



LIQUID AND GRIT

SOCIAL CASINO REPORT

Competitive research and actionable recommendations for
product owners on innovations in social casino

AUGUST 2016

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INTRODUCTION



Dear Product Owner,

The rate of change in the social casino market has dramatically increased now that games are approved by the App Store within 48 hours. Use our Market Watch to stay up-to-date on these most recent developments. You will notice more feature summary slides - including information on games outside the top 30 grossing.

Despite all of the innovations, some mechanics in social casino remain fundamental. A strong level progression is still paramount. In Key Features and Recommendations, you will find a detailed review of level progression mechanics. This month's Quick Wins includes event boards, guest experience, ticket-based live ops, and polish items.

This is the first month you will see the New Machine Releases section that breaks down three machine releases from KONAMI Slots, Wizard of Oz Slots, and House of Fun. This section gives you volatility, bonus game hit rate, and win rate on these top machines.

The Game Deep Dive section dissects POP! Slots, PlayStudios' most recent game. POP! Slots is currently the 34th highest grossing iOS game, with some original social mechanics tied into slots play.

William Lind, a famous military strategist, once said, "[We] must learn to think creatively, to innovate, and to do the things that will most quickly seek out the enemy's weak spots and undo him." Playtika's \$4.4 billion acquisition, Rocket Games' \$170 million acquisition, and Pokémon GO's 60 million installs demonstrates the high value of creativity, innovation and opportunity.

All the best,

Brett Nowak
Editor-in-Chief

KEY FEATURES AND RECOMMENDATIONS

FEATURE RECOMMENDATIONS SUMMARY

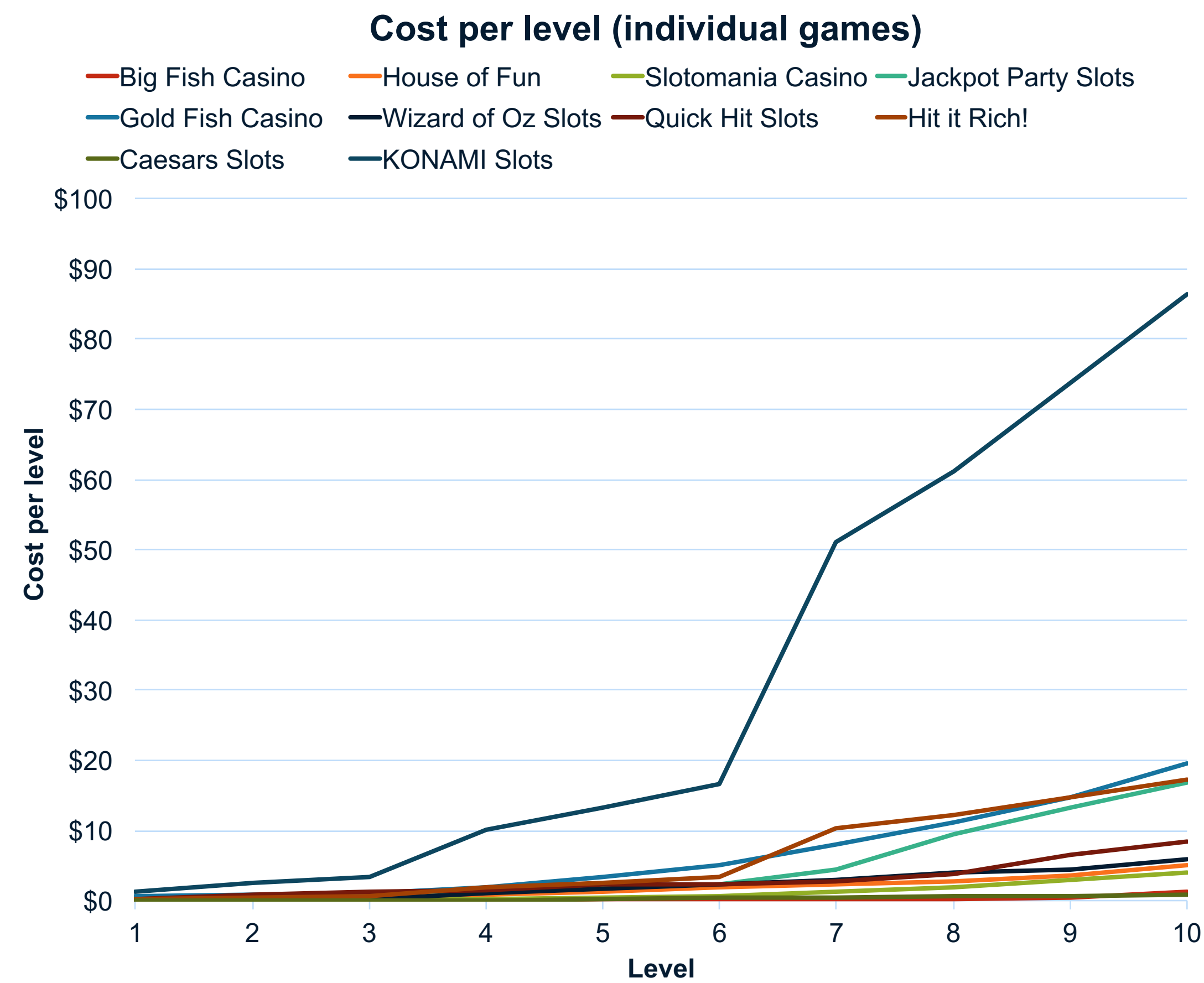
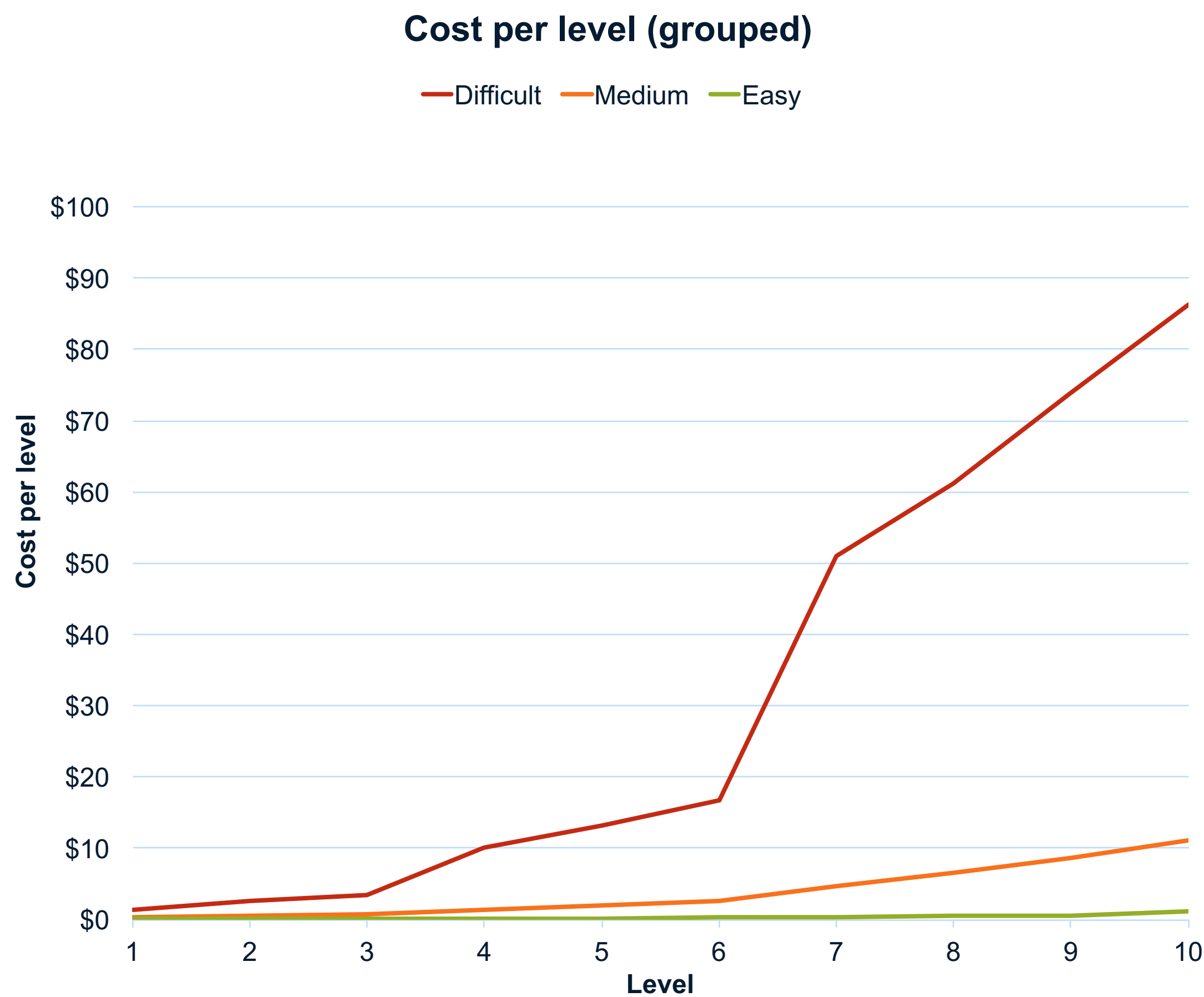
Adjust your level progression based on quality and quantity of machines. Test events boards for retention and improve the guest experience for non-Facebook players. Fill in roadmap gaps with polish items

Feature	KPIs	Recommendations
Bold Beat		
Level Progression	<ul style="list-style-type: none">New user retentionLifetime value	<ul style="list-style-type: none">Tune level progression based on quality and quantity of contentGive players choices, free spins, and multiple rewards for level-ups
Quick Wins		
Events Boards	<ul style="list-style-type: none">Retention and engagement	<ul style="list-style-type: none">Create an involved events board that engages players with quizzes, awards coins to leading players, and promotes social interaction with a Facebook fan pageEvents page can also introduce players to new game features as they debut
Guest Experiences	<ul style="list-style-type: none">Retain non-Facebook users	<ul style="list-style-type: none">Build a smooth guest experience so that users can easily and effectively log in or sign up using only their email for a nice coin reward
Ticket-based Live Ops Events	<ul style="list-style-type: none">Engagement	<ul style="list-style-type: none">As simple live ops events become rather common, consider implementing more involved events to keep players engaged
Polish Items	<ul style="list-style-type: none">Long-term retention	<ul style="list-style-type: none">Turn screen lock off during auto spin, add pre-release marketing, and trigger XP boosts to sink wallets

BOLD BEAT: LEVEL PROGRESSION

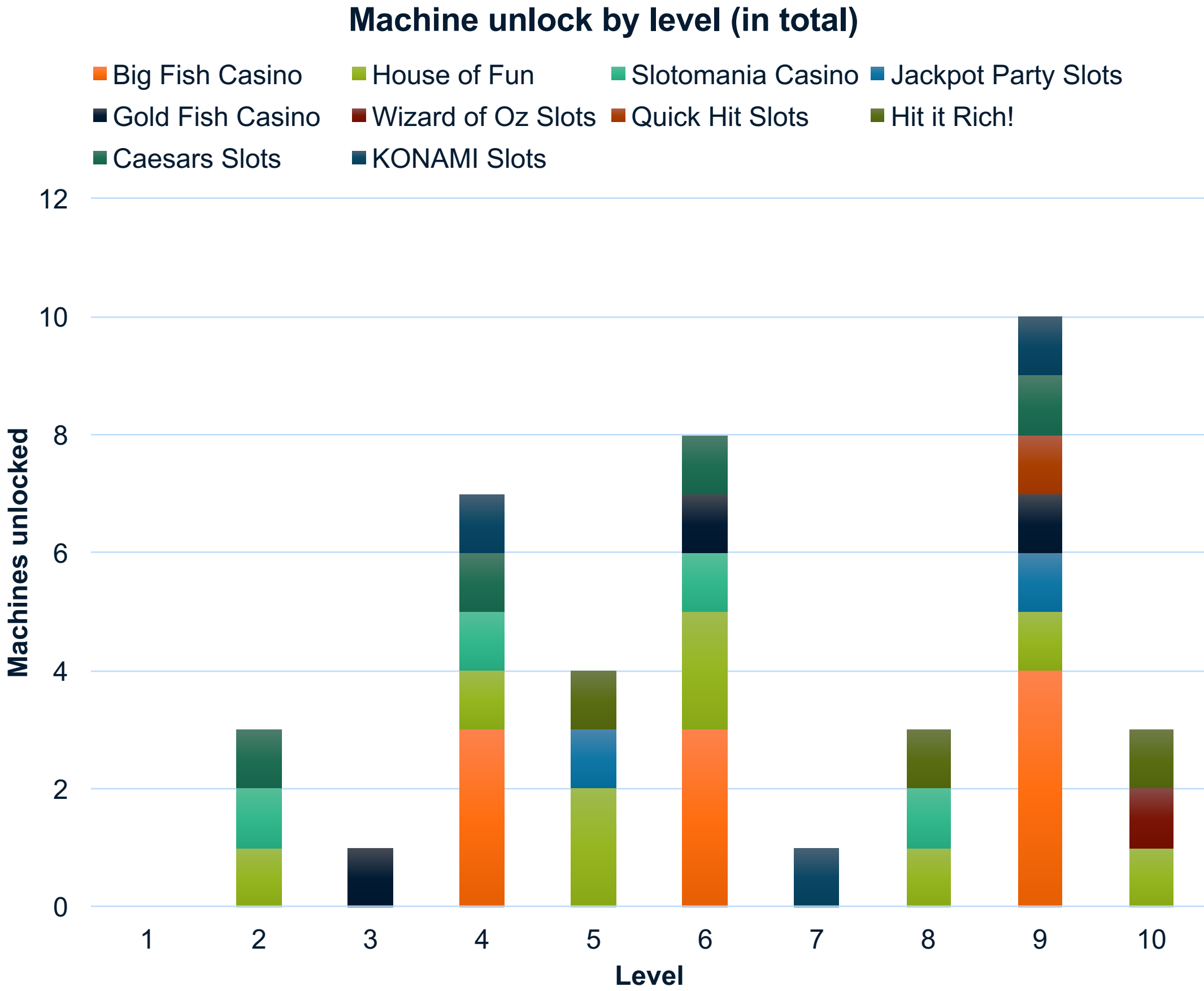
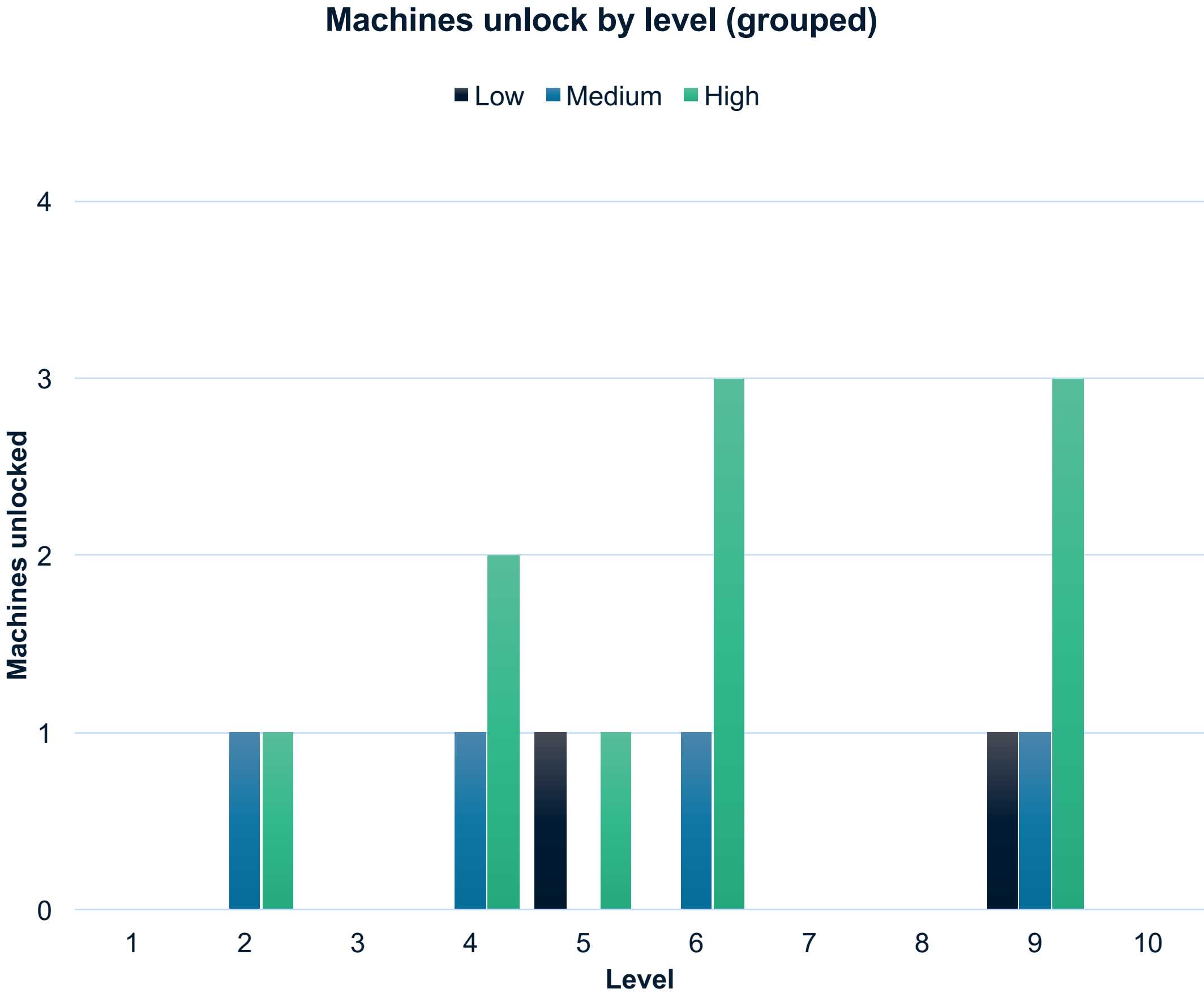
LEVEL PROGRESSION COST

KONAMI Slots has the most difficult level progression. Big Fish Casino and Caesars Slots are both easy. The rest of the games are medium difficulty



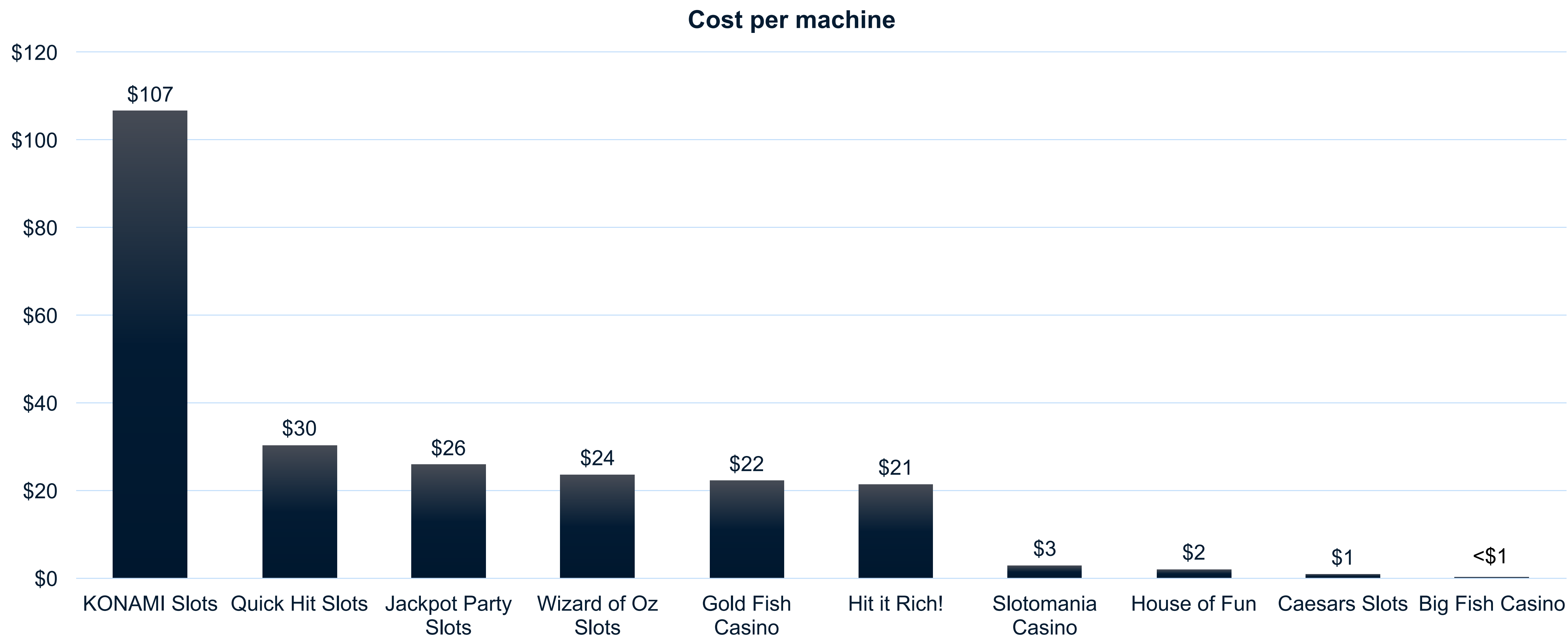
MACHINE UNLOCK BY LEVEL

Jackpot Party Casino, Wizard of Oz Slots, and Quick Hit Slots are all low machine releases.
Slotomania Casino, Gold Fish Casino, Hit it Rich!, Caesars Casino, and KONAMI Slots are all medium.
Big Fish Casino and House of Fun are high



COST PER MACHINE

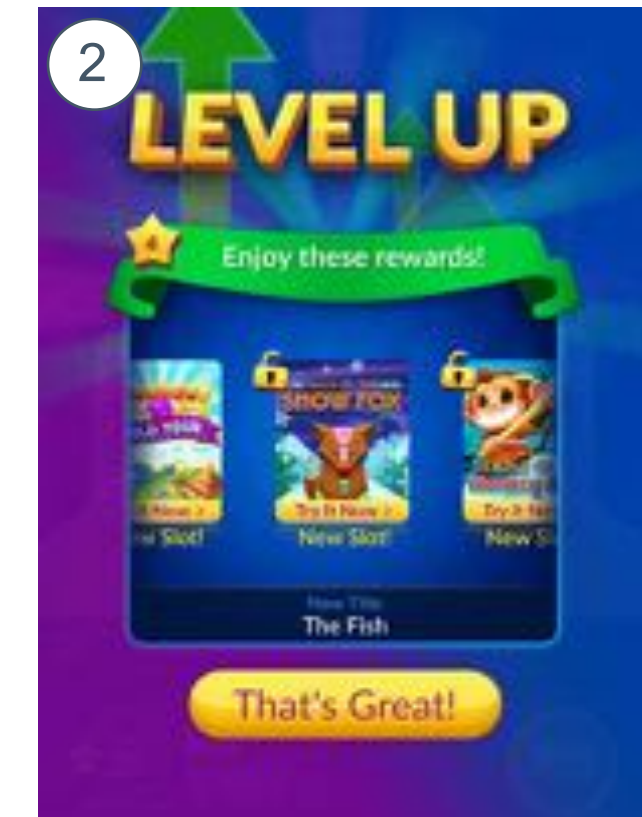
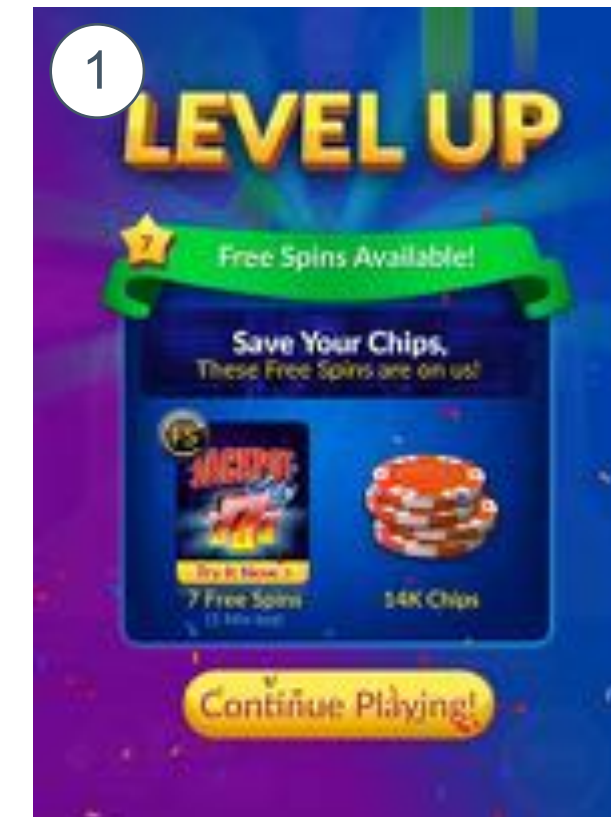
Adjust cost per machine based on the value of the machine IP and the amount of machine content.
KONAMI Slots, for example, prices their machines at \$107 based on strong IP and limited content



RECOMMENDATIONS

Tune level progression based on quality and quantity of content. Give players choices, free spins, and multiple rewards for level-ups

- **Give free spins when new machines are unlocked:** In Big Fish Casino, when new machines are unlocked players receive seven free spins (image 1).
- **Make winnings somewhat random:** In Big Fish Casino, players unlock four, three, one, or no machines upon level-up (image 2).
- **Allow players to choose a slot machine to unlock:** In Jackpot Party Casino, players may pick one of two machines when they hit level five (image 3).
- **Start levels partially complete:** In Jackpot Party Casino, XP rolls into the next level (as opposed to starting over at each level). Players are more likely to complete a progress bar if the bar starts partially complete (image 4).
- **Market right after level-ups:** In Slotomania, non-Facebook connected players will see a full-screen dialogue marketing the value of Facebook connect right after the level-up reward (image 5).
- **Attach feature introductions to levels:** New users in Slotomania are introduced to features as they level-up to appropriate levels.
- **Provide multiple level-up rewards:** Vegas Downtown Slots has four rewards for players: max bet increases, power bonuses, bonanza bonus increases, and status points (image 6).



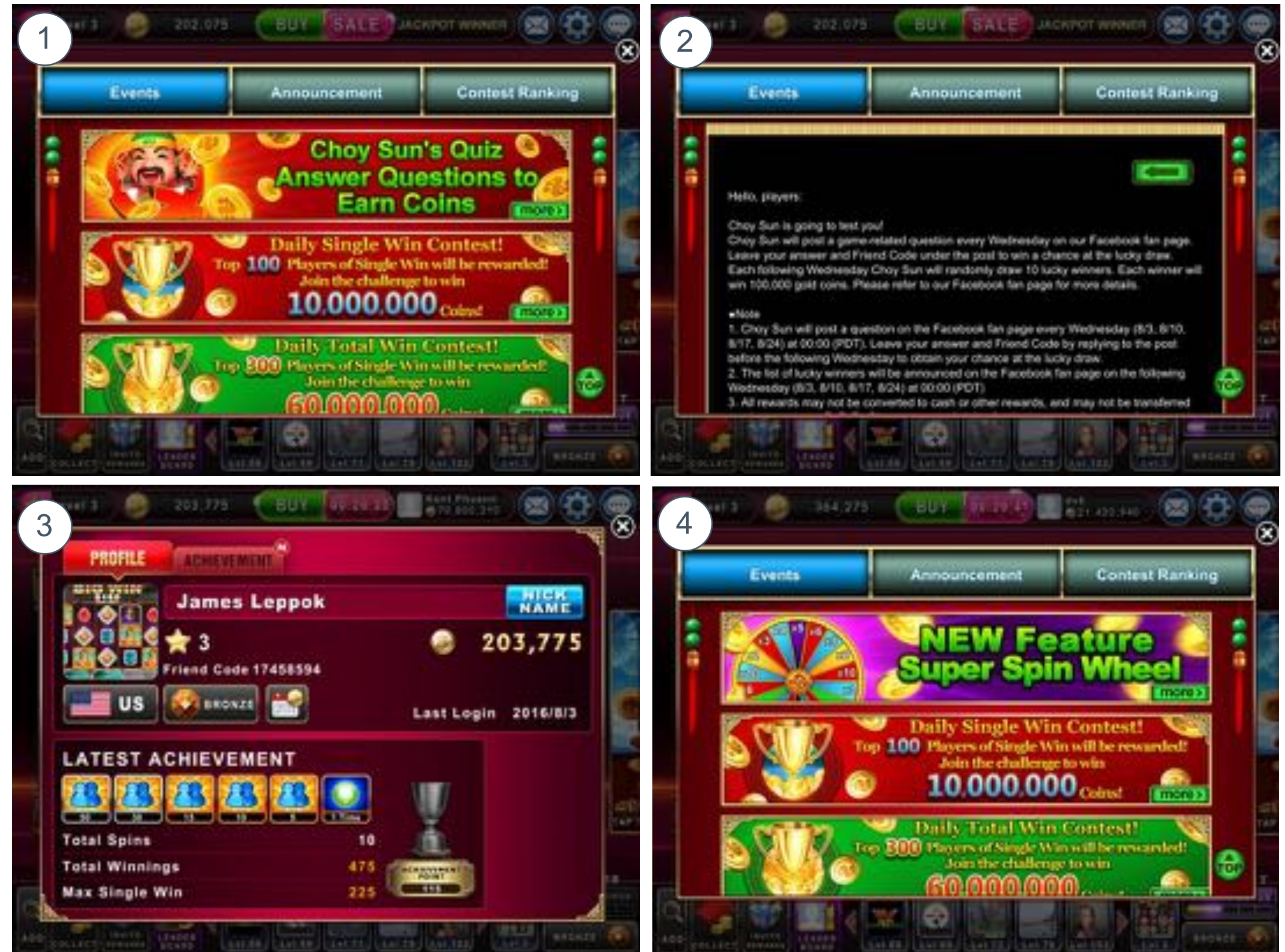
QUICK WINS

- Events Boards
- Guest Experiences
- Ticket-Based Live Ops
- Polish Items

EVENTS BOARDS

FaFaFa – Real Casino Slots has an events board that keeps players organized and promotes daily game play

- An events board is displayed upon app entry for players. The board includes all active daily events for the player (image 1).
- Clicking on an event opens a message to the player (image 2).
- Players receive a friend code to collect coins on the fan page (image 3).
- New features, like the super spin wheel, are also included in the board (image 4).
- Events include:
 - Quizzes: A game-related question is posted on the Facebook fan page. Players must leave their answer and friend code. Ten winners are selected weekly.
 - Single win leaders: Players who win the most coins in a single machine are rewarded coins daily.
 - Total win leaders: Players who win the most coins on any machine are rewarded coins daily.
 - New feature announcements: The new achievements feature was marketed in the events board.
 - Fan page promo: A link to the Facebook fan page is also included.
- **Create an involved events board that engages players with quizzes, awards coins to leading players, and promotes social interaction with a Facebook fan page.**
- **Your events page can also introduce players to new game features as they debut.**



GUEST EXPERIENCES

DoubleDown Casino provides players with a nice email-only login flow to their guest experience

- Players in DoubleDown Casino have the option of logging in with Facebook or playing as a guest (image 1).
- Players can create a guest account or retrieve an account using email (image 2).
- Players are then asked to input their email and password in a two-step process (image 3).
- A confirmation dialogue is added (image 4).
- Players then receive an email with a promotion, like the chance to win a 100 million chips (image 5).
- Once players click on the email promotion and log into Facebook, DoubleDown Casino can associate that email with a Facebook account (image 6).
- **Build a smooth guest experience so that users can easily and effectively log in or sign up using only their email for a nice coin reward**



TICKET-BASED LIVE OPS

Elaborate live ops events in Slots! Lucky Play Casino includes levels, tickets, and a progress bar

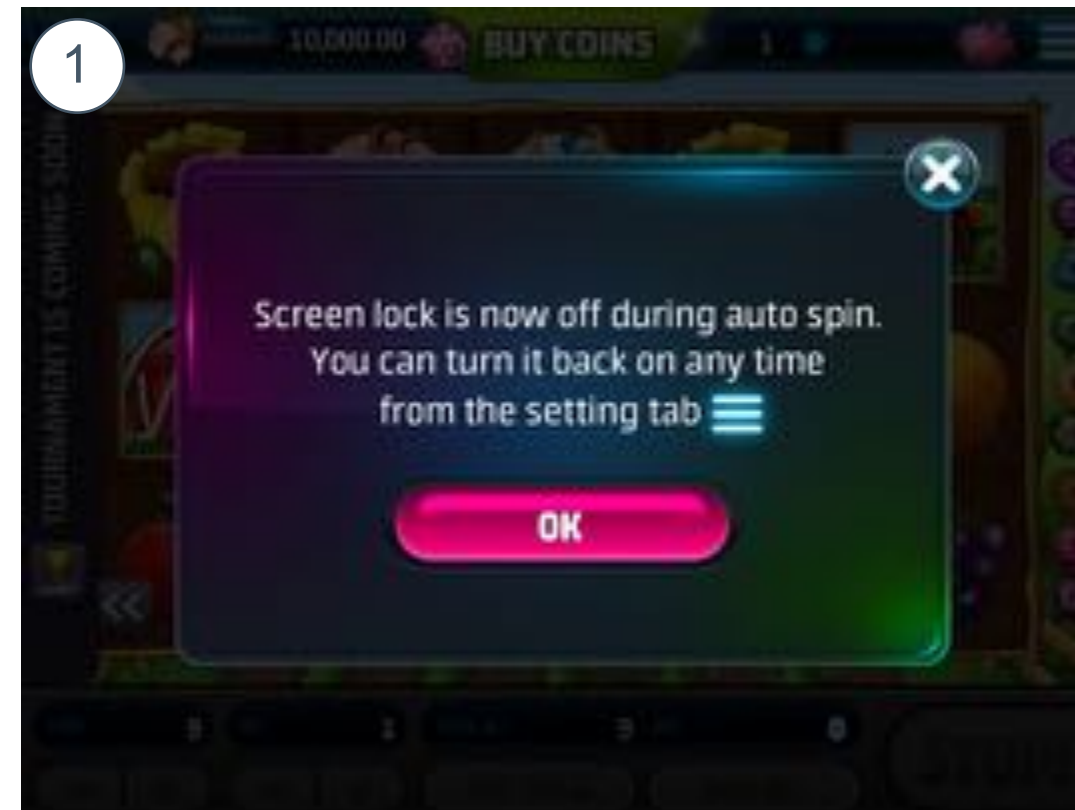
- Players in Slots! Lucky Play Casino are notified of the new machine and the live ops event associated with that machine upon app entry (image 1).
- The live ops event includes four levels, a countdown timer, rewards, and a link to see winners (image 2).
- The event gives players 1,000 in credits. Players must achieve a score of 755,000 to beat the level. Score is calculated by coins won (image 3).
- The machine has a progress bar at the top, showing players how they are progressing towards beating the level (image 4).
- When players do not beat a level, they are given the option to start over or buy 10 more spins with two tickets (image 5). Players are given 10 tickets to start and may purchase 10 tickets for \$0.99.
- Players win less than \$0.01 worth of coins for beating the level (image 6).
- **As simple live ops events have become rather common, consider implementing more involved events like this to keep players engaged.**



POLISH ITEMS

Turn screen lock off during auto spin, add pre-release marketing, and trigger XP boosts to sink wallets

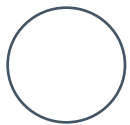





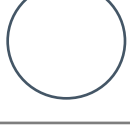



- **Turn off screen lock during auto spin:** When players turn on auto spin in Slotomania, Slotomania turns screen lock off and notifies players that screen lock is off (image 1).
- **Pre-market features a week before a release with a countdown timer:** In Huuuge Casino, pre-marketing for the Billionaires' League was released days in advance with a countdown timer (image 2).
- **Market an update with the next machine release:** In Slots! Lucky Play Casino, players are shown the newest machine and told to upgrade in order to play that machine (image 3).
- **Monetize at random times, like free spins:** DoubleUp Slots monetizes players right after free spins, triggering an upsell dialogue after free spins (image 4).
- **Trigger increased XP after a player's wallet grows too large:** After a huge win in Wizard of Oz Slots, the Fire XP dialogue surfaces with a seven-minute countdown timer to sink the player's now-large wallet (image 5).
- **Give players bonus coins for updating:** In Vegas Downtown Slots, players receive 6K coins, which is worth less than \$0.01. Consider awarding players a larger bonus for updating given the importance of playing new updates (image 6).



MARKET WATCH AS OF 8/12/16

TOP 10 GROSSING

DoubleDown Casino released a daily challenges feature. Two new machines released in House of Fun with challenges

Game	Change	Date	Notes
Big Fish Casino		7/6/16	No release this month
DoubleDown Casino		7/5/16	Daily challenges fully released (image 1)
GSN Casino		8/4/16	Video bingo and high-quality machine released (image 2). Secret machine coming soon
Slotomania Casino		7/20/16	Jackpot of Oz machine released to all with live ops event (image 2)
House of Fun		7/26/16	Three new machines added with challenges and update to the primary bonus with a wheel of fun (image 3)
Heart of Vegas		8/10/16	New machine and jackpots added to recently released machine
Jackpot Party Casino		7/14/16	No release this month
Hit it Rich!		7/20/16	Three new real-world IP machines (Shania Twain, Happy Days, and Skee-Ball)
Wizard of Oz Slots		7/19/16	New Twister machine released with mystery gift mechanic on 7/19. Bug fixes and bonus mechanic released on 8/5
Bingo Bash		6/22/16	No release this month



TOP 11 – 20 GROSSING




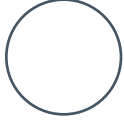


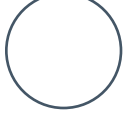

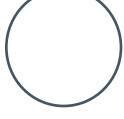

Bingo Blitz released a new Bingo room and slot machine. Scatter Slots released a machine unlocked to all players. Caesars Slots released contests with a buffalo-themed machine

Game	Change	Date	Notes
Bingo Blitz		8/11/16	New Bingo room and new slot machine (image 1)
Quick Hit Slots		7/19/16	No release this month
Gold Fish Casino		7/26/16	Small customer service improvements
Bingo Bash		7/21/16	Special room released
KONAMI Slots		7/19/16	Two new machines released
DoubleU Casino		8/4/16	New machine released 8/2. Bug fixes on 8/4
World Series of Poker		7/5/16	No release this month
Viva Slots Las Vegas		7/5/16	No release this month
Scatter Slots		8/4/16	Bug fixes on 7/22. New machine release unlocked and free to players on 8/2 (image 2). Small improvements on 8/4
Caesars Slots		8/10/16	New machine released on 7/26. New Buffalo-themed machine released 8/10 with contests (image 3)



TOP 21 – 30 GROSSING

DoubleUp Slots had a massive release that included profiles, achievements, new club challenges, and the vault. High 5 Casino released jackpots, a new daily prize wheel, and quests

Game	Change	Date	Notes
myVegas		8/2/16	New machine
Slot Bonanza		7/27/16	Marketing a new game, Wolf Slots, released under a different title, and three new machines
Black Diamond		7/27/16	Two new machines, one Miami Vice IP, and an improved new user experience 7/27. Another machine released 8/1
GSN Grand Casino		6/6/16	No new release
DoubleUp Slots		8/5/16	New machines, jackpots, player profiles, achievements (image 1), club challenges, and a vault (image 2)
High 5 Casino		8/5/16	New jackpots, coin store, two machines, and daily prize wheel (image 3). Bug fixes on 8/2. Quests on 8/5
Hot Vegas Slots Casino		6/20/16	No release this month
Jackpotjoy Slots		7/29/16	New classic machine released
Classic Vegas Casino		5/26/16	No release this month
Pharaoh's Way		7/27/16	New machine



DOUBLEDOWN CASINO

Released a daily challenge system tied to wins and similar to collections

- Players are introduced to the new feature with a game entry dialogue (image 1).
- The daily challenges dialogue, which is accessible in the machine, shows one of the three daily challenges (image 2). The daily challenges are tied to machine win spins: players must collect three-of-a-kind wins with the 10 symbol to win coins.
- In total, players can win 10x their bet: \$0.80 worth of coins total in the daily challenge at the \$0.08 bet amount.
- The progress bar fills up as players collect items within a daily challenge (image 3).
- Winning a daily challenge does not disrupt automatic spinning, so players must open up the daily challenge to see their winnings (image 4).
- The second challenge is to collect 12 three-of-a-kind wins with the 10 symbol to win \$0.28, and the third challenge is the same: collect 34 three-of-a-kind wins with the 10 symbol to win \$0.40 (image 5).
- Players are notified when they win all the daily challenges so that they can complete the daily challenge at another bet amount (image 6).



WIZARD OF OZ SLOTS

Released the Wizard's Chamber, a progression challenge system where the challenges are incorporated into the machines

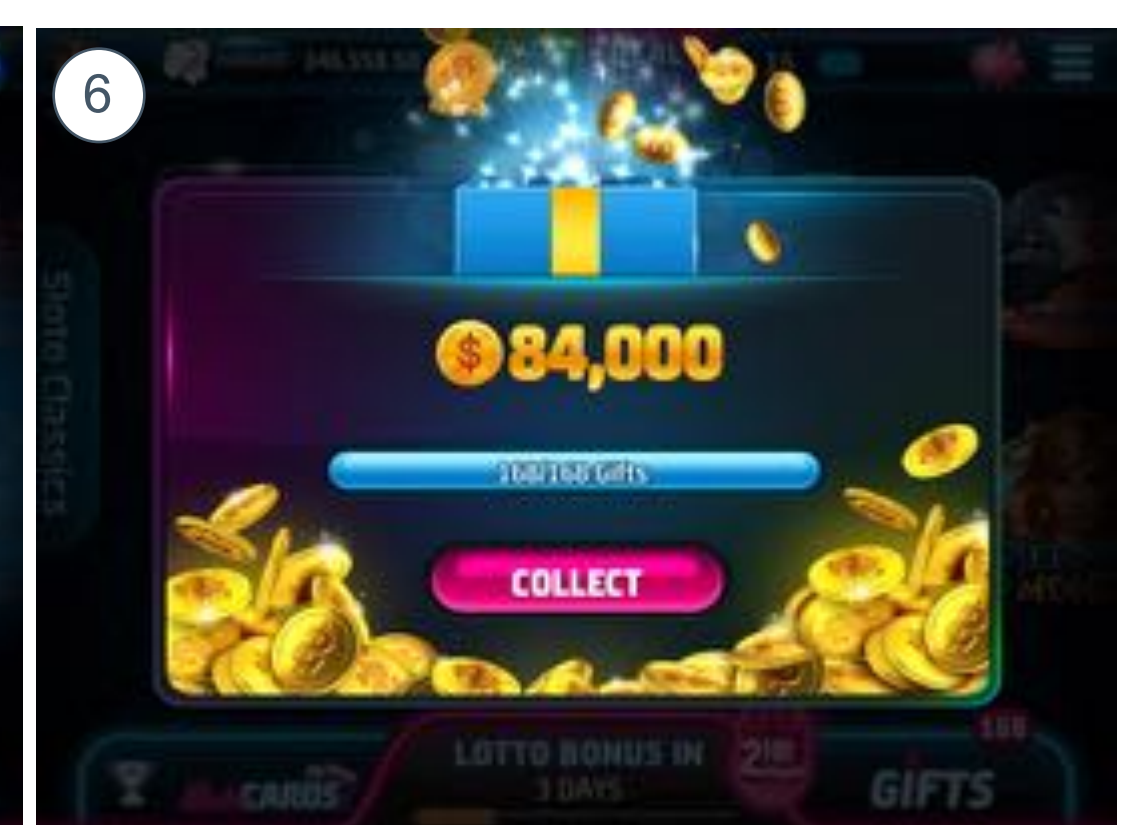
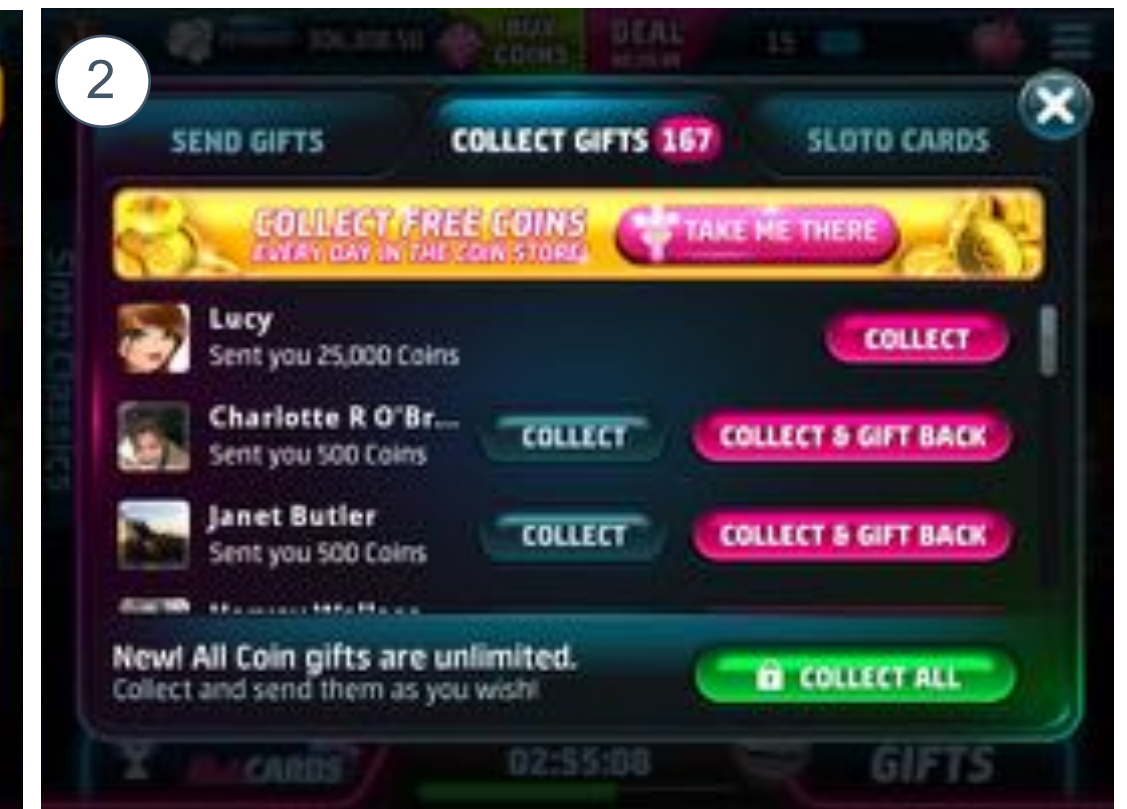
- Players must complete challenges to progress along a path and collect rewards (image 1).
- There is a countdown timer to the final wheel spin, and each completed challenge adds to the final reward (image 2).
- Challenges include hitting a 777 spin 125 times (image 3). The first challenge takes approximately 30 minutes to complete and gives players \$0.12 worth of coins and a wheel upgrade.
- Hitting a 777 spin triggers a progress bar in the machine UI to show players their progression towards completing the challenge (image 4).
- Completing a challenge triggers a completion dialogue (image 5).
- When the timer completes, players may spin the wheel to earn a multiple on their prize (image 6).



SLOTOMANIA

Released unlimited collect and send gifts functionality to players and 2x mystery gift sends to all players

- Upon app entry, Slotomania triggers a video that includes an animated hostess and a real host. The two introduce the latest updates: send and collect all gifts and twice as many mystery gift sends (image 1). The latest updates are also marketed on the loading screen.
- Within the send gift dialogue, there is a collect all button that is locked to players who have not purchased in the past seven days (image 2).
- Clicking the locked collect all button takes players to the buy page where they can make a purchase to unlock the collect all functionality (image 3).
- After players make a purchase, they receive collect all for seven days, two hour power for seven days, and 36 status points (for a \$1.99 purchase) (image 4).
- Players are also rewarded a packet of Sloto Cards, which is shown in a separate dialogue (image 5).
- For seven days after a purchase, the collect all button in the collect gifts dialogue is unlocked. Pressing collect all triggers an animated dialogue that shows players all the gifts collected (image 6).



DOUBLEUP SLOTS

Released achievements, player profiles, new club challenges, and the vault

- Achievements are presented as a list, similar to the goals feature. Some achievements include; reach level six, return two days in a row, and reach a house prize (image 1).
- The vault may be opened with a \$4.99 purchase (image 2).
- Players can now edit their profiles, which include their VIP status, best balance, biggest win, and current balance (image 3).
- The fast fortune prize is a time-based unlockable prize. When players are out of time, they are notified with a dialogue that covers the reels. Clicking add time takes players to a fast fortune dialogue with 60M coins for \$1.99. This is the same conversion amount given on the buy page.
- DoubleUp Slots continues to invest in clubs by adding club challenges. The winning club receives 2x club rewards (image 4).

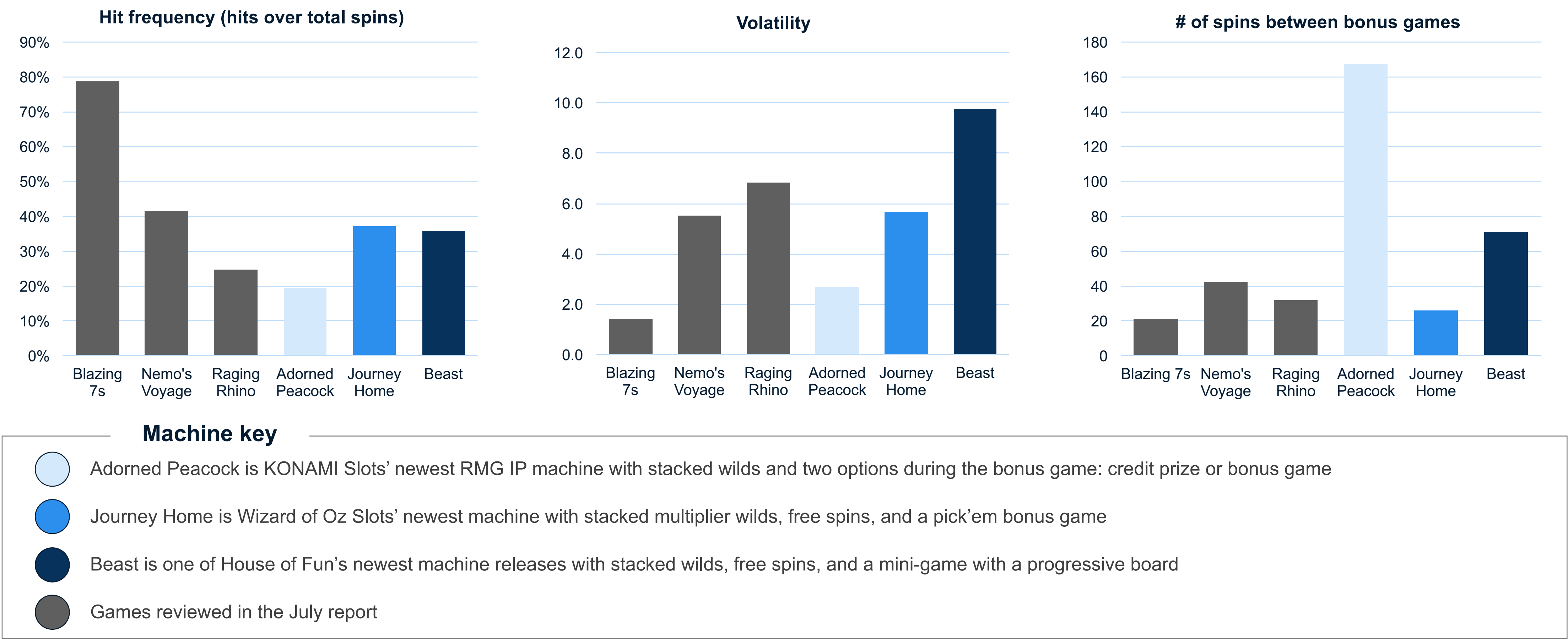


NEW MACHINE RELEASES

- **Adorned Peacock** (KONAMI Slots)
- **Journey Home** (Wizard of Oz)
- **Beast** (House of Fun)

NEW MACHINE RELEASE SUMMARY

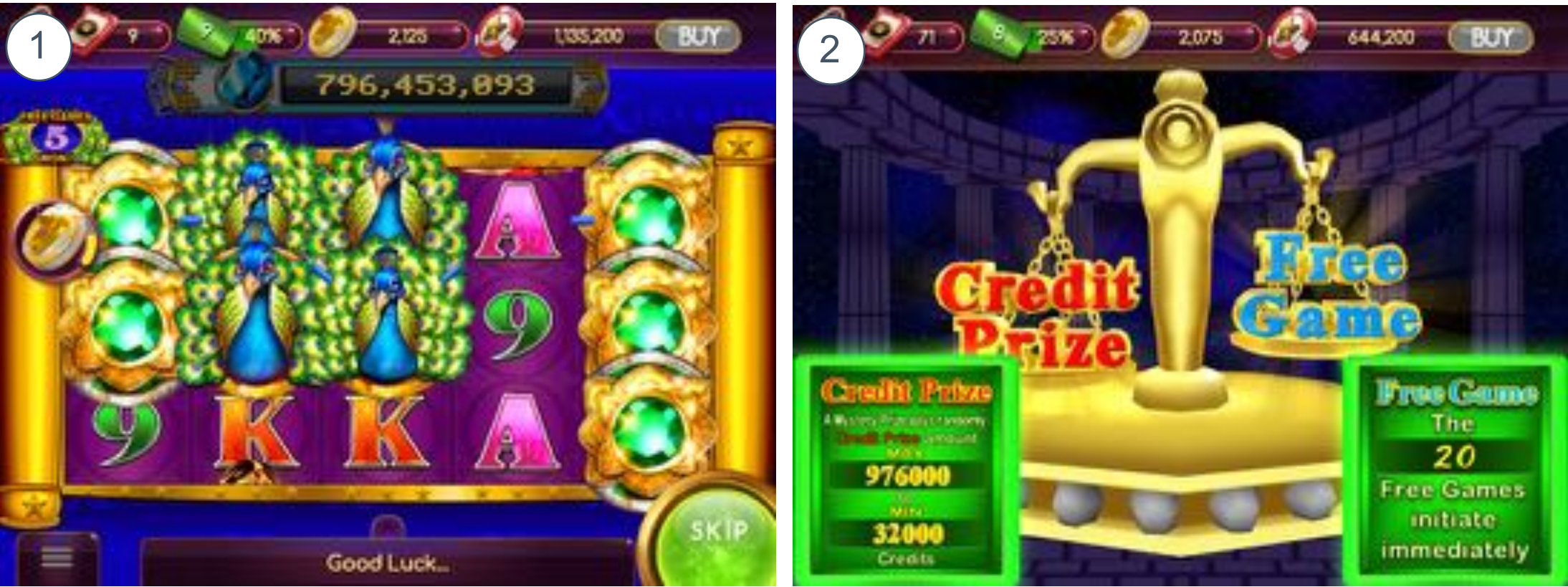
KONAMI Slots released a machine with infrequent bonus game hits and a choice-based bonus game. Wizard of Oz released a casual game with a pick'em bonus. House of Fun released a machine with a fairly unique mini-game



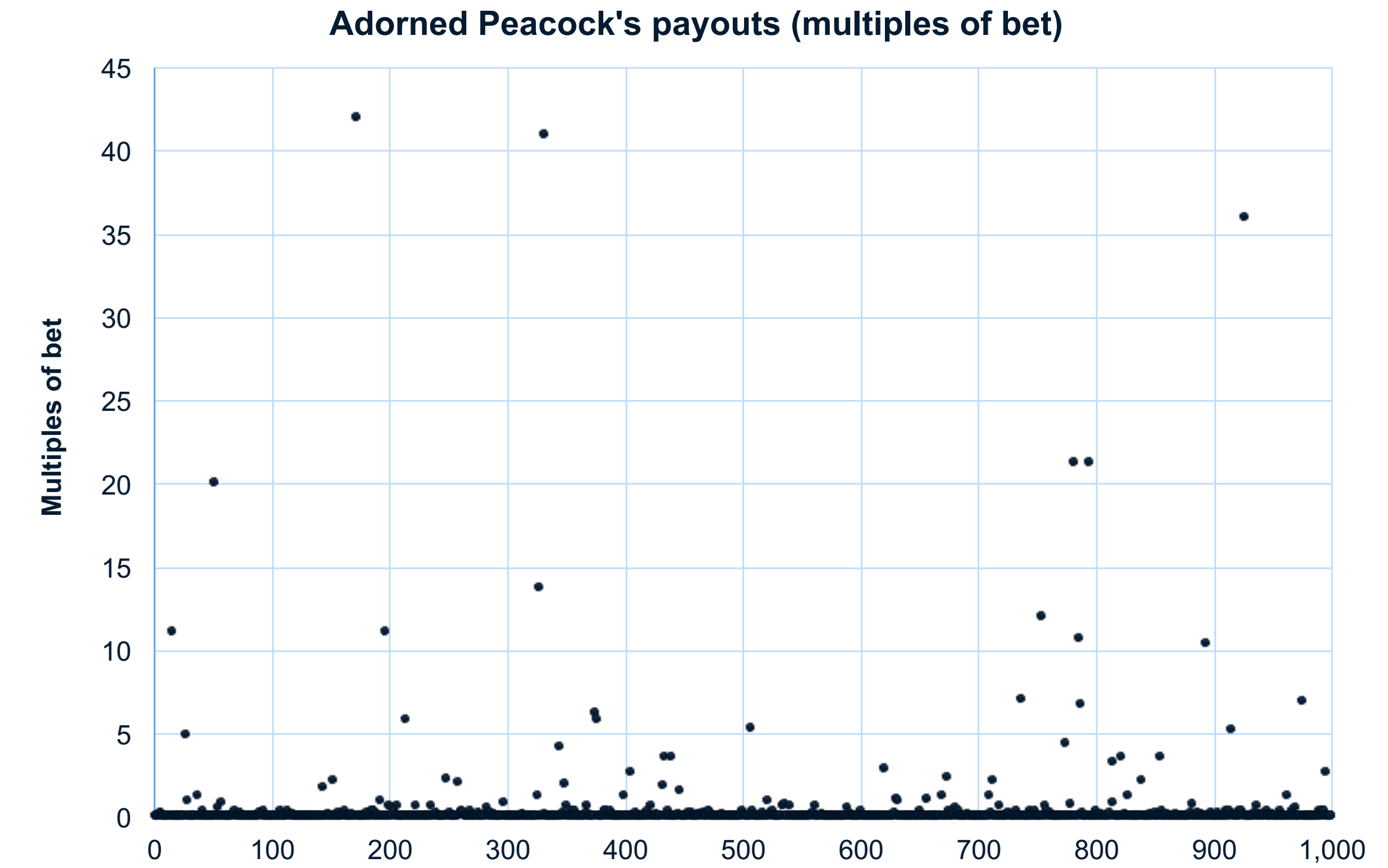
KONAMI SLOTS

Adorned Peacock, a KONAMI IP machine, has a low hit frequency, few bonus game hits, and low volatility

Mechanics: Stacked wilds appear on the reels, and any symbol except wilds can be stacked (image 1). Players have an option of credit prize or bonus game feature (image 2).



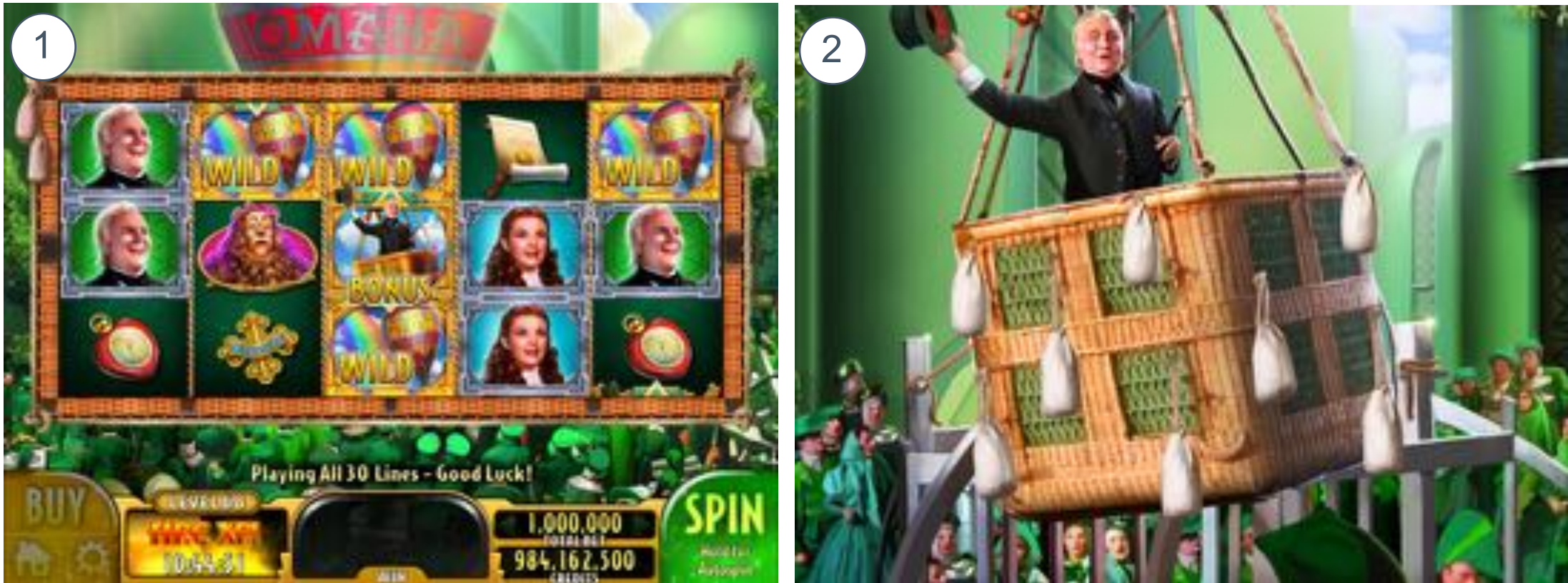
19%	Low hit frequency A 19% win percentage is a low percentage compared to other recently released games
167	Infrequent bonus game hits 1 in every 167 spins is a bonus game. This is a very low frequency of bonus game hits
42x	Small max wins The bonus games pay moderately. The max win in a bonus game is 42x the bet (Raging Rhino max win was 132x)
2.7	Low volatility The bonus game win amount is not large enough to make variability very high



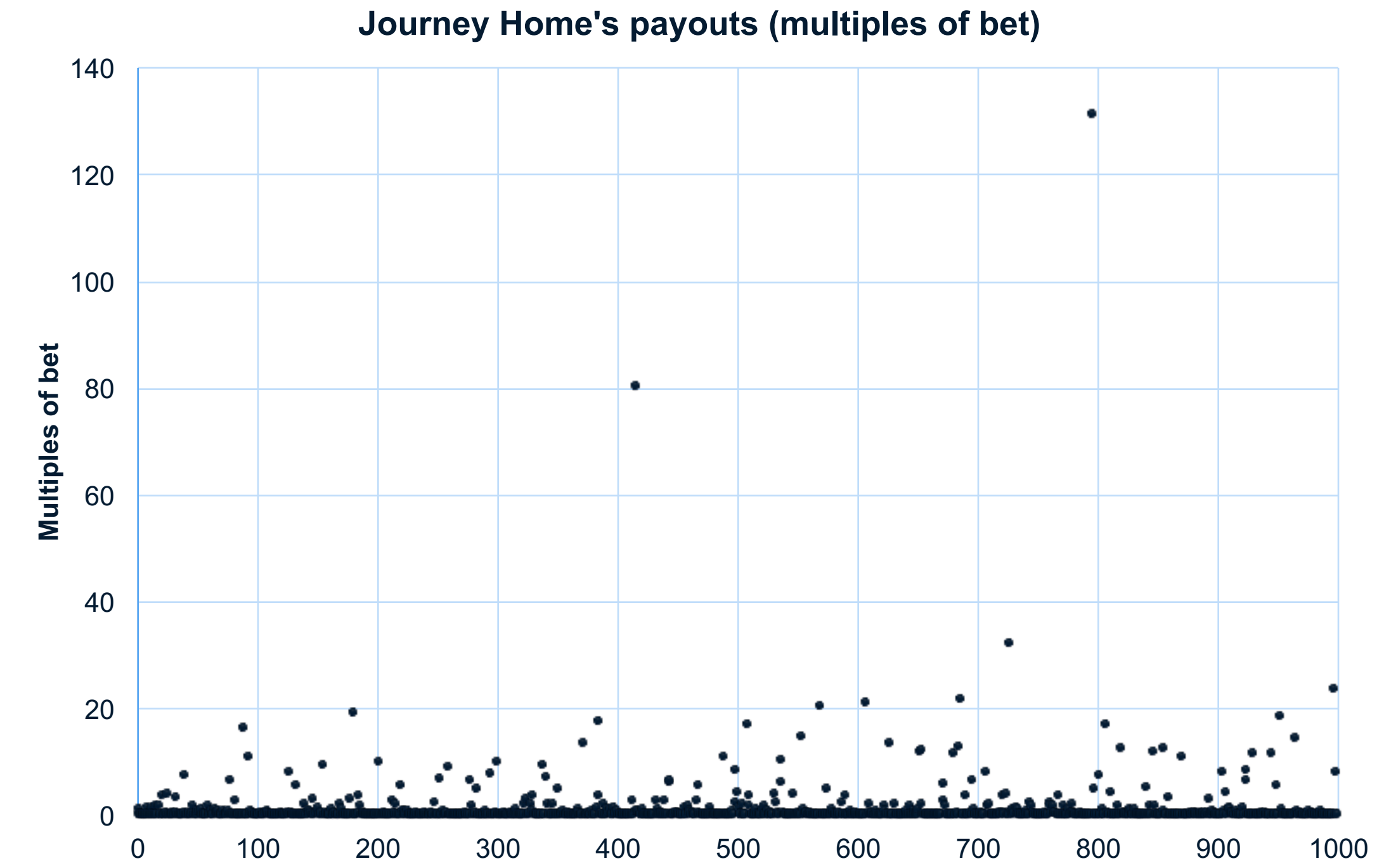
WIZARD OF OZ SLOTS

The Journey Home machine in Wizard of Oz Slots has an average hit frequency, frequent bonus game hits, and medium-high volatility

Mechanics: Stacked multiplier wilds (image 1), a free spin mode with an extra symbol, and a pick'em bonus game in which players must pick bags hanging on a hot air balloon basket (image 2).



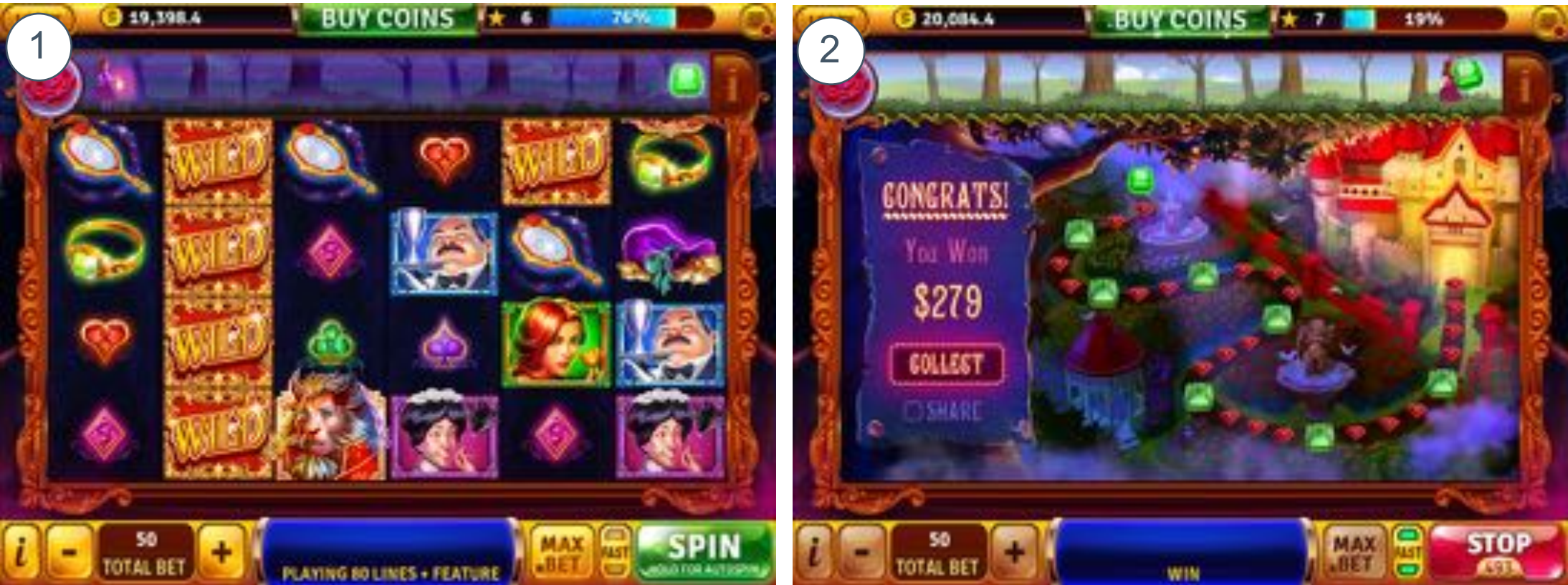
37%	Medium hit frequency A 37% win percentage is an average win percentage compared to other recently released games
26	Frequent bonus game hits 1 in every 26 spins is a bonus game. This is a very high frequency of bonus game hits
131x	Medium max wins A 131 max win might have been an outlier, but it is nonetheless a comparatively big max win
5.6	High volatility Volatility is fairly high with this machine



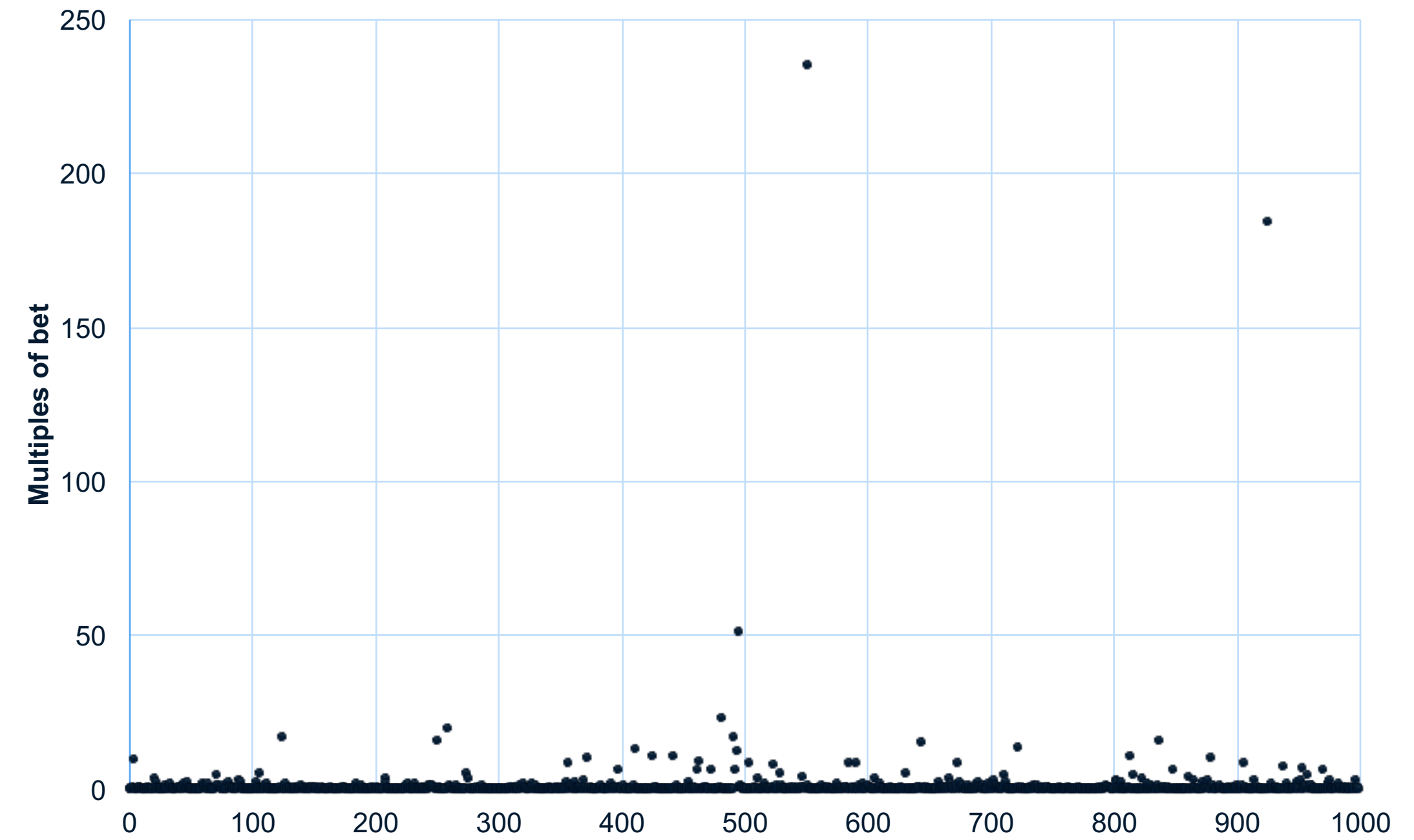
HOUSE OF FUN

The Beast machine in House of Fun has an average hit frequency, infrequent bonus game hits, and very high volatility

Mechanics: A 4 x 5 machine with stacked wilds (image 1), a free spin mode with sticky wilds, and a bonus mini-game (image 2) that is triggered when the character at the top of the machines progresses to the green gem (image 1).



Beast's payouts (multiples of bet)



36%	Medium hit frequency A 36% win percentage is an average win percentage compared to other recently released games
71	Average frequency bonus game hits 1 in every 71 spins is a bonus game
235x	Big max wins A 235 max win is the biggest max win multiplier compared to other games
9.8	Very high volatility Volatility is the highest with this machine, comparatively

GAME DEEP DIVE: POP! Slots

FEATURE SUMMARY



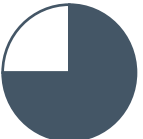
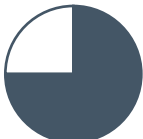

POP Slots! (Playstudios' new game) brings a social table to the slots experience competing against DoubleU Casino and Big Fish Casino

- POP! Slots content is organized by unlockable casinos. The first casino is MGM Grand and includes four machines (image 1).
- The game has a DoubleU Casino feel, with player icons (image 2), a real casino, and other live people.
- Players can either pick a machine directly on the games layout (image 3) or sit at a machine by walking through the lobby (image 4).
- All players at the table can share prizes and emojis (image 5).
- PlayStudios obviously continues to leverage connections with real-world rewards by providing players with cruise line, hotel, and other real-world benefits (image 6).



ECONOMY BREAKDOWN

The initial coin balance is comparatively small in POP! Slots, with a slightly more generous new user tuning at the default and minimum bet levels. Otherwise, the economy tightness is average

	Value	Tightness	Rank*	Notes
Coins-to-dollar ratio	78.8K		10/22	<ul style="list-style-type: none">The economy inflation is average compared to top-grossing slots games
Initial coin balance	\$0.37		21/22	<ul style="list-style-type: none">The initial value players receive is the second smallest
New user bet values	\$0.01 default \$0.01 minimum		18/22 15/22	<ul style="list-style-type: none">The initial default bet is cheapThe minimum bet is moderately cheap
New user tuning	48 default bet spins 48 minimum bet spins		16/22 18/22	<ul style="list-style-type: none">Players receive a below average number of spins at the default betPlayers receive a below average number of spins at the minimum bet
Total daily coin bonuses	\$0.67 primary \$1.44 secondary \$2.11 total		11/22	<ul style="list-style-type: none">Players collect an average number of coins daily compared to top-grossing slots games in the primary, secondary, and total coin bonuses

*Compared to the top 22 grossing social slots games

MACHINE COMPARISON

POP! Slots is not competing on slot machine quality but rather social interactions within the slot machine room

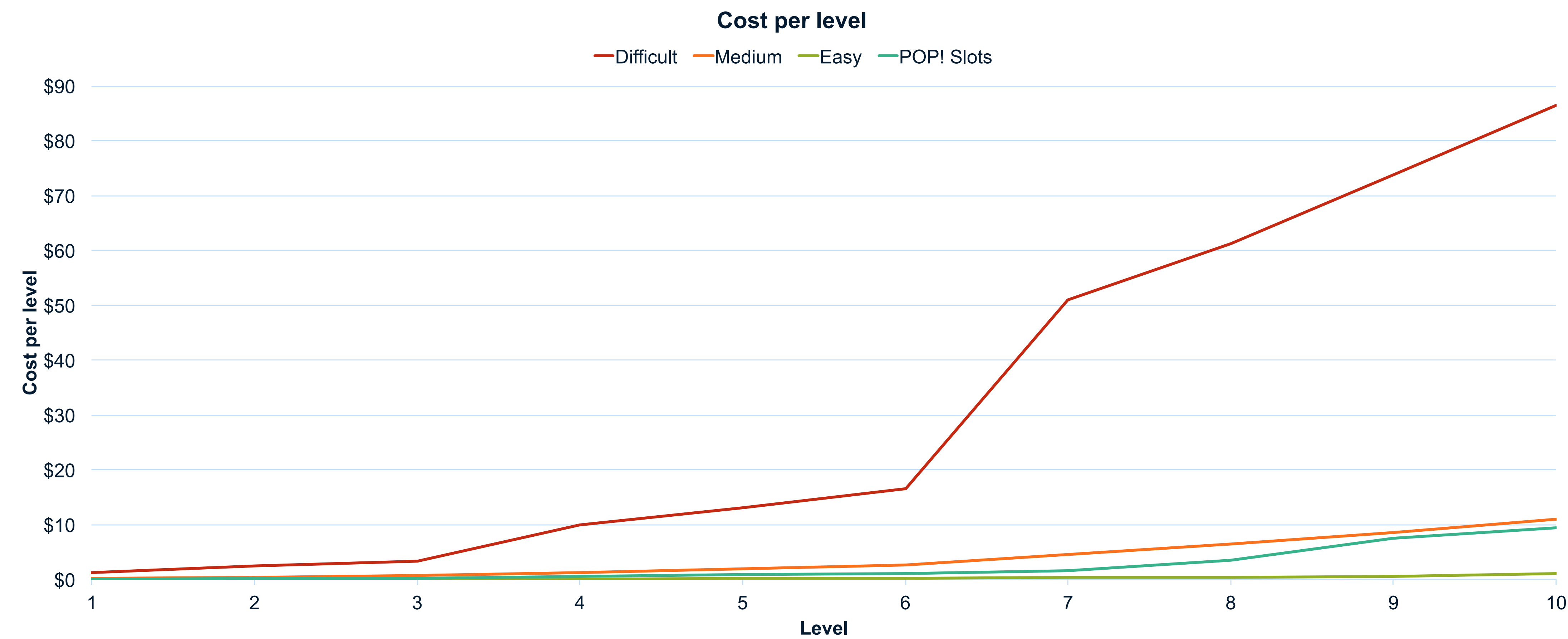
	Strength	Notes
IP	<div><div></div></div>	MGM machines and Wizard of Oz themed machines but no strong IP (image 1)
Mechanics	<div><div></div></div>	POP! Slots mechanics are fairly simple, with mostly 5 x 3 machines and free spin modes (image 2)
Jackpots	<div><div></div></div>	There are no progressive jackpots in the first five machines (image 3)
Social	<div><div></div></div>	Players can win coins based on other players' wins and even share bonus games (image 4)
Access	<div><div></div></div>	The first four machines are accessible to new players. The fifth machine is level-locked at level five (image 5)
Quality	<div><div></div></div>	The art, style, and VFX of the machines are moderate (image 6)



LEVEL PROGRESSION



POP! Slots has a level progression that is easy until level eight, when it increases to medium difficulty



APPENDIX

DATA COLLECTION PROCESS

Data is collected from market research, app intelligence tools, and a deep analysis of the game

Market research	Analysis of competing hypotheses	Game information
<ul style="list-style-type: none">• Transaction information comes from the iOS App Store's In-App Purchases tab. These packages are ranked based on number of transactions• Las Vegas player insights come from online sources like the Las Vegas Convention and Visitors Authority and the UNLV Center for Gaming Research• Progressive jackpot information comes from online research, specifically from Wizardofodds.com• Trending revenue, downloads, and package-rank data comes from Priori Data, a Liquid and Grit partner	<ul style="list-style-type: none">• <i>"Analysis of competing hypotheses (ACH) requires an analyst to explicitly identify all the reasonable alternatives and have them compete against each other for the analyst's favor, rather than evaluating their plausibility one at a time."</i> – CIA.gov• All the components of a game (e.g., features, economy, theme) compete against each other to determine the most impactful features• We illustrate how these components compete against each other to determine the most valuable features• We also incorporate the uniqueness of a feature in the market, comparing the feature across top-grossing and breakout slots games on iOS	<ul style="list-style-type: none">• Game information comes from a deep-dive analysis of each game• Return-to-player (RTP) and win percentage are found by tracking over 500 spins from a machine at a certain bet amount• In the economy section and economy-related slides, the coin value is determined by converting coins into money using \$5.00 worth of non-sale purchasable coins in each game. For example, if the minimum bet is 1,000 coins and players can purchase 500 coins for \$5.00, the value of the minimum bet is \$10.00. For games without a \$5.00 package, the next closest package is used

Move swift as the wind and closely formed as the wood. Attack like the fire and be still as the mountain.

– Sun Tzu, *The Art of War*

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