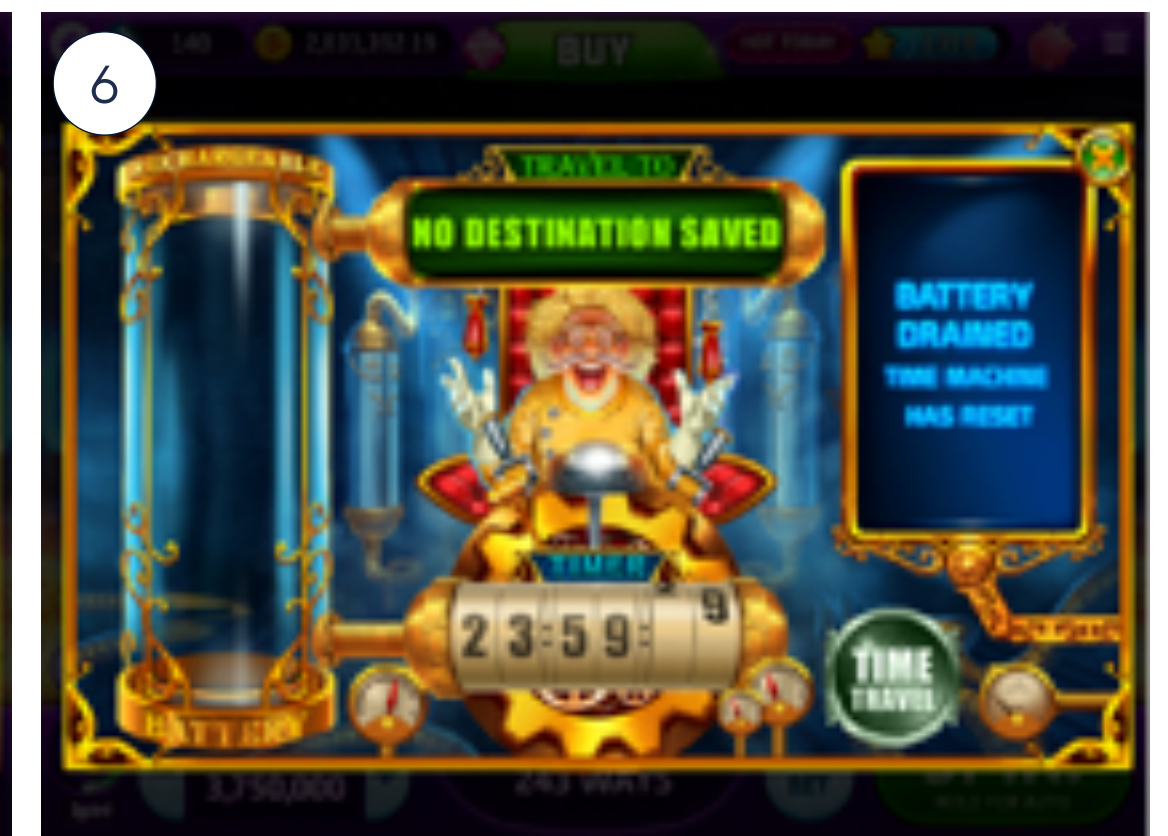
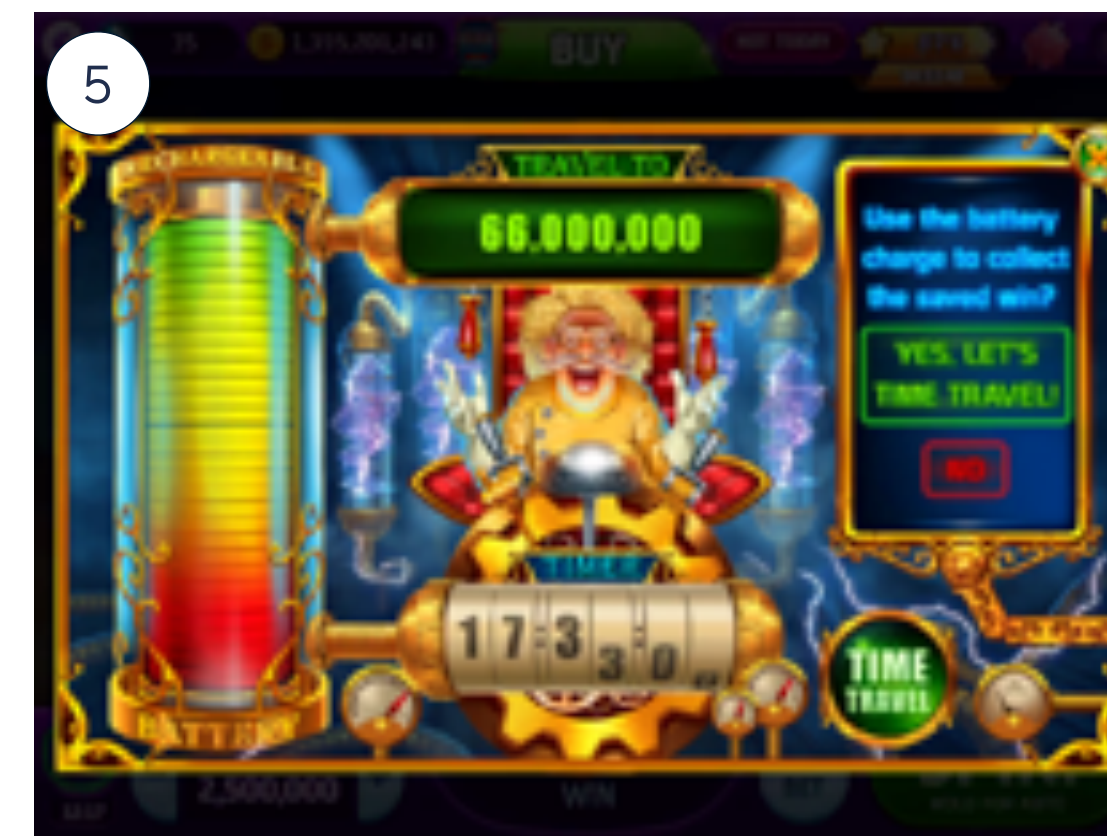
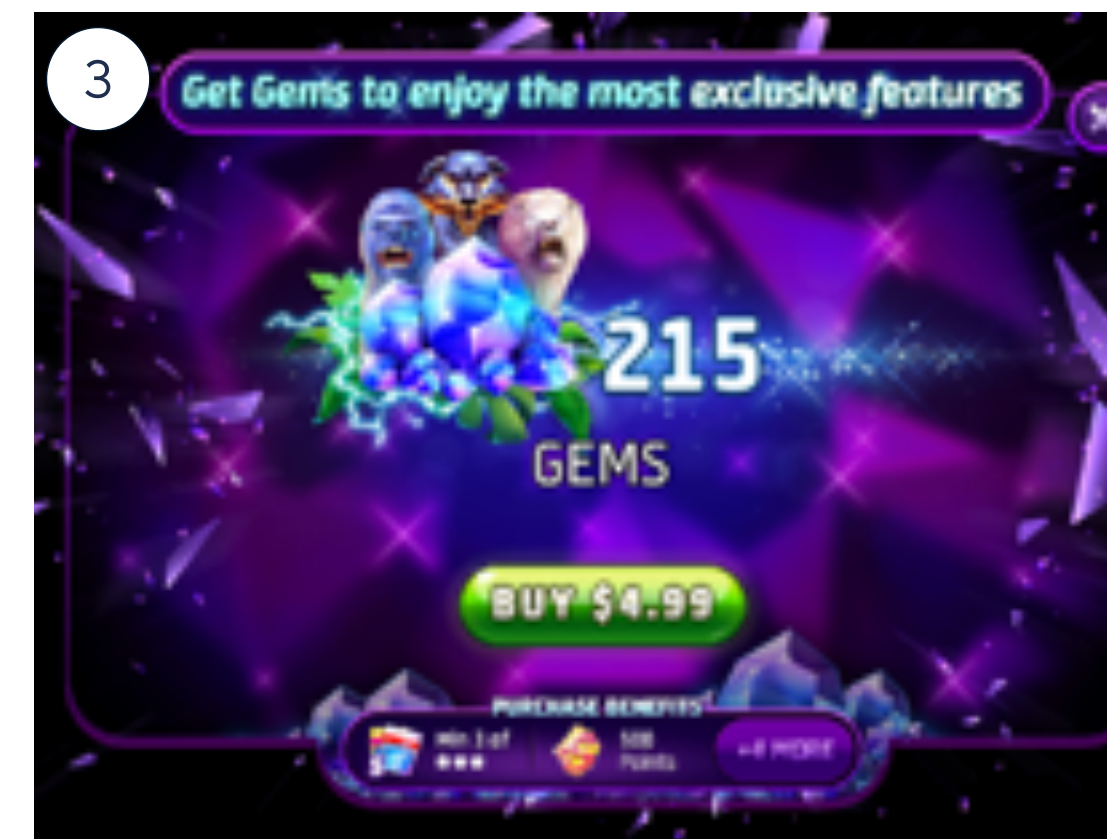
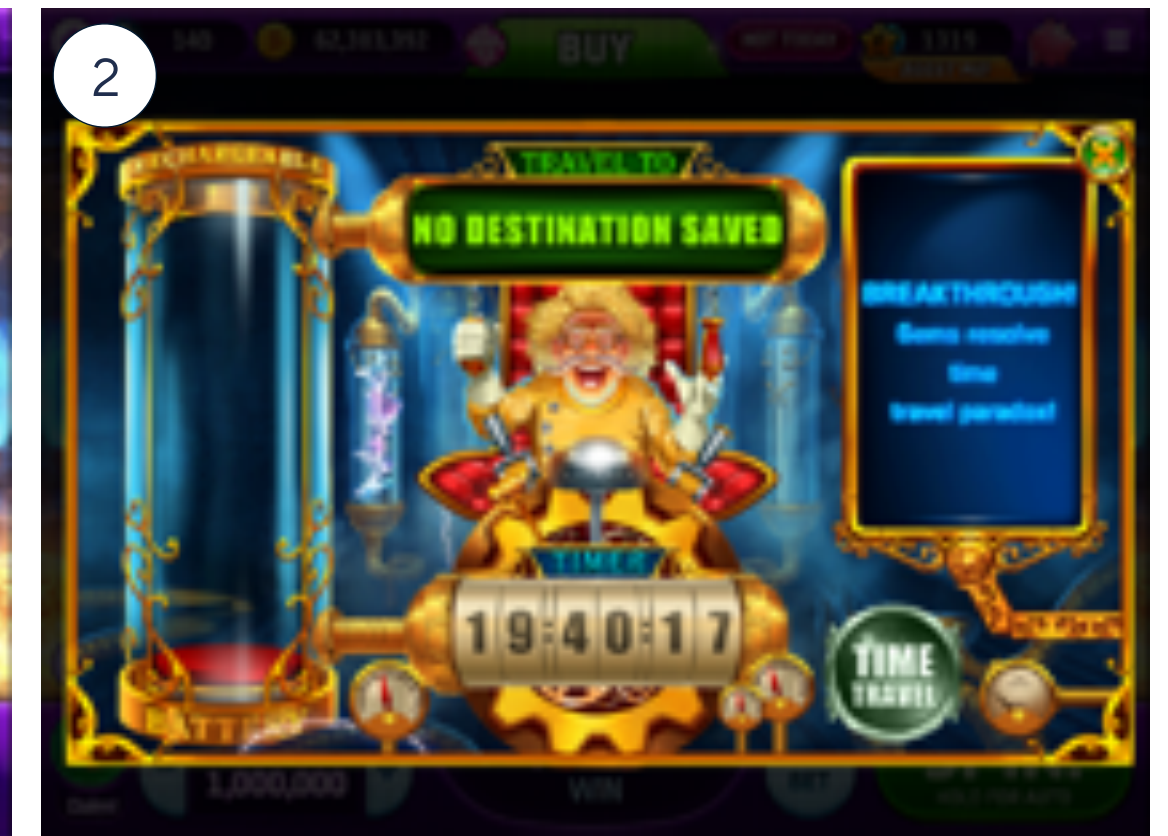
- Players collect special symbols to fill a meter (1).
 - There is a minimum bet required to fill the meter.
- Completely filling the meter adds an *Energy* to the *Battery* (2).
- When players hit a *Super Win*, they can spend *Gems* to collect two *Energy* and save the equivalent amount as the *Super Win* in the *Time Machine* (3 & 4).
- Fully charging the *Battery* unlocks the option to *Time Travel* (5).
- *Time Travel* awards the saved *Super Win* and resets the *Battery*.
- The *Battery* loses a *Charge* every 24 hours (6).
- If the *Charge* completely runs out, players lose any saved *Super Win*.

More Information on the Machine

- [Coin Grab](#)
- [Save Super Win](#)
- [Choose Your Monster & Free Games](#)
- [Time Travel Bonus Collection](#)
- [Badges](#)

Related Machines & Features

- [The Big Cheese](#) - Lotsa Slots
- [Macau Nights](#) - Slotomania
- [Neptune's Pearls](#) - Caesars Slots



EXPERT INSIGHTS

This machine makes three adaptations to the proven Bank feature: 1) players fill the Bank with one large win ... as opposed to many wins, 2) players spend to fill the Bank ... as opposed to spending to open it, and 3) the Bank's value can be lost during the event ... as opposed to just at the end.

Key Insights

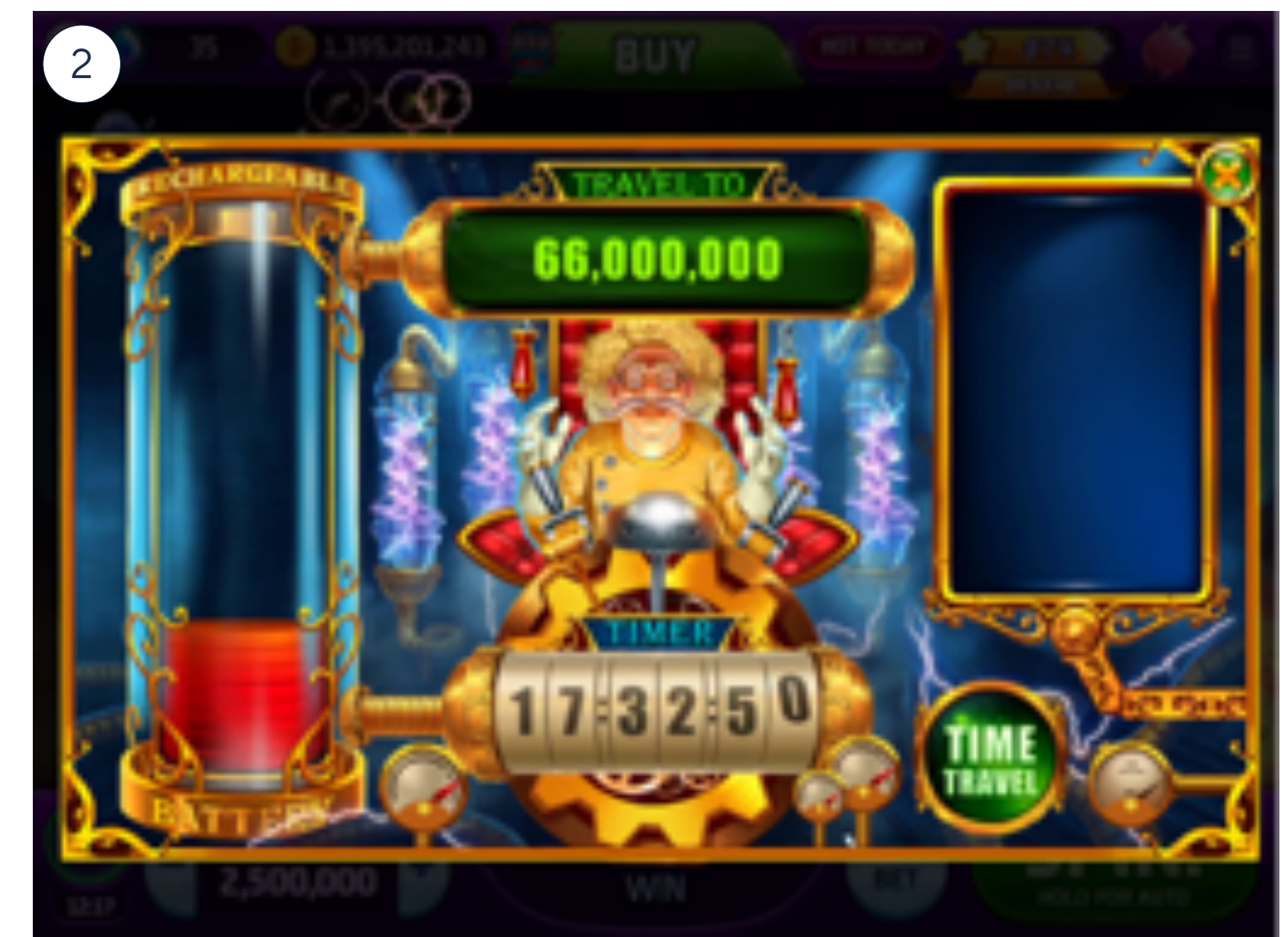
- **Fill rate based on a big win:** Setting the fill rate to a *Super Win* incentivizes players to increase their bet and personalizes the max fill to each player's betting (1).
- **Spend to fill:** By making players spend to fill the Bank, players are more invested in completing the Bank to recoup the value.
- **Loss aversion:** Players can lose the saved *Super Win* if the *Battery* runs empty. This can happen because every 24 hours the *Battery* charge decreases by one. To avoid this loss, players will spend disproportionately ... a human tendency called [loss aversion](#) (2).

Player Persona Information

- **Target player:** *Gambler Gail*
- **Core motivation:** Profit, and then Arousal
- **Meta-feature preferences:** She is most interested in meta-features that drive more winnings, such as boosts, VIP rewards, and mini games (e.g. scratcher cards).
- **Desire to play:** Gaming feels like an effortless way to reward herself ... to experience a high.
- Download the full [L&G Slots Persona Report](#) for more information

Additional Information Online

- Click here for more images and videos of [Time to Cash](#)
- See all [Bank features in Casino](#)
- See all [Bank features in Puzzle](#)



BOOST SYMBOLS

The Lady Devil in DoubleU Casino

MECHANIC ANALYSIS

In one of the two bonuses, *Blue Hearts* award the sum of the *Pink Hearts* that have already landed and locked. *Yellow Hearts* award the sum of both *Blue* and *Pink Hearts* that have landed.

Feature Details

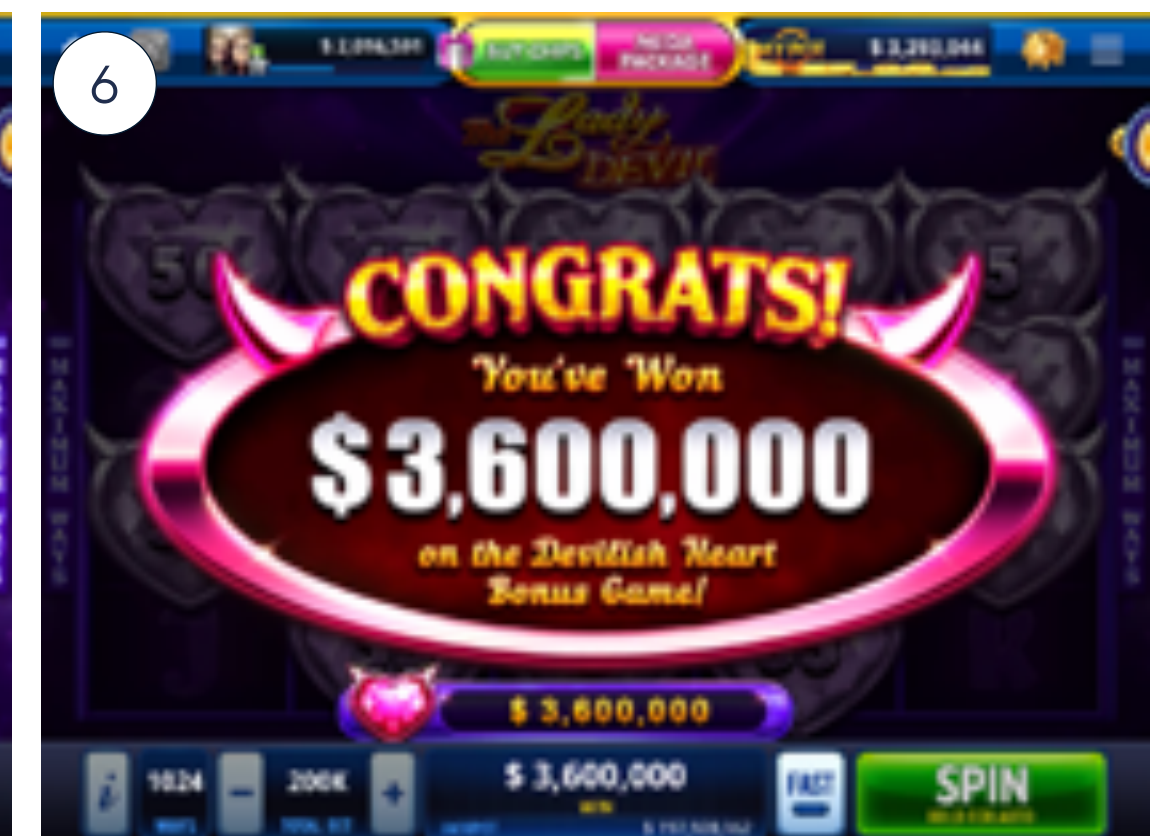
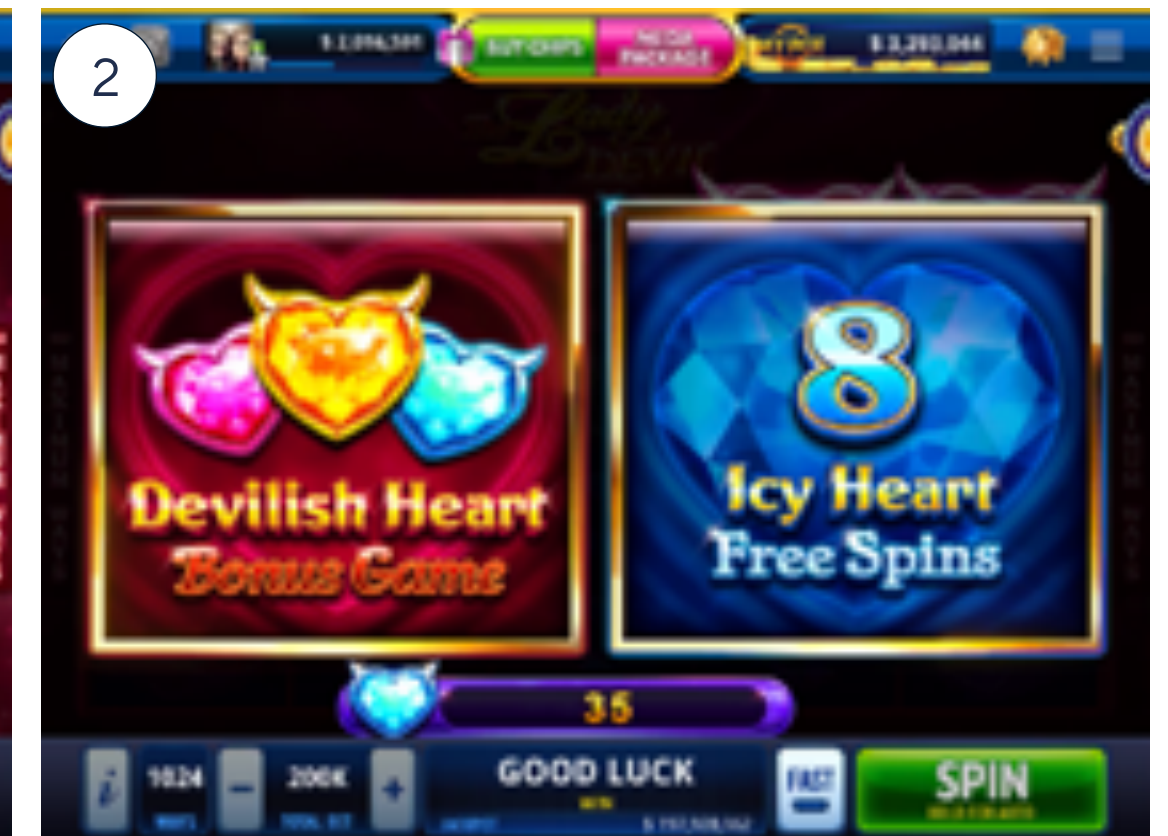
- The bonus is triggered by hitting six *Pink Hearts* (1).
- Once triggered, players can pick between two bonuses (2).
- During the six-spin *Devilish Heart Bonus Game*, the *Pink Hearts* that triggered the bonus are locked.
- Players can win additional spins (3).
- *Blue Hearts* award the sum of all *Pink Hearts* (4).
- *Yellow Hearts* award the sum of all *Pink*, *Blue*, and *Yellow Hearts* (5).
- The bonus ends if the spins run out or all the slots are filled.
- Filling all the slots with *Hearts* awards 2x the total amount of all the *Hearts* (6).

More Information on the Machine

- [Devilish Heart Bonus Game](#)
- [Icy Heart Free Spins](#)

Related Machines

- [Legendary Pandarcher](#) - DoubleDown Slots
- [Clover Isle Deluxe](#) - Caesars Slots
- [Lock it Link Eureka Reel Blast](#) - Gold Fish



EXPERT INSIGHTS

Consider dropping boost symbols during the base game or in a *Lightning Link* respin. Then, add more variations to the boosts (like mini-jackpots) to increase excitement.

Key Insights

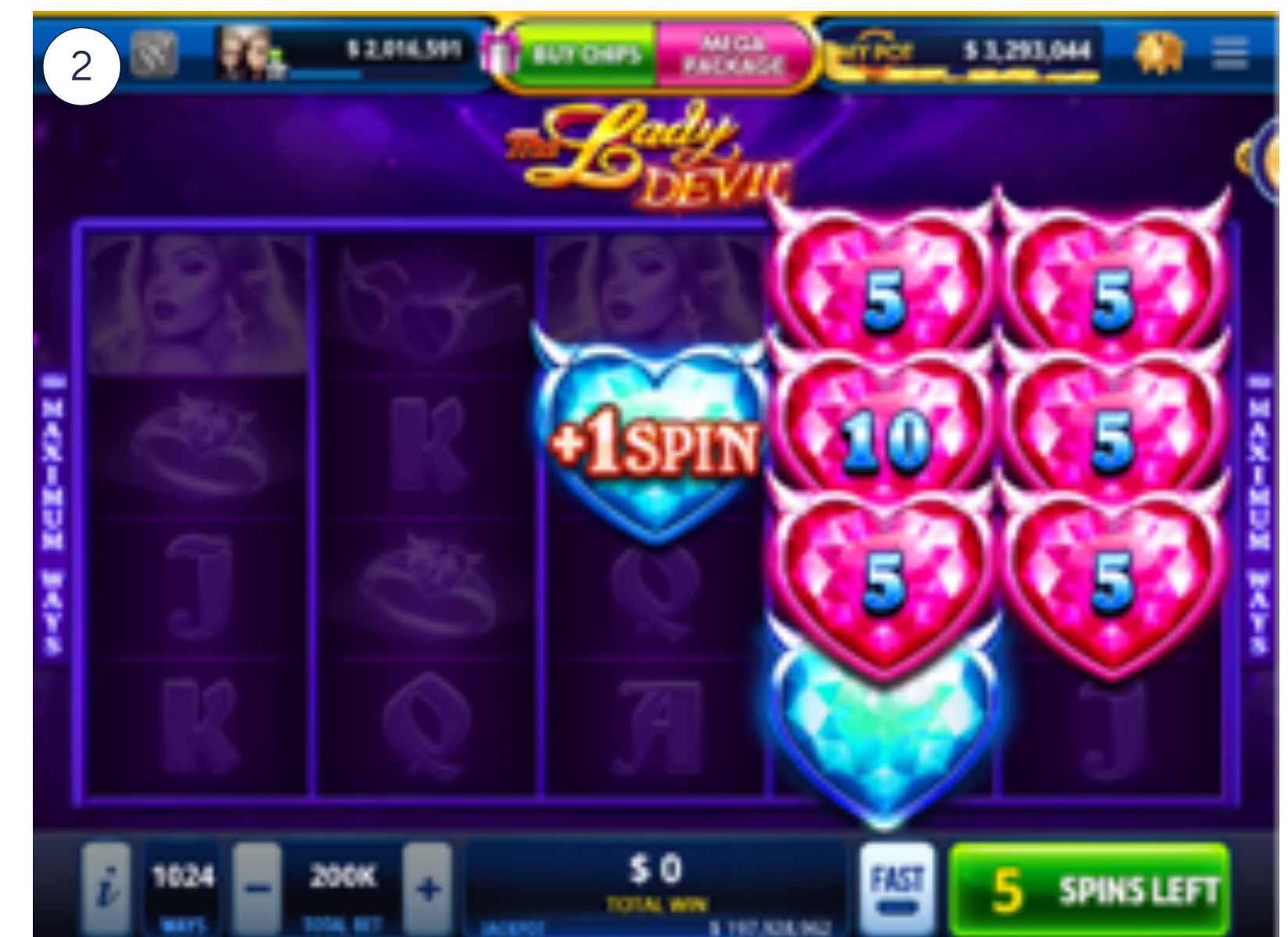
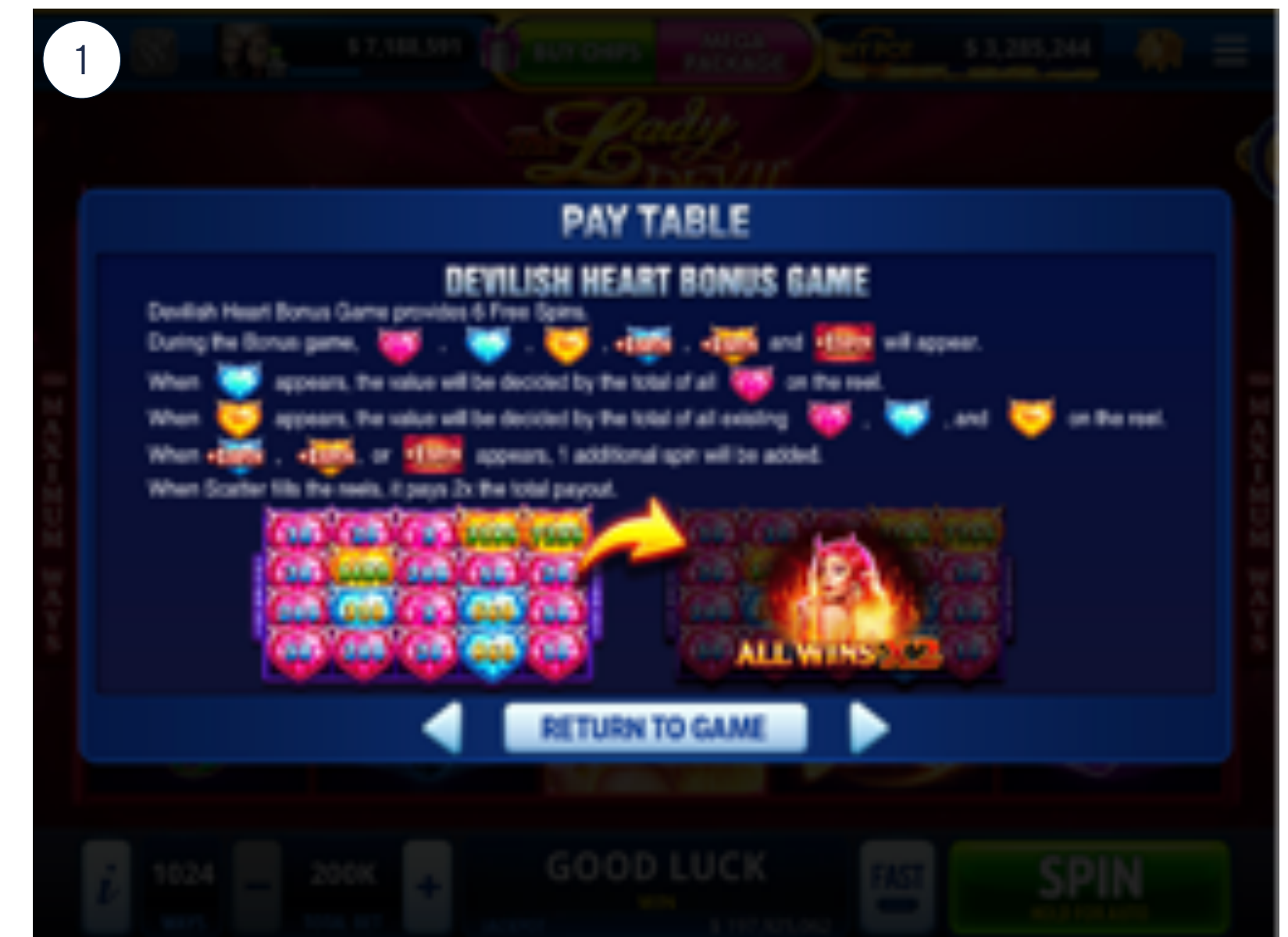
- **Base game or *Lightning Link* respins:** Evolutions of *Lightning Link* continue to appear and generate player engagement in social mobile slots (see the [1/19 Slots Design Report Key Trends](#) or check the [Data Tool](#) for more recent information on respins) (1).
- **New symbol boosts.** In DoubleU Casino's machine, there are three variations: additional spins, credits, and sum of credits. Consider adding bonus game triggers and jackpots (2).

Player Persona Information

- **Target player:** *Sensation Serena*
- **Core motivation:** Arousal, and then Profit
- **Demographics:** *Sensation Serena* is the smallest group, more female, and spends the most money and the most amount of time playing digital slots.
- **Bonus game preferences:** *Sensation Serena* seeks out more involved bonus game mechanics to be entertained and feel enjoyment. She likes bonuses with 'Deal or No Deal' options, collecting things, and mini stepper machines.
- **Jackpot preferences:** To drive excitement, *Sensation Serena* likes all kind of jackpots, but prefers progressive jackpots pooled from many players' bets.
- Download the full [L&G Slots Persona Report](#) for more information

Additional Information Online

- Click here for more images and videos of [The Lady Devil](#)
- Go to the [Data Tool](#) then filter on Base Game Features > Respins for respins trend insights

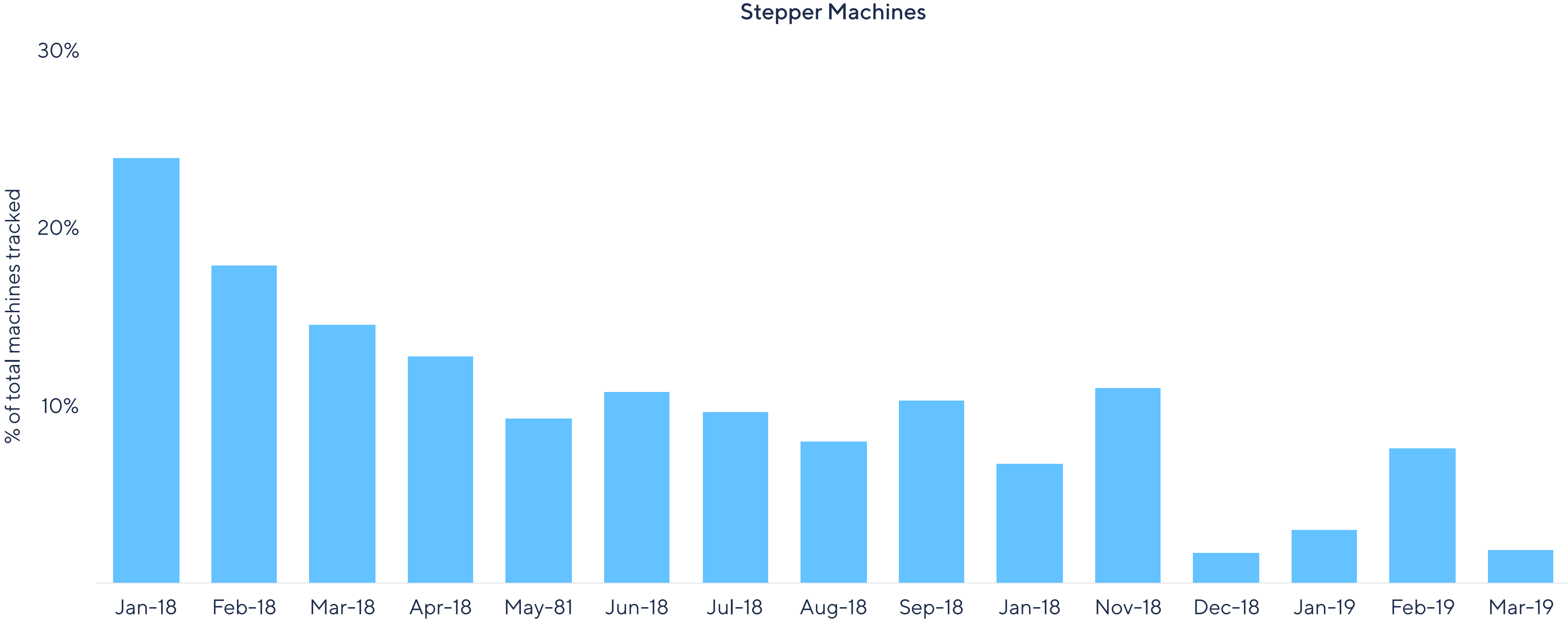


KEY TRENDS



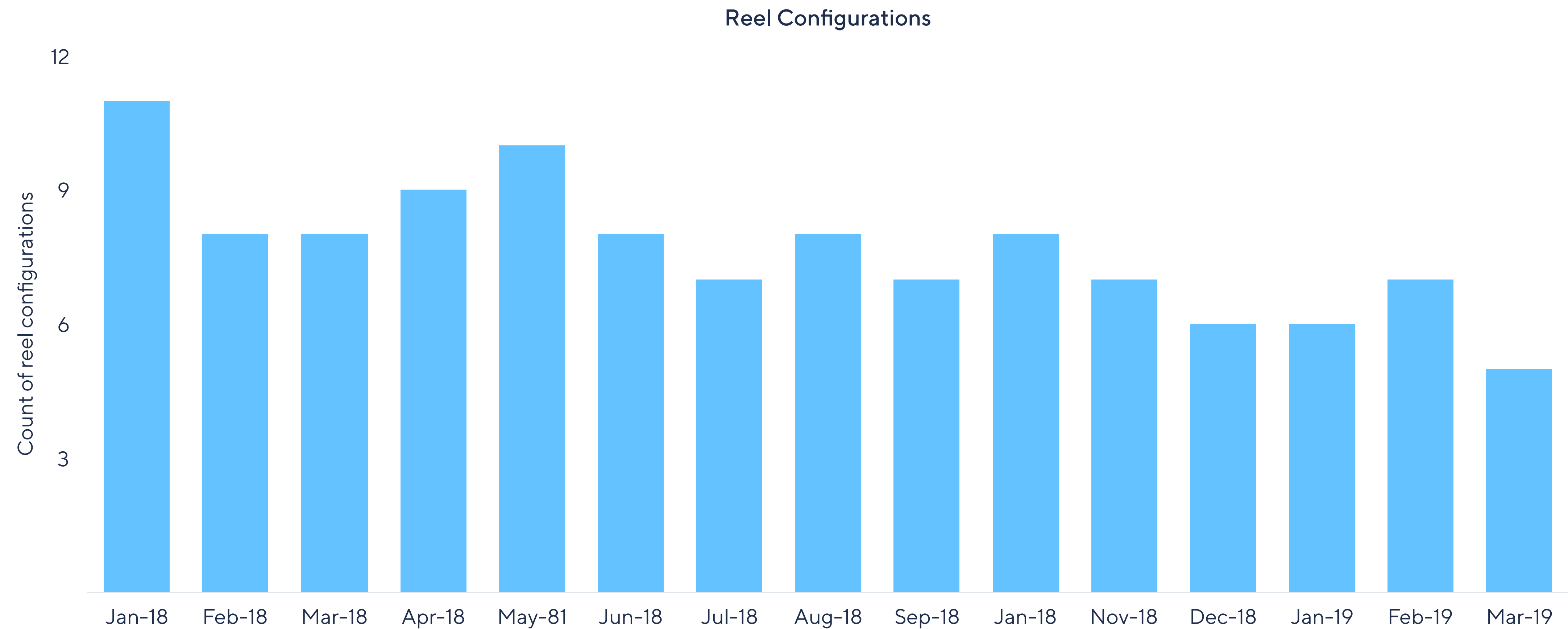
CLASS

Stepper machines have declined dramatically over the past 15 months and were only 2% of total machines tracked in March.



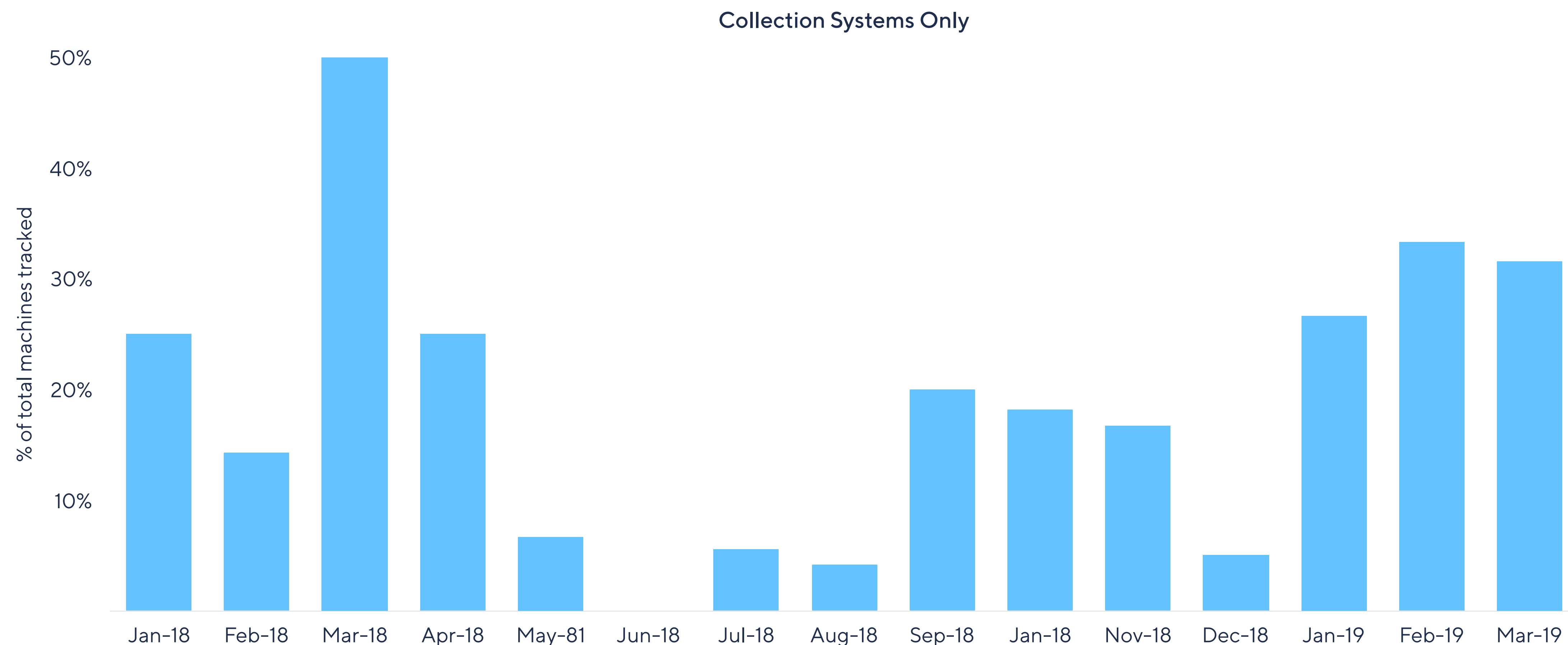
REELS

Reels are becoming more concentrated. The dominate combinations are 3 x 5, 4 x 5, n x n, and multi-matrix. These four reel configurations make up 84% of the reels released in the past 15 months in tracked machines.



PROGRESSION

Machines with *progression systems only* appear to be trending ... meaning no fill meter, no map, not in reels or symbols, and not in the bonus.



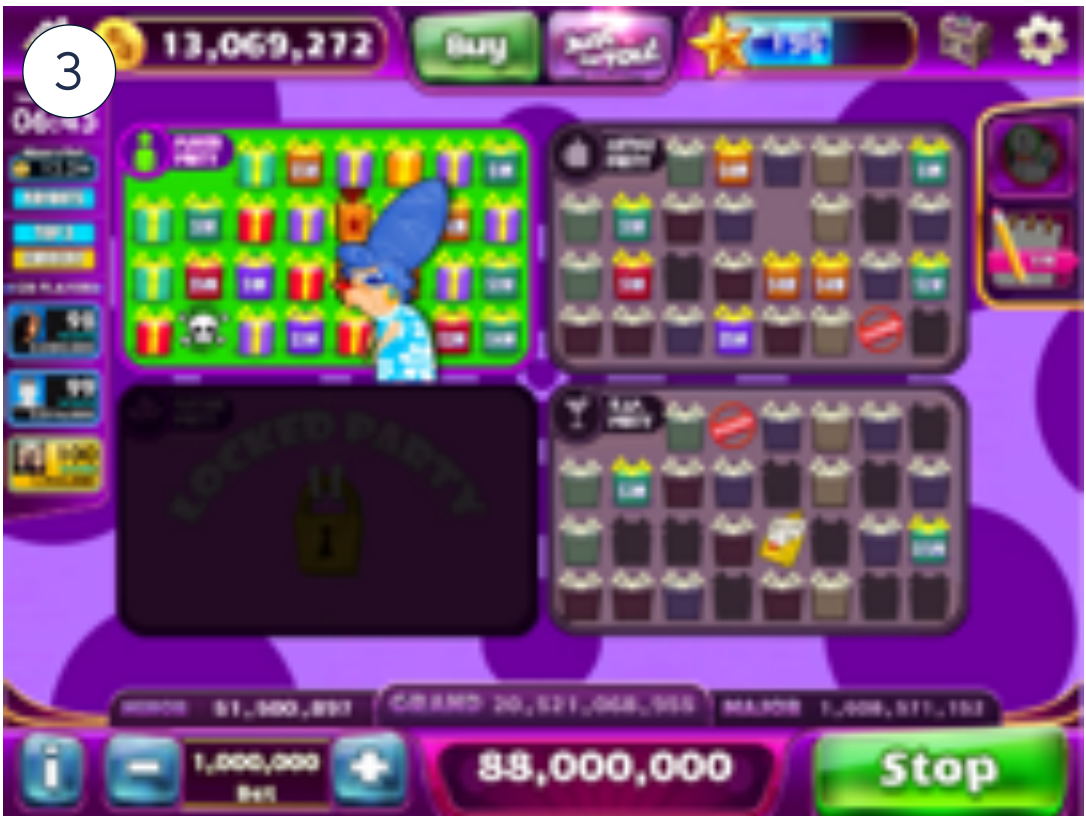
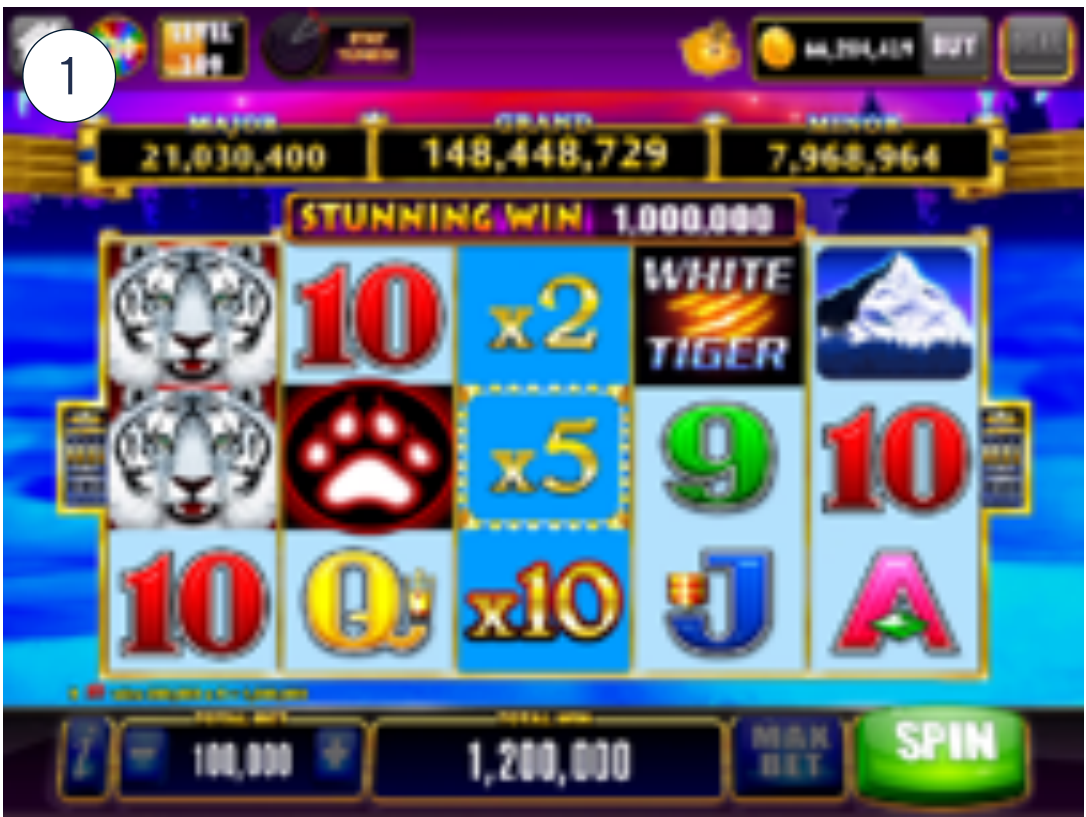
MARKET WATCH



3/1/19 - 3/31/19

NOTABLE RELEASES I

App	Machine	Key Image	Description
Cashman Casino	White Tiger	Jackpot Feature	In the <i>Jackpot Feature</i> , the center reel is filled with only multipliers and jackpots. Players select one of the three positions in the center reel. The symbol that lands in that position is the prize (1).
DoubleDown Casino	Green Luck	Multiplier Wild	Landing two full, consecutive reels of wilds will transform the second reel into a 2x multiplier. If a third, fourth, or fifth consecutive wild reel lands ... they will be transformed into 3x, 4x, and 5x multipliers (2).
House of Fun	Puss the Scoundrel Returns	Coin Collection	Players collect <i>Coins</i> while spinning to purchase <i>Gifts</i> . <i>Gifts</i> contain coins and bonus games. When all the <i>Gifts</i> in a set are opened, the <i>Character</i> is collected, a bonus game is awarded, and the next <i>Character Set</i> is unlocked.
Jackpot Party	Jackpot Block Party	Block Party Bonus	<i>Block Party Bonus</i> is a pick'em with one of three sections unlocked. Players select <i>Presents</i> in the active section to win coins, reveal pick'em bonuses, and more. A <i>Skull</i> symbol will end the round, collecting all the prizes (3).
Caesars Slots	8 Track	Dance Floor Bonus	Collecting three <i>Red</i> or three <i>Blue Dice</i> during spins triggers the <i>Dance Floor Bonus</i> mini-game. Players roll <i>Dice</i> to move the <i>Red</i> or <i>Blue Dancer</i> along a game board to win rewards.

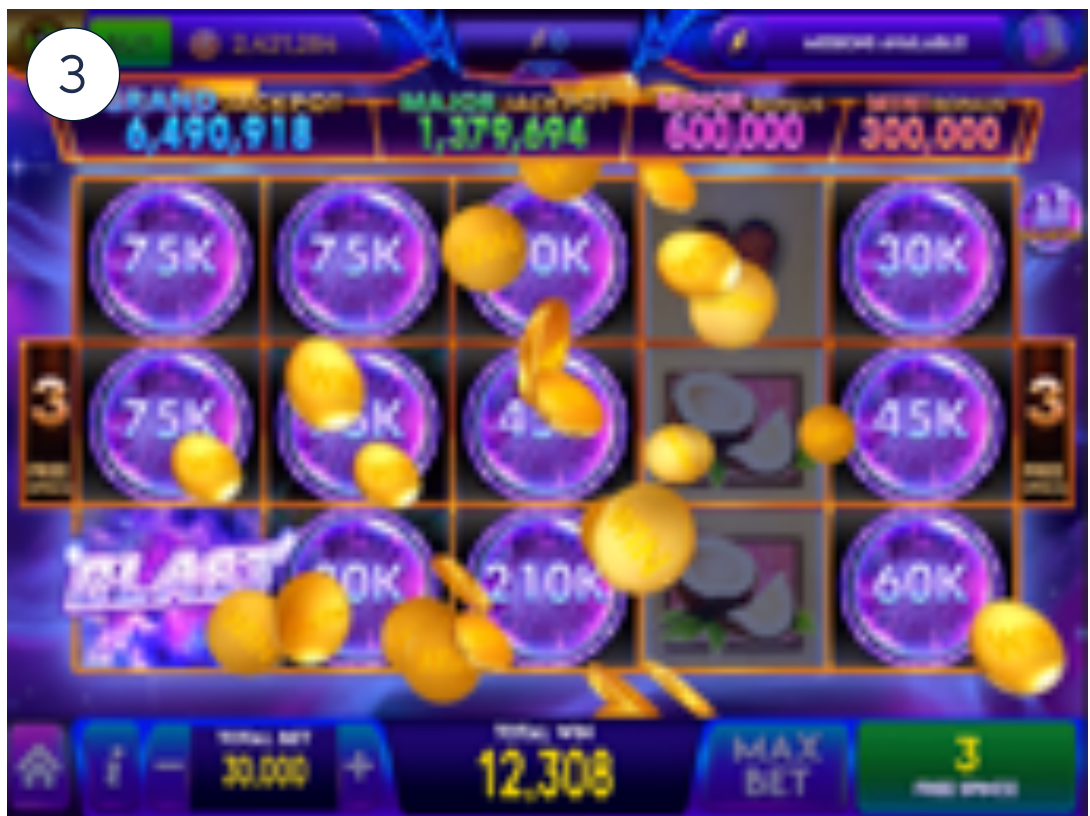


NOTABLE RELEASES II

App	Machine	Key Image	Description
myVegas Slots	Watch What Happens Live with Andy Cohen	Bonus with Credit Multiplier	<i>Word of the Game Bonus</i> symbols add credits to the <i>Drink Meter</i> . The credits are then multiplied by the multipliers won in the bonus game (1).
Gold Fish	Gozen	Bullseye Bonus	Landing <i>Bullseye</i> symbols during the <i>Bullseye Bonus</i> shoots arrows at a target. Hitting <i>Rings</i> fill an object above the corresponding reel. Once the object is filled, that reel turns to wilds and locks (2).
Lightning Link Casino	Pacific Princess Lightning Blast Sunset Ace Lightning Blast	Lightning Blast Feature in Hold and Spin	Landing <i>Orbs</i> rewards players ... even if <i>Hold and Spin</i> bonus is not triggered. During <i>Hold and Spin</i> , the <i>Blast</i> symbol will collect all the locked <i>Orbs</i> any time during the bonus. Players still collect the total at the end of the bonus spins (3).
Lotsa Slots	The Big Cheese	Cheese Wheel	Players fill a <i>Cheese</i> meter by landing <i>Cheese</i> symbols during base play. When full, a <i>Cheese Wheel</i> or <i>Super Cheesy Free Spins</i> bonus is triggered.

All Machines Released

Review all the machines released easily in the new [Data Tool](#) by filtering 'Year' and 'Month'



APPENDIX



SLOTS PRODUCT COUNCIL

These industry-leading slots experts strengthen the Expert Insights sections by analyzing the machines and providing commentary and analysis for the Report.

Arthur Lee	Robin Littleworth
<p>Game Design and Math Innovator Consultant</p> <p>LinkedIn Profile</p> <p>Arthur Lee is a leading slots consultant in social casino.</p> <p>Prior to going independent, Arthur was a Game Designer at Playtika for two and a half years. At Playtika, he headed the innovation of Lightning Link-type games with Fairy Bliss, Lady Havana, and one of the best performing games at House of Fun, City of Queens. Arthur designed record breaking titles such as Frankenbride, Lady Hotness, Giant's Treasure, and Beast.</p> <p>Before making an impact in the social mobile market, Arthur was a Senior Mathematician in RMG at American Gaming Systems (AGS) and KONAMI Gaming.</p> <p>He combines his experience of land-based slots with the lack of regulation in social games to provide the most competitive games in social and real money gaming.</p>	<p>Product and Operations Consultant</p> <p>LinkedIn Profile</p> <p>Robin Littleworth is a leading management consultant and with over a decade of experience producing hundreds of compelling slot games.</p> <p>Currently, he is an advisor to social casino companies on game design, studio operations, marketing, and strategic planning.</p> <p>Prior to his current consulting roles, Robin led all of the worldwide game development studios for Scientific Games, where he annually produced the world's most innovative slot titles for both land-based and online.</p>

DEMOGRAPHICS

A survey of 1,299 participants from the U.K. and U.S. were recruited to respond. The data formed patterns of game choices, slots preferences, and playing habits ... producing five distinct personas.

Demographics*					
	Fame Frank	Money Mike	Daydreamer Denise	Gambler Gail	Sensation Serena
Size	21%	22%	27%	19%	12%
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 are representative of the strength of each player persona.

PREMIUM PARTNERSHIPS

Liquid and 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	Kinrate Analytics	Sensor Tower
<p>Market Research</p> <p>Quadrant Strategies website</p> <p>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.</p> <p>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.</p>	<p>Player Personas</p> <p>Kinrate Analytics website</p> <p>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.</p> <p>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.</p> <p>The products of Kinrate Analytics have been developed in university-led research projects in collaboration of economists, psychologists, game scholars, and data scientists.</p>	<p>Mobile App Store Intelligence</p> <p>Sensor Tower website</p> <p>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.</p> <p>Clients harness Sensor Tower’s suite of app intelligence tools to...</p> <ul style="list-style-type: none">▸ 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



“You study, you learn, but you guard the original naïveté. It has to be within you, as desire for drink is within the drunkard or love is within the lover.”

– Henri Matisse

LiquidandGrit.com



Brett.Nowak@LiquidandGrit.com

