



LIQUID AND GRIT SLOTS REPORT

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

APRIL 2016

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Introduction



Dear Product Owner,

In this issue, we examine Quick Hit Slots, a game that was released September 2015 and is now the 75th highest grossing iOS game. Although this game is largely IP-driven, Quick Hit Slots has three core features valuable to your current and upcoming games: leveling systems, content unlock events, and viral flows.

To level lock content or not is often a big question in game design. Quick Hit Slots chose to level lock. So did over half of the 2015 breakout slots games. Innovations in leveling and game progressions are constantly surfacing in the gaming space. Accordingly, we draw recommendations from successful games, including Lifeline, a popular idle game, and Episodes, the 21st highest grossing iOS game.

In addition to level-locked content, Quick Hit Slots skillfully directs players to reach new content. The content unlock events mechanic increases the ROI of each machine release. To round out our recommendations, we look at Wizard of Oz Slots, which utilizes a VIP program, achievements, leveling, and expansions to optimize content releases. We include insights from Marvel Contest of Champions in our recommendations, as the game uses secondary currencies and content unlock events to maintain status as the 10th highest grossing iOS game.

Viral flows are not what they used to be, but they're still helping some games with installs. Big Fish Casino and DoubleU Casino have figured out virals. Quick Hit Slots also includes a few worth covering. As a result, the viral flows analysis includes Quick Hit Slots but bases recommendations largely on the greater slots market.

Finally, Quick Hit Slots' economy and wallet experience are well-designed, providing players with a volatile experience. These earn a thorough review in the Economy Deep Dive.

All the best,

Brett

QUICK HIT SLOTS: GAME OVERVIEW

Quick Hit Slots level locks strong IP-machines to players in a clean and simple UI

Daily bonuses

- Upon app-entry, players receive a daily bonus
- The daily bonus has a Quick Hit lottery, return bonus, and friend bonus
- There is also a bonus wheel given out every two hours



IP-Machines

- The machines in Quick Hit Slots have high IP value, a core factor of the game's success
- There is a progressive jackpot machine that is unlocked at levels 9, 32, 61, and 100
- There are 19 machines total (as of 4/15/2016)



Invite friends

- In the lobby, there is a gift giving flow, Facebook send gift flow, and multi-friend invite flow
- All three invite flows are analyzed in this report



Tournaments

- A tournaments bar is present on the left-hand side of the game screen
- The tournaments are free and appear on all machines
- There is only one tournament play at any given time, and there are lapses between tournaments



KEY FEATURES AND RECOMMENDATIONS

FEATURE RECOMMENDATIONS SUMMARY



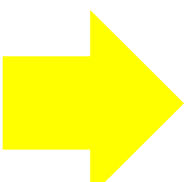
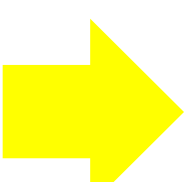

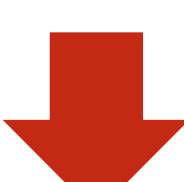
Quick Hit Slots has strong IP *and* valuable core mechanics, including leveling systems, content unlock events, and viral flows. Invest some of the current roadmap to improve the core mechanics.

| Feature | Impact | Recommendations |
|-----------------------|---|---|
| Leveling systems | <ul style="list-style-type: none">Increase LTV | <ul style="list-style-type: none">Add both unlocked and level-locked content to the gameTest new innovations with a dynamic story, then monetize with choice-based upsells |
| Content unlock events | <ul style="list-style-type: none">Near-term revenue | <ul style="list-style-type: none">Unlock content through VIP programs, secondary currencies, and fill-the-meter mechanicsRe-release proven content to maximize the content’s ROI |
| Viral flows | <ul style="list-style-type: none">Increase organic installsImprove retention | <ul style="list-style-type: none">Invest in social: a difficult but valuable component of mobileConsider social boosts, monetizing gift accepts, and socially integrated invites |

BACKGROUND DATA



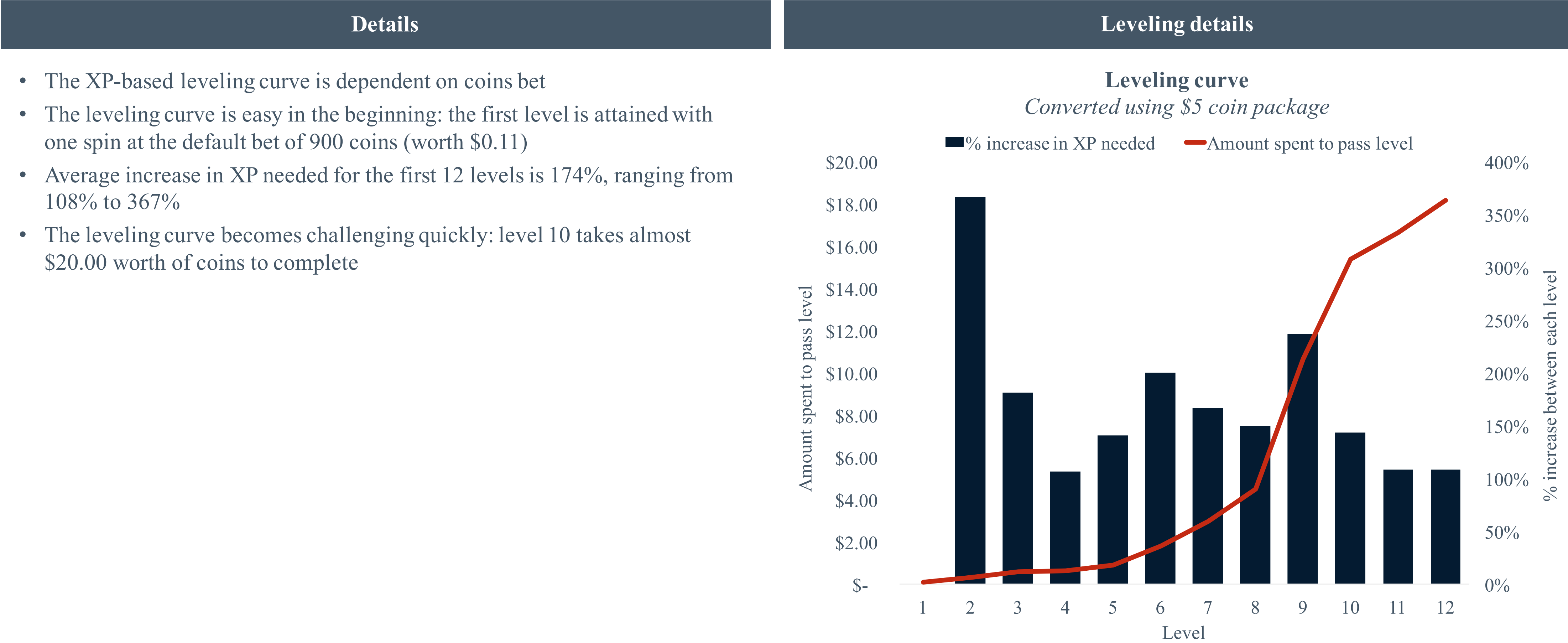
Machine IP, leveling curve, and the economy are the driving forces behind Quick Hit Slots’ success. Content unlock events and viral flows are valuable components but more successful in other games.

| Feature | Strength | Contributing to success |
|-----------------------|---|---|
| Machine IP |  | Yes. The machines in Quick Hit Slots are well-known, real-world slot machines and a key component to the game’s breakout success. |
| Leveling curve |  | Yes. Leveling curves are making a comeback; a majority of the 2015 breakout slots games released content based on leveling. Scatter Slots, Caesars Slots, Viva Slots Las Vegas, KONAMI Slots, and Quick Hit Slots all gate content behind levels. |
| Content unlock events |  | Somewhat. With support from strong IP, both the preview slot and featured slot icons are prominently placed in the lobby. Wizard of Oz Slots, which also has strong IP, uses several mechanics to optimize content releases. |
| Viral flows |  | Somewhat. Although Quick Hit Slots does a nice job with virals, our recommendations are largely based on other leading slots games. |
| Economy |  | Yes. The economy is built to give players a solid taste of the game before sinking their wallets aggressively. This process is repeated with the comparatively large daily coin bonuses, but those bonuses get sunk quickly with expensive minimum bet amounts |
| Primary coin bonus |  | No. The primary coin bonus has some nice features but is not superior to the current primary coin bonuses in the social casino space. |

LEVELING SYSTEMS

FEATURE SUMMARY

Leveling in Quick Hit Slots is fairly traditional, with an XP-based leveling curve that starts out very easy and becomes increasingly more difficult



TOP-GROSSING: MARKET INFO

Four of the top ten grossing iOS slots games have level-locked content. House of Fun and Jackpot Party Casino combine both free and level-locked content.

| Game | Strength | Comments |
|----------------------|-------------|--|
| Slotomania Casino | <div></div> | <ul style="list-style-type: none">Strong focus on leveling system (image A) |
| Wizard of Oz Slots | <div></div> | <ul style="list-style-type: none">Strong focus on leveling system (image B) |
| House of Fun | <div></div> | <ul style="list-style-type: none">Combination of no leveling and leveling system (image C) |
| Jackpot Party Casino | <div></div> | <ul style="list-style-type: none">Combination of no leveling and leveling system |
| Hit it Rich! | <div></div> | <ul style="list-style-type: none">All machines unlocked |
| GSN Casino | <div></div> | <ul style="list-style-type: none">All machines unlocked |
| DoubleU Casino | <div></div> | <ul style="list-style-type: none">All machines unlocked |
| Big Fish Casino | <div></div> | <ul style="list-style-type: none">All machines unlocked |
| DoubleDown Casino | <div></div> | <ul style="list-style-type: none">All machines unlocked |
| Heart of Vegas | <div></div> | <ul style="list-style-type: none">All machines unlocked |



BREAKOUT GAMES: MARKET INFO

Level-locked content is found in five of the top eight 2015 breakout slots games

| Game | Strength | Comments |
|------------------------------|-------------|--|
| Scatter Slots | <div></div> | <ul style="list-style-type: none">Strong focus on leveling system–gameplay with and without leveling (image A) |
| Caesars Slots | <div></div> | <ul style="list-style-type: none">Strong focus on leveling system (image B) |
| Viva Slots Las Vegas | <div></div> | <ul style="list-style-type: none">Strong focus on leveling system (image C) |
| KONAMI Slots | <div></div> | <ul style="list-style-type: none">Strong focus on leveling system |
| Quick Hit Slots | <div></div> | <ul style="list-style-type: none">Strong focus on leveling system |
| DoubleUp Slots | <div></div> | <ul style="list-style-type: none">All machines unlocked |
| Old Vegas Slots | <div></div> | <ul style="list-style-type: none">All machines unlocked |
| Slots - Classic Vegas Casino | <div></div> | <ul style="list-style-type: none">All machines unlocked |

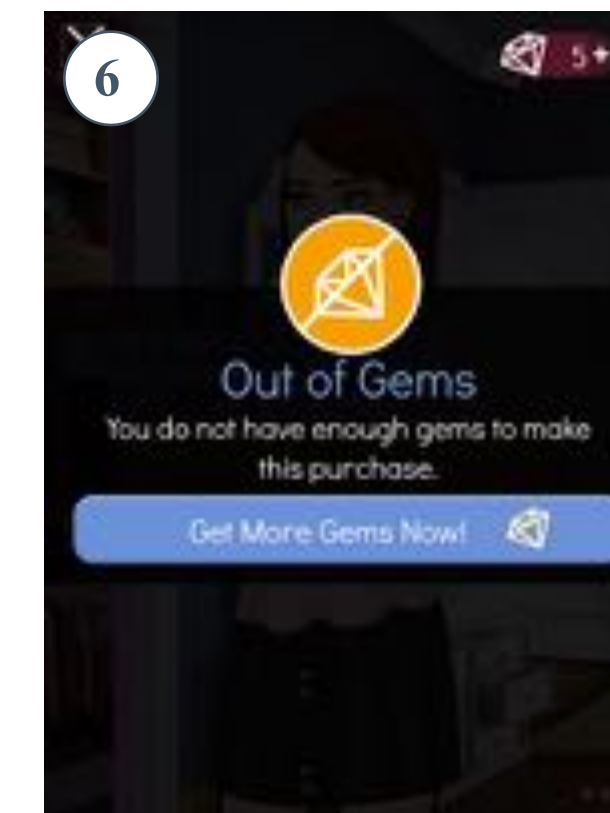


RECOMMENDATIONS

Add both unlocked and level-locked content to the game. Test new innovations with a dynamic story, then monetize with choice-based upsells.

Details

- **Add both unlocked and level-locked content:** House of Fun puts free content first, then adds level-locked content afterwards. Scatter Slots does the opposite, providing a secondary free play mode (images 1 & 2)
- **Create a simple story:** A Dark Room, the successful iOS idle game, progresses much like a slots game, with clicks, but there is an interesting text-based story (image 3)
- **Provide simple choices:** Lifeline, the hit iOS casual game, has an interactive, choose-your-own-adventure-style story. Players must make choices to progress through the game (image 4)
- **Form habits with intentional breaks in the story:** In Lifeline, the character that players chat with often becomes busy, and players are forced to leave the game at exciting times. This mechanic is used in radio and TV (image 4)
- **Send multiple push notifications when players leave too early:** Lifeline sends three push notifications in a row when players leave the game before intentional breaks
- **Monetize choices with an upsell:** In Episodes, the 21st highest grossing game on iOS, players are offered four choices, three free and the fourth paid (often too expensive without a purchase) (images 5, 6, & 7)
- **Consider non-slots IP for long-term strategic advantage:** The most popular story in Episodes is based on the 2004 classic movie *Mean Girls*. This makes the stories easier to create and more effective



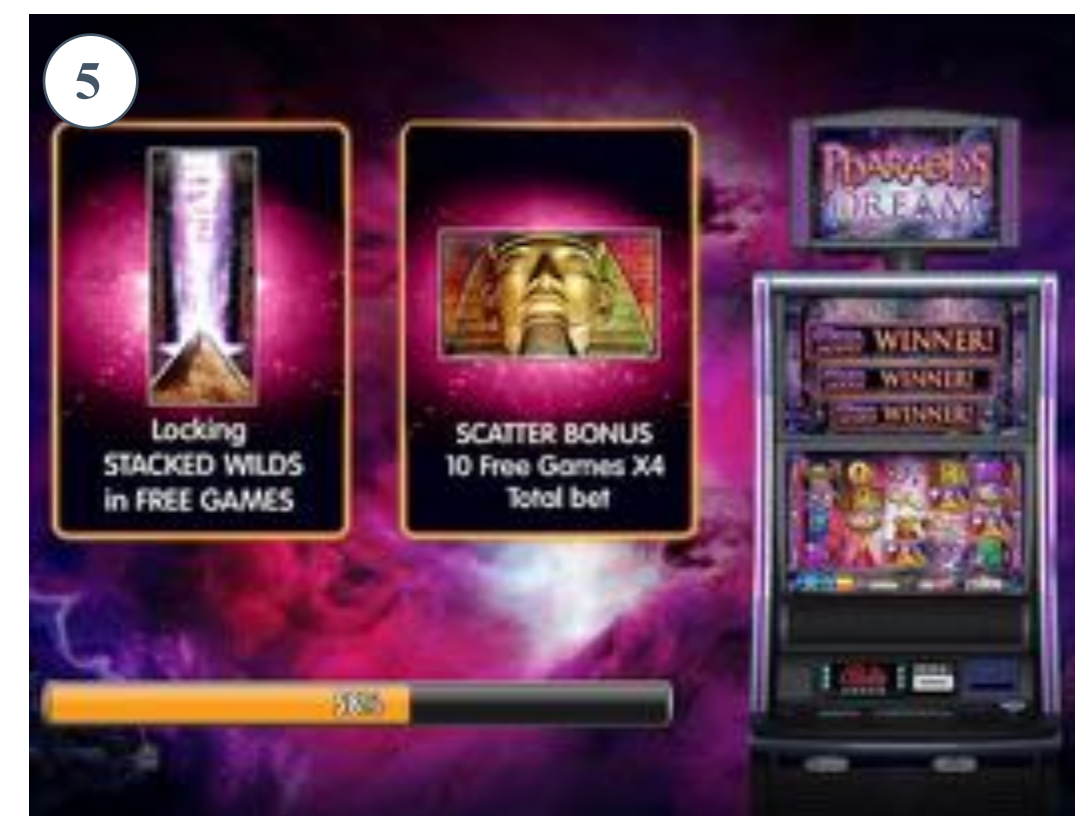
CONTENT UNLOCK EVENTS

FEATURE SUMMARY

Quick Hit Slots allows players to unlock new machines with a preview slot mechanic that involves a fill-the-meter progress bar

Details

- Two small machine icons are accessible in the lobby:
 - Featured slot takes players to the Lucky Tree machine, the latest machine released and last in the level progression (image 1)
 - Preview slot opens up marketing that explains the feature; “Fill the meter to unlock.” Clicking “OK, got it” simply closes the dialogue. Players have 24 hours to unlock the machine (image 2)
- To unlock the preview slot, players must bet enough to fill-the-meter in any machine
- The meter is filled based on coins won. This feature is similar to the house prize feature analyzed in our February 2016 Slots Report (image 3). *See Referenced Features for details on DoubleUp Slots’ house prize feature*
- Once the meter is full, players can access the preview slot machine (image 4)
- The preview slot machine, Pharaoh’s Dream in this case, is the next machine to be released for all players and will be placed at the end of the level progression (image 5)
- The featured slot machine, Lucky Tree, is included in the app-entry dialogue, which markets a X2 sale (image 6)



TOP-GROSSING: MARKET INFO

Wizard of Oz Slots has strong content unlock mechanics, and Jackpot Party Casino adds mini-games to important releases

| Game | Strength | Comments |
|----------------------|----------|---|
| Wizard of Oz Slots | ● | <ul style="list-style-type: none">New machines unlockable with several mechanics (image A) |
| Jackpot Party Casino | ● | <ul style="list-style-type: none">Mini-game built to market new CLUE slot machine (image B) |
| Hit it Rich! | ● | <ul style="list-style-type: none">All machines unlocked for limited-time events (image C) |
| Slotomania Casino | ● | <ul style="list-style-type: none">New machines receive a full-page app-entry dialogue, are open to all, and then are placed at the end of the level progression |
| Heart of Vegas | ● | <ul style="list-style-type: none">Featured slot machines section defaulted in lobby |
| House of Fun | ● | <ul style="list-style-type: none">In the main lobby, new slot machines sit on the left-hand side of the screen |
| GSN Casino | ● | <ul style="list-style-type: none">All machines unlocked. New machines marketed with lobby cards |
| DoubleU Casino | ● | <ul style="list-style-type: none">All machines unlocked. New machines marketed with lobby cards |
| Big Fish Casino | ● | <ul style="list-style-type: none">In the main lobby, new slot machines sit on the left-hand side of the screen |
| DoubleDown Casino | ● | <ul style="list-style-type: none">All machines unlocked. New machines marketed upon app-entry with sale |



BREAKOUT GAMES: MARKET INFO

Machines in Scatter Slots can be unlocked with the secondary currency

| Game | Strength | Comments |
|------------------------------|-------------|---|
| Quick Hit Slots | <div></div> | <ul style="list-style-type: none">See Feature Summary slide for details |
| Scatter Slots | <div></div> | <ul style="list-style-type: none">Machines can be unlocked with gems, the game’s secondary currency (image A) |
| Caesars Slots | <div></div> | <ul style="list-style-type: none">All machines unlocked. New machines receive an app-entry dialogue for marketing (image B) |
| Viva Slots Las Vegas | <div></div> | <ul style="list-style-type: none">New machines are added at later levels but not unlocked to all players (image C) |
| KONAMI Slots | <div></div> | <ul style="list-style-type: none">Machines level-locked. No visible marketing of new machines |
| DoubleUp Slots | <div></div> | <ul style="list-style-type: none">All machines unlocked |
| Old Vegas Slots | <div></div> | <ul style="list-style-type: none">All machines unlocked |
| Slots - Classic Vegas Casino | <div></div> | <ul style="list-style-type: none">All machines unlocked |



RECOMMENDATIONS

Unlock content through VIP programs, secondary currencies, and fill-the-meter mechanics. Re-release proven content to maximize the content's ROI.

Details

- **Add exclusive content to the VIP program:** In Wizard of Oz Slots, players unlock exclusive content, like the Ruby Slippers machine, at certain VIP tiers. The first tier with exclusive content can be reached either by collecting XP and leveling up or with a \$100 purchase (image 1)
- **Re-release content with similar fiction:** Wizard of Oz Slots has a ridiculous amount of content and only one IP. The game has proven that once you find a winner, players will play multiple machines with similar themes (image 2)
- **Tie unlocking new content into the entire gameplay:** In Marvel Contest of Champions, players earn units to purchase crystals. Crystals are then used to unlock champions (images 3 & 4). Scatter Slots has proven that RPG mechanics can be applied successfully to the slots genre
- **Add the fill-the-meter mechanic:** Summarized in February 2016's Slots report, the fill-the-meter mechanic is already a powerful feature in DoubleUp Slots to drive up bet per spin and in Slotomania Casino to drive up conversion (images 5 & 6). *See Referenced Features for more details on both the house prize and piggy bank features*



VIRAL FLOWS

FEATURE SUMMARY

Quick Hit Slots provides players with three viral options: gifting to anyone, gifting to Facebook friends, and a multi-friend invite selector

Details

Gifting to anyone

- Players can send gifts, invites, and coin requests to friends in the gifting tab (image 1)
- All three options prompt the Facebook request dialogue with the frictionless sends checkbox clicked yes (image 2)
- The friends in each category are different

Gifting to Facebook friends

- Players can also send gifts directly to Facebook friends by clicking on the second icon and following the Facebook send gifts dialogue (image 3)
- This dialogue does not request a confirmation click

Multi-friend invite selector

- The third button prompts a multi-friend selector with 50 friends selected (image 4)
- Clicking “invite” will prompt the Facebook request dialogue flow with 50 friends selected
- The frictionless sends option is not checked yes
- Players can send multiple 50-friend requests

Images in Quick Hit Slots



TOP-GROSSING: MARKET INFO

There are many examples of strong viral flows in the top-grossing iOS slots games

| Game | Strength | Comments |
|----------------------|----------|--|
| Slotomania Casino | ● | <ul style="list-style-type: none">Strong viral flows with a search bar and multiple tabs (image A) |
| DoubleU Casino | ● | <ul style="list-style-type: none">Invite friend flow with pictures and direct link to profiles (image B) |
| Big Fish Casino | ● | <ul style="list-style-type: none">Add friends, suggested friends, and all online players options (image C) |
| House of Fun | ● | <ul style="list-style-type: none">Multi-gifting options when inviting friends |
| Jackpot Party Casino | ● | <ul style="list-style-type: none">Direct to Facebook invite flow |
| Hit it Rich! | ● | <ul style="list-style-type: none">Direct to Facebook invite flow |
| Wizard of Oz Slots | ● | <ul style="list-style-type: none">Incentivized multi-friend selector with gifting |
| DoubleDown Casino | ● | <ul style="list-style-type: none">Incentivized invite flow |
| Heart of Vegas | ● | <ul style="list-style-type: none">No viral flows |
| GSN Casino | ● | <ul style="list-style-type: none">No viral flows |



BREAKOUT GAMES: MARKET INFO

Half of the 2015 breakout slots games have viral flows

| Game | Strength | Comments |
|------------------------------|-------------|--|
| Viva Slots Las Vegas | <div></div> | <ul style="list-style-type: none">Viral flow includes playing friends and suggested friends (image A) |
| Slots - Classic Vegas Casino | <div></div> | <ul style="list-style-type: none">Incentivized request invite flow has 1,000 friends selected (image B) |
| Caesars Slots | <div></div> | <ul style="list-style-type: none">Viral flow allows players to invite friends with coins and spins (image C) |
| Quick Hit Slots | <div></div> | <ul style="list-style-type: none">Viral flow examined in this report |
| Scatter Slots | <div></div> | <ul style="list-style-type: none">No viral flows |
| KONAMI Slots | <div></div> | <ul style="list-style-type: none">No viral flows |
| DoubleUp Slots | <div></div> | <ul style="list-style-type: none">No viral flows |
| Old Vegas Slots | <div></div> | <ul style="list-style-type: none">No viral flows. Gift flow is not turned on |

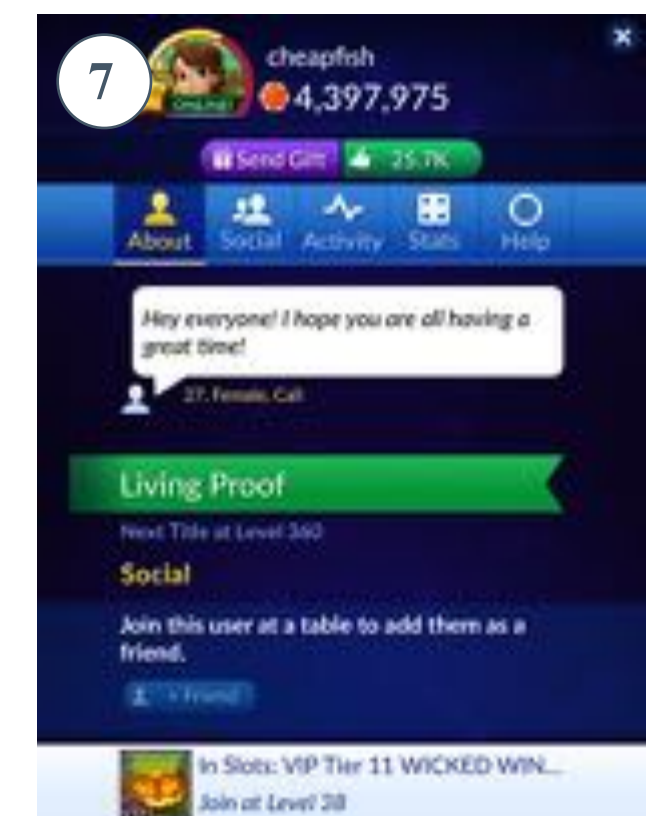
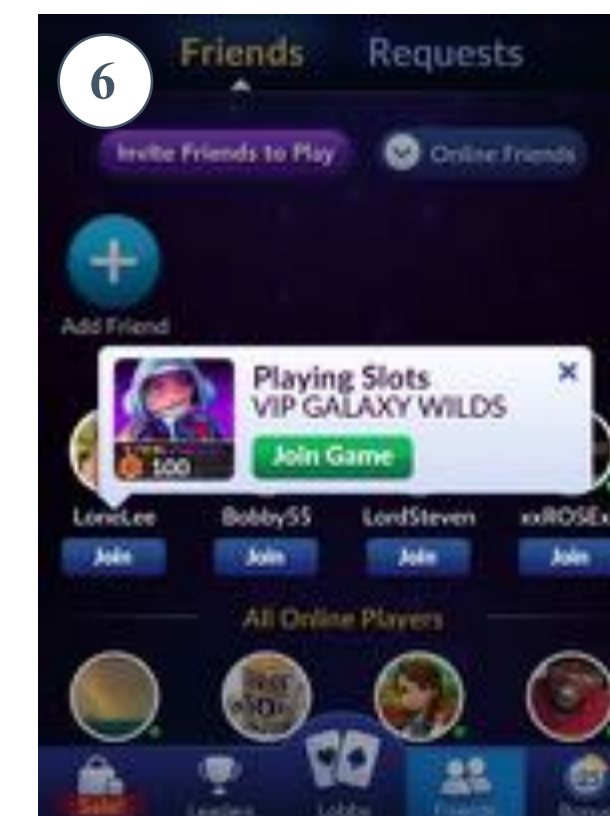
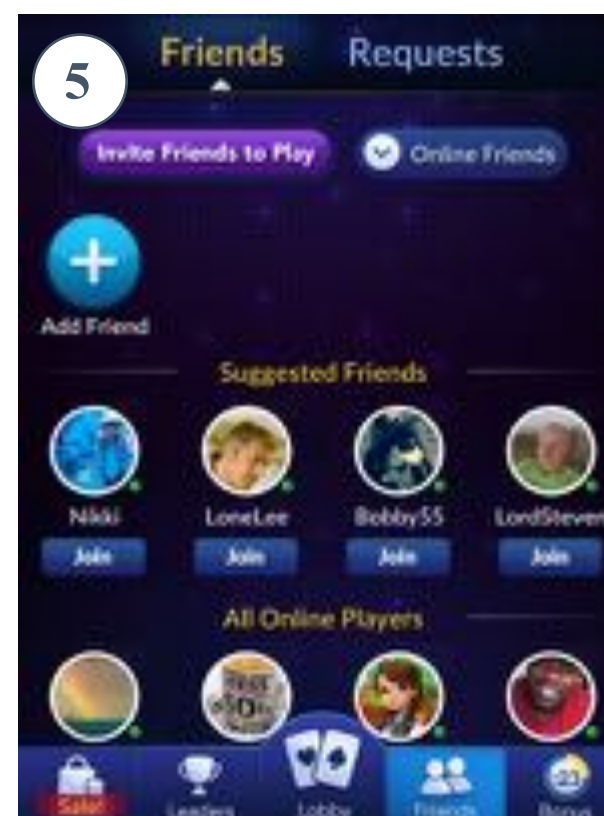
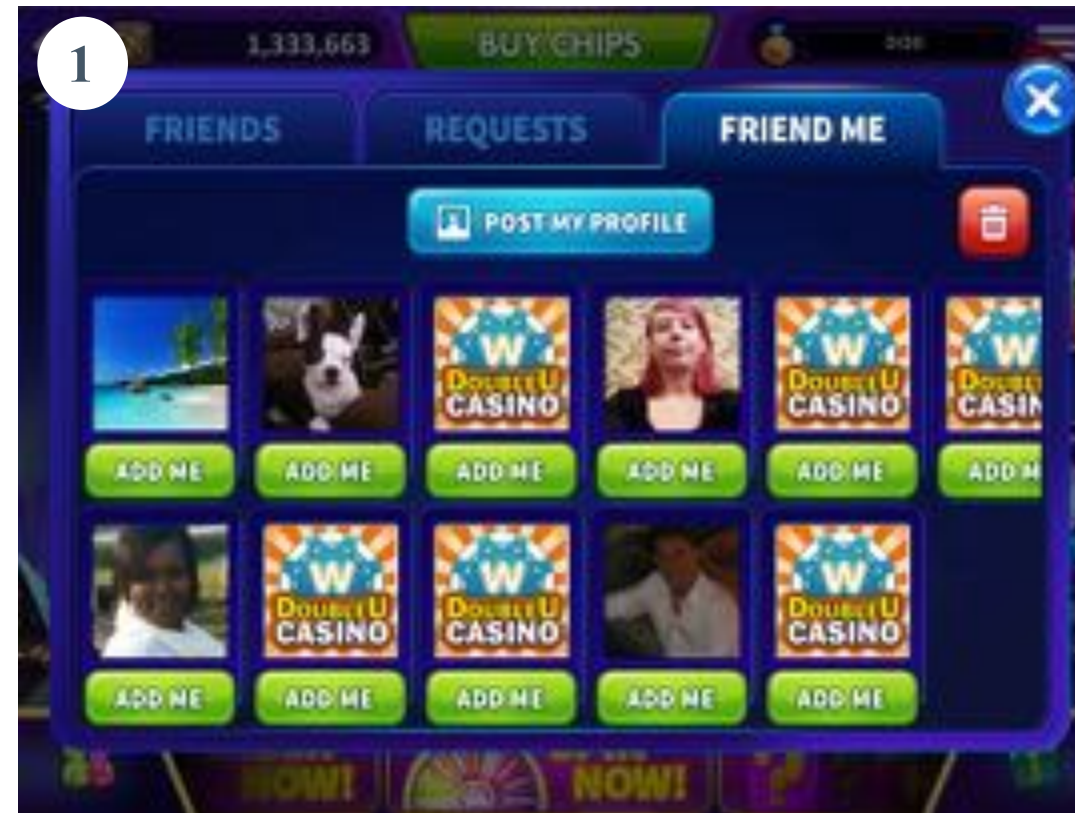


RECOMMENDATIONS

Invest in social: a difficult but valuable component of mobile. Consider social boosts, monetizing gift accepts, and socially integrated invites.

Details

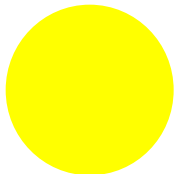
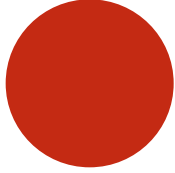
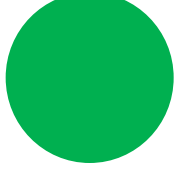
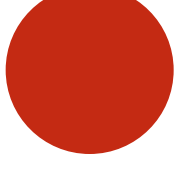
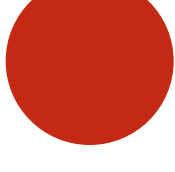
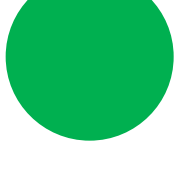
- **Allow players to social boost:** In DoubleU Casino, players can post their profile in the “Friend me” tab for six minutes to receive friend requests (images 1 & 2). *More information on social boosts is included in our first [Poker Report](#). Email us to see a sample*
- **Monetize the one-click collect all gifts feature:** Slotomania Casino unlocks the “collect all” button for seven days with every purchase (image 3).
- **Heavily incentivize friend invites:** Slots - Classic Vegas Casino gives players \$2.00 worth of coins for each organic install, which is too small. Considering the value of a loyal user is now \$3.50, *according to Fiksu*, the coin bonus should be at least \$5.00 (image 4)
- **Integrate viral flow into the social experience:** In Big Fish Casino (BFC), the friends tab prioritizes a join suggested friends functionality first. This is an engagement and social mechanic, in addition to inviting friends and sending requests (image 5)
- **Allow players to join friends:** This is a powerful engagement mechanic if your game has social features (image 6)
- **Connect profiles for even more social actions:** Through their profiles, players in BFC can join, gift, check social activities, etc. (image 7)
- **Move friend requests within the app:** Gifting in DoubleU Casino and BFC are both controlled by the game and require no Facebook flow



ECONOMY DEEP DIVE

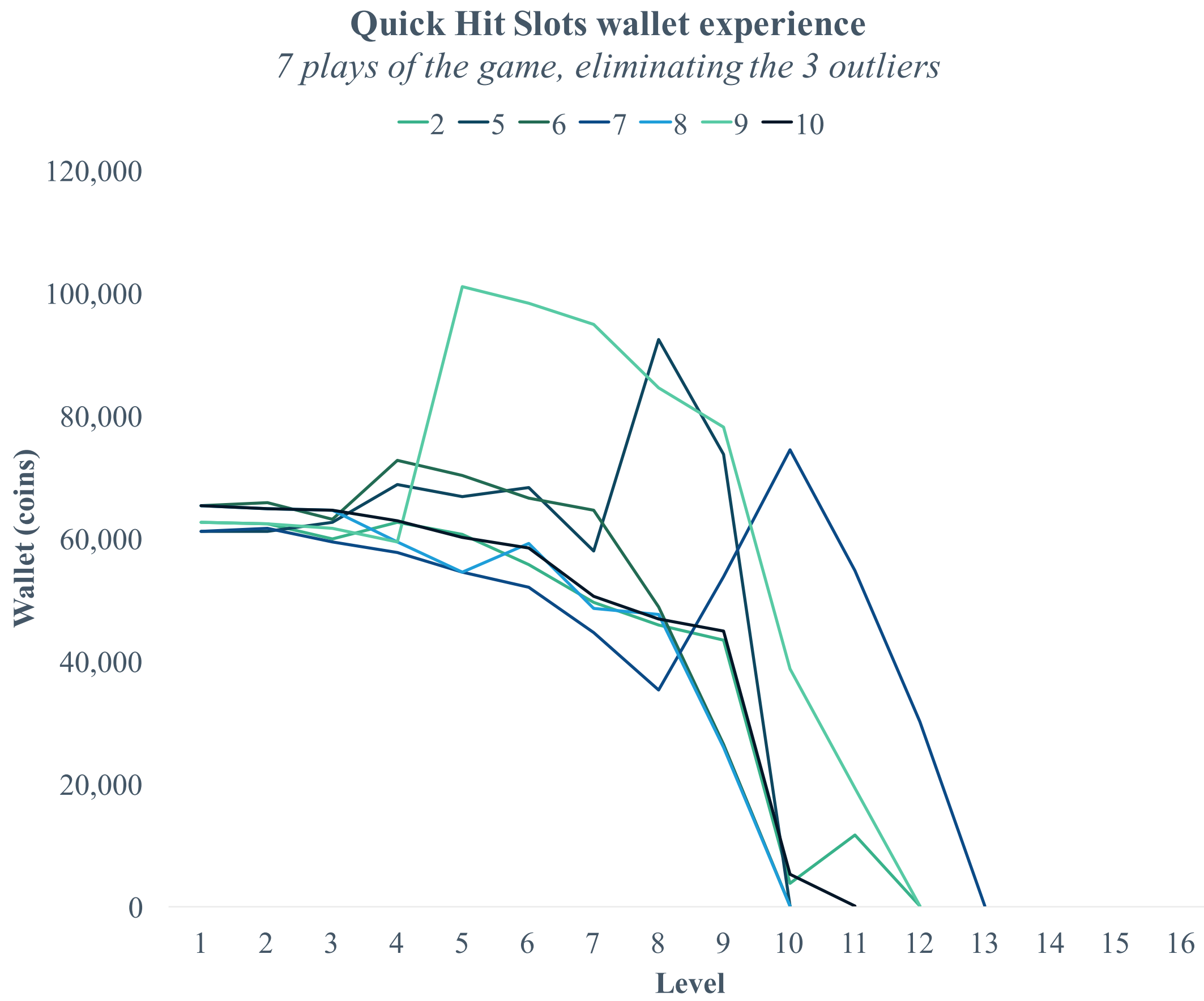
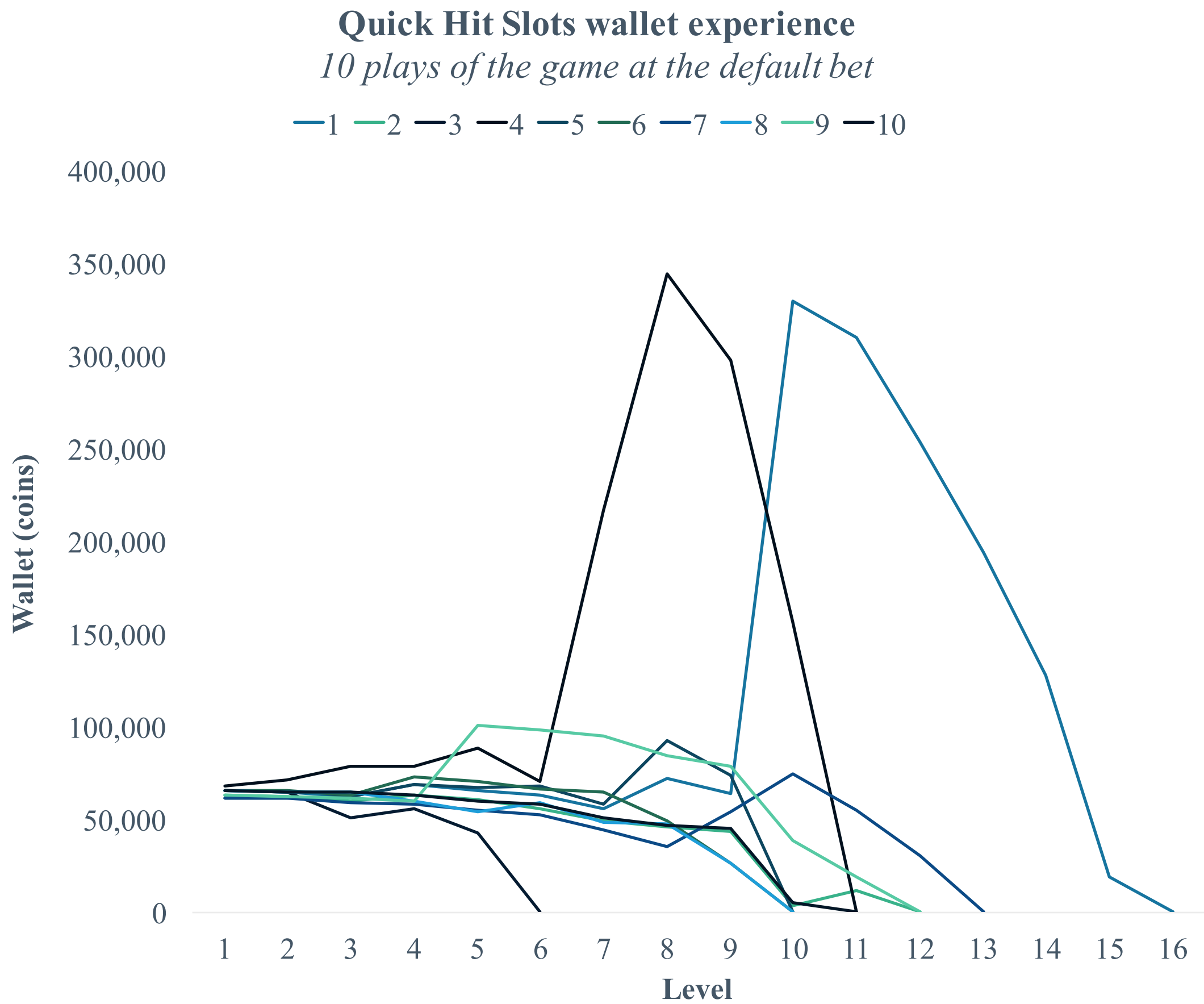
ECONOMY SUMMARY: QUICK HIT SLOTS

Quick Hit Slots loads new players with a large number of coins, but sinks wallets aggressively with an expensive minimum and default bet. Then it gives players ample daily coin bonuses to create a volatile wallet experience.

| | Value | Tightness | Comments |
|-----------------------------------|----------|---|---|
| Wallet experience | Medium |  | <ul style="list-style-type: none">The wallet experience crashes players out on the second machine, which is a progressive jackpot. This forces players to bet aggressively to potentially win the jackpot |
| Coins-to-dollar ratio | 4k |  | <ul style="list-style-type: none">The economy is very tight: the third tightest economy compared to both the 2015 breakout and top-grossing slots games |
| Initial coin balance | \$10.00 |  | <ul style="list-style-type: none">Players initially receive considerable value |
| Default and minimum bet values | \$0.11 |  | <ul style="list-style-type: none">The initial default and minimum bets are the same and very expensive for players |
| New user tuning | 89 spins |  | <ul style="list-style-type: none">Although players start out with a hefty value, the expensive bet amounts make the tuning tight |
| Total value of daily coin bonuses | \$8.64 |  | <ul style="list-style-type: none">Players collect a large number of coins daily compared to both the 2015 breakout and top-grossing slots games |

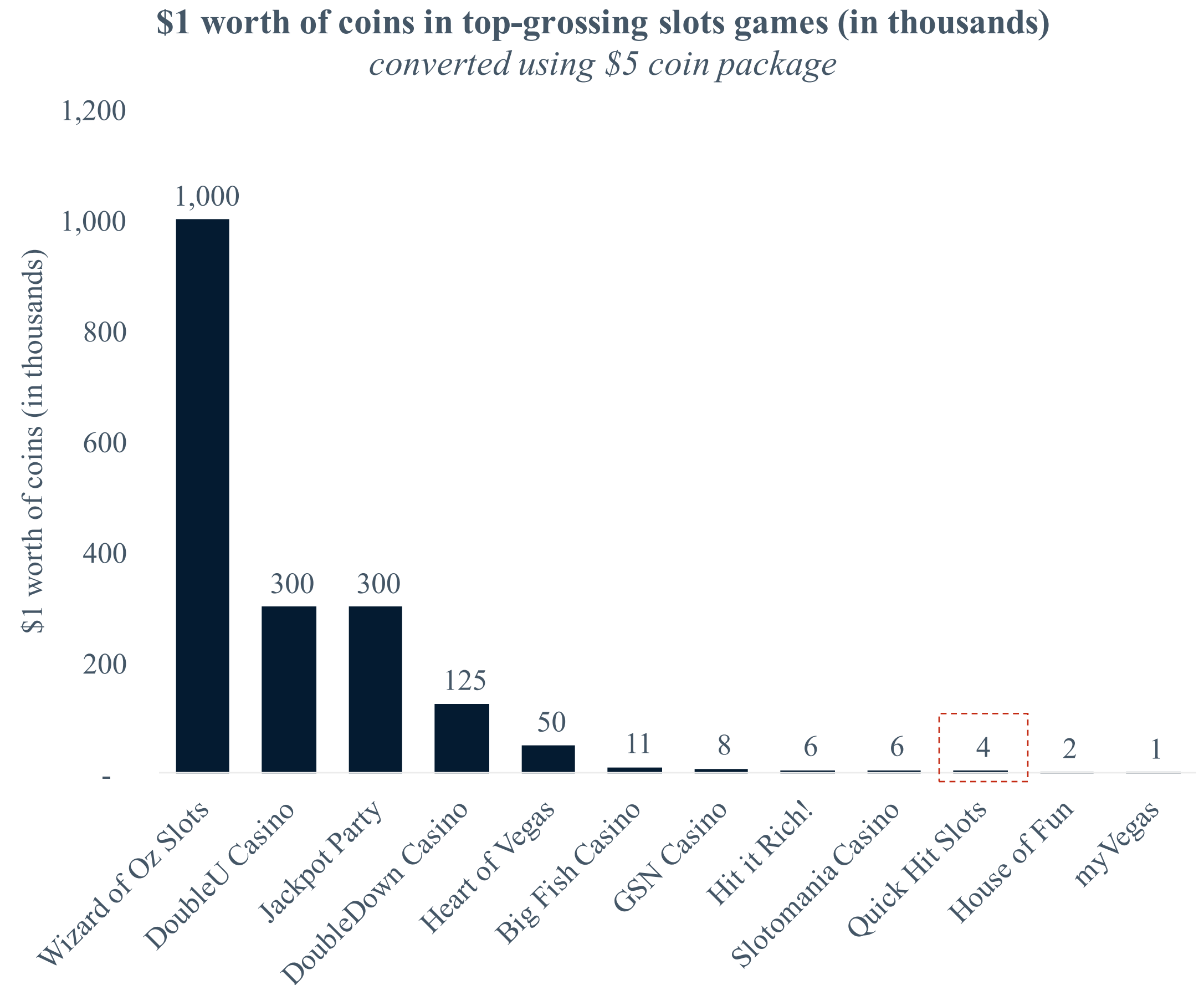
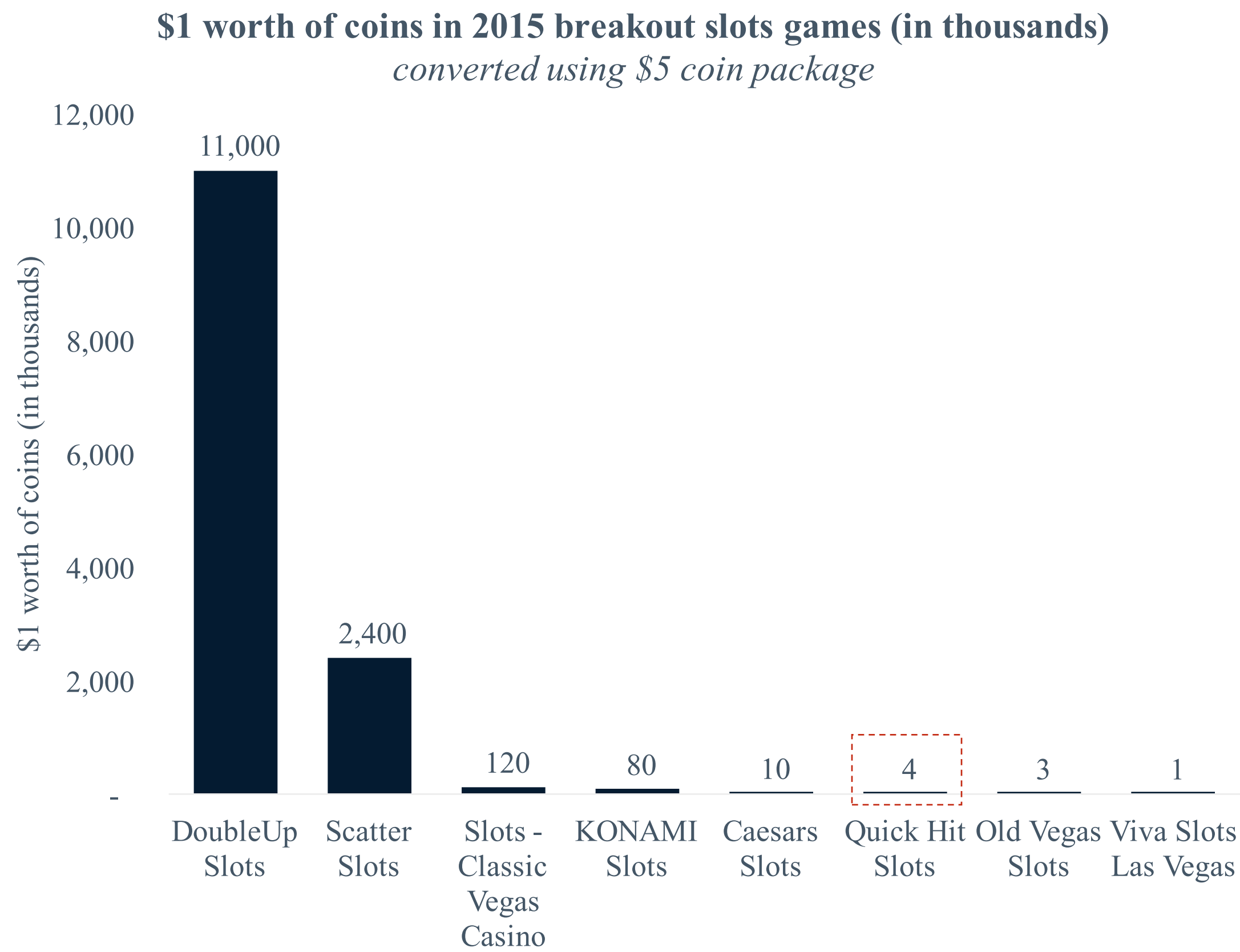
WALLET EXPERIENCE

Players experience the first machine, then quickly crash out wallets in the second machine when trying to qualify for its progressive jackpot



COINS-TO-DOLLAR RATIO

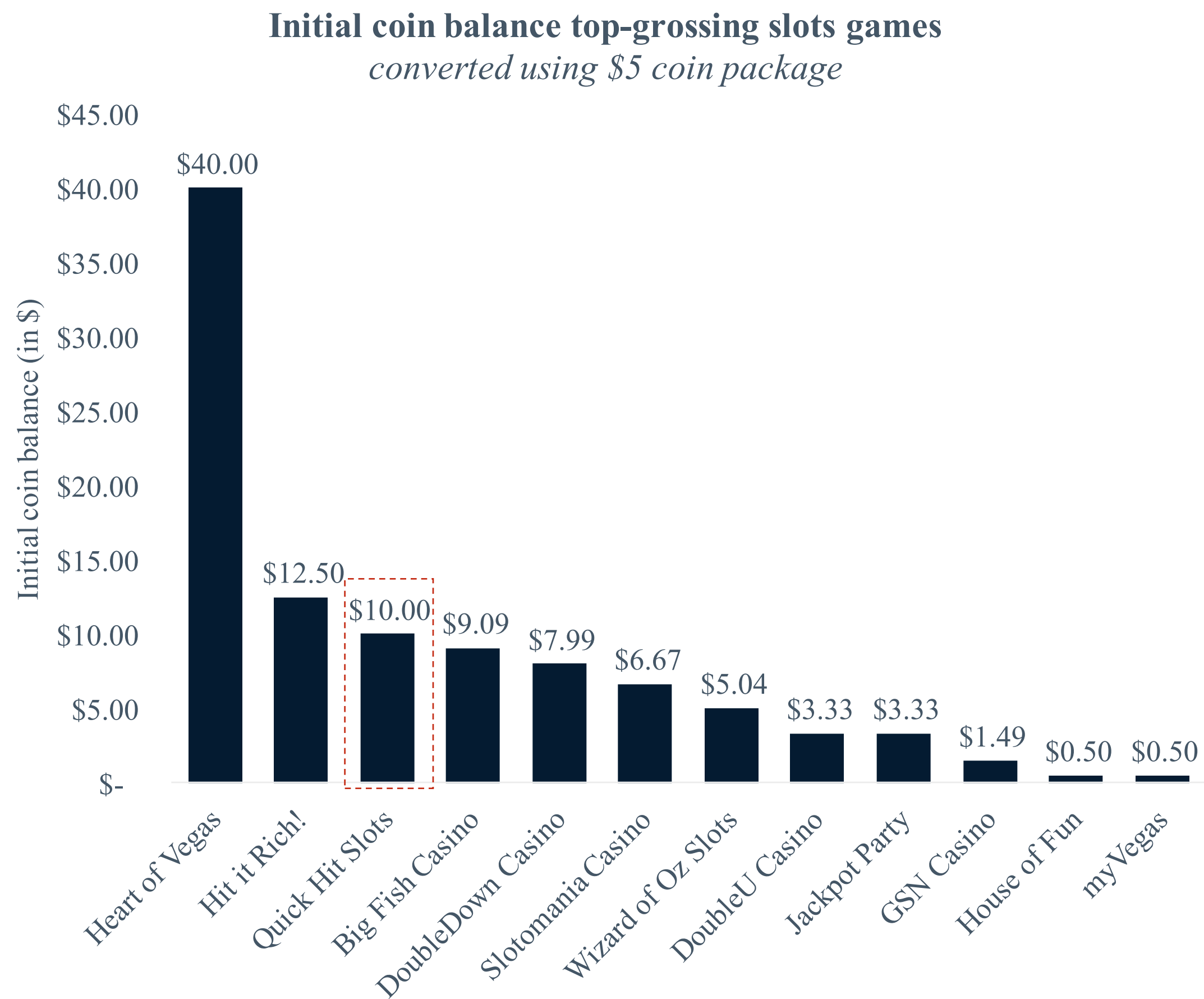
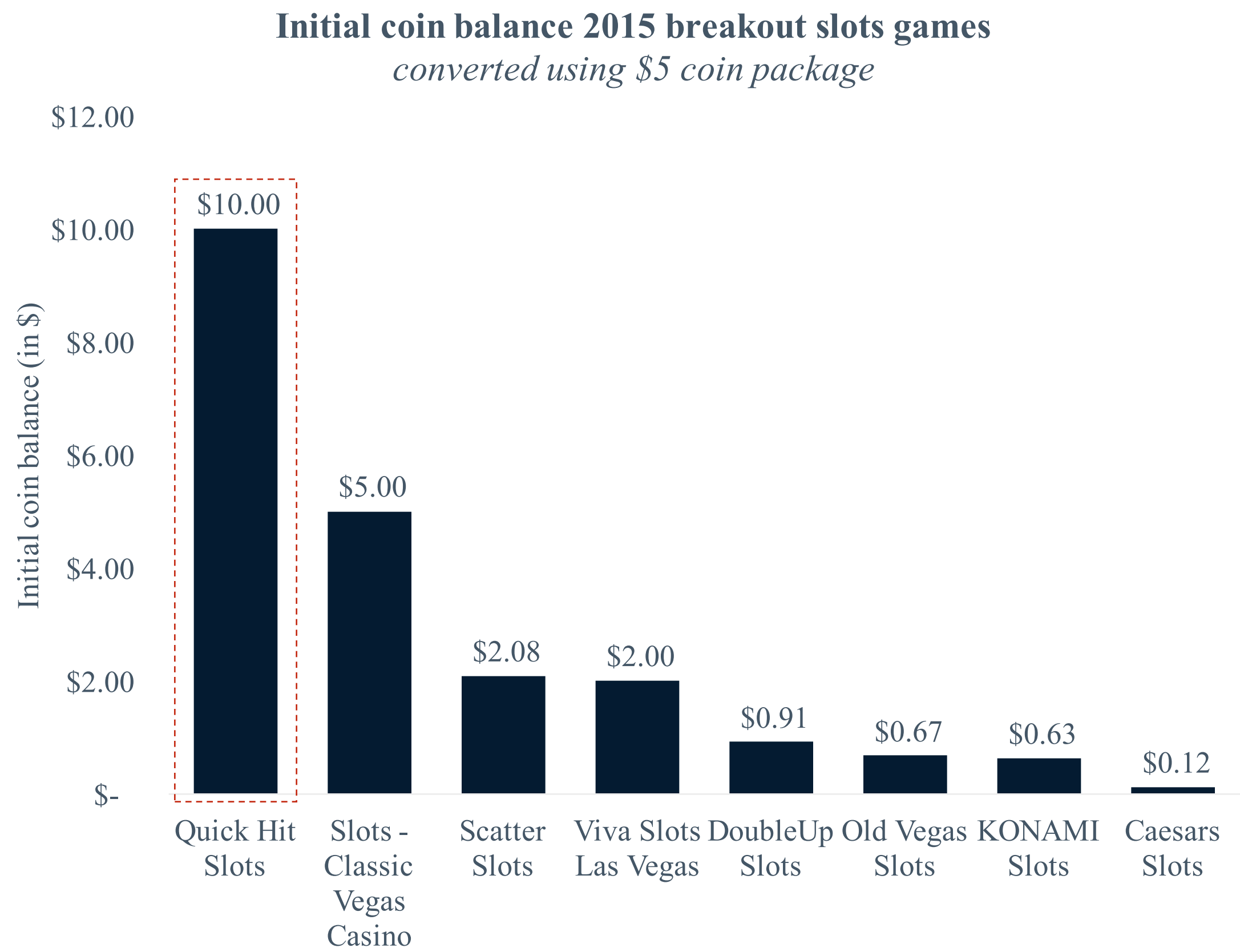
**Quick Hit Slots’ coin value is expensive compared to the 2015 breakout and top-grossing slots games;
\$1 acquires 4,000 coins in Quick Hit Slots**



Estimated value of \$1 worth of coins is taken from users who have not yet made a purchase, the closest package to \$5.00, and the coin amount without bonuses and sales

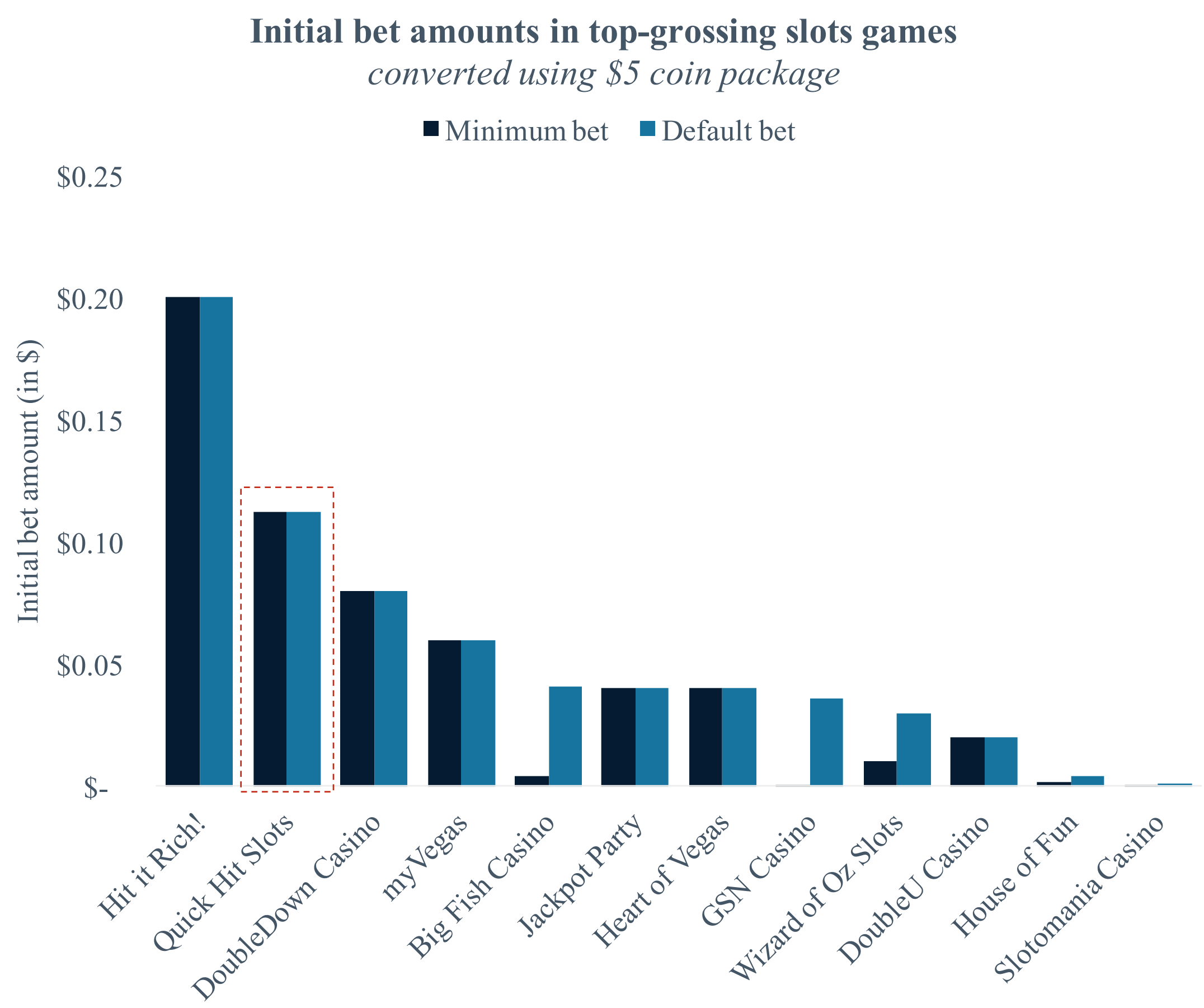
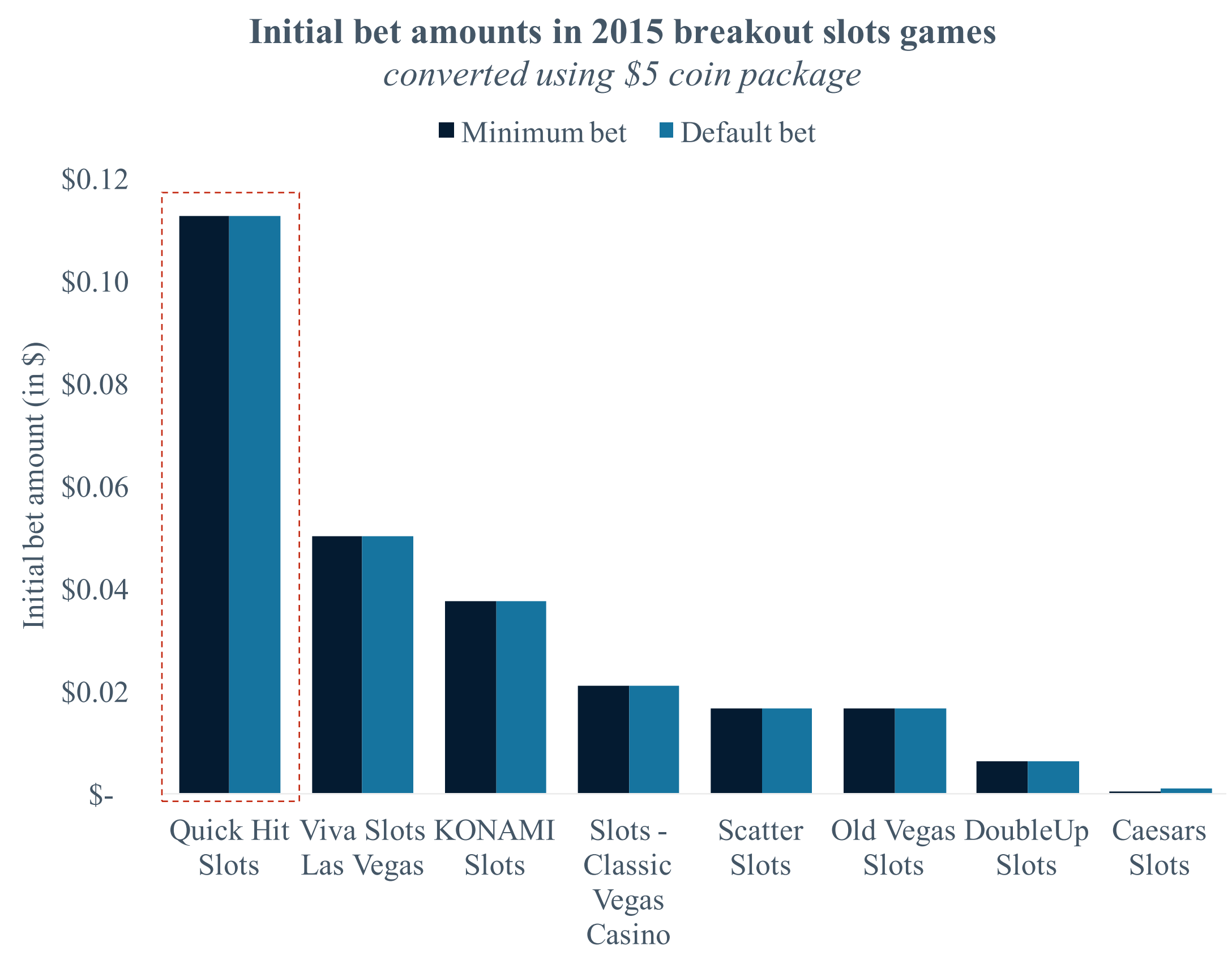
INITIAL COIN BALANCE

Quick Hit Slots loads new players with \$10.00 worth of coins at the start of the game to give the illusion they are flush with coins



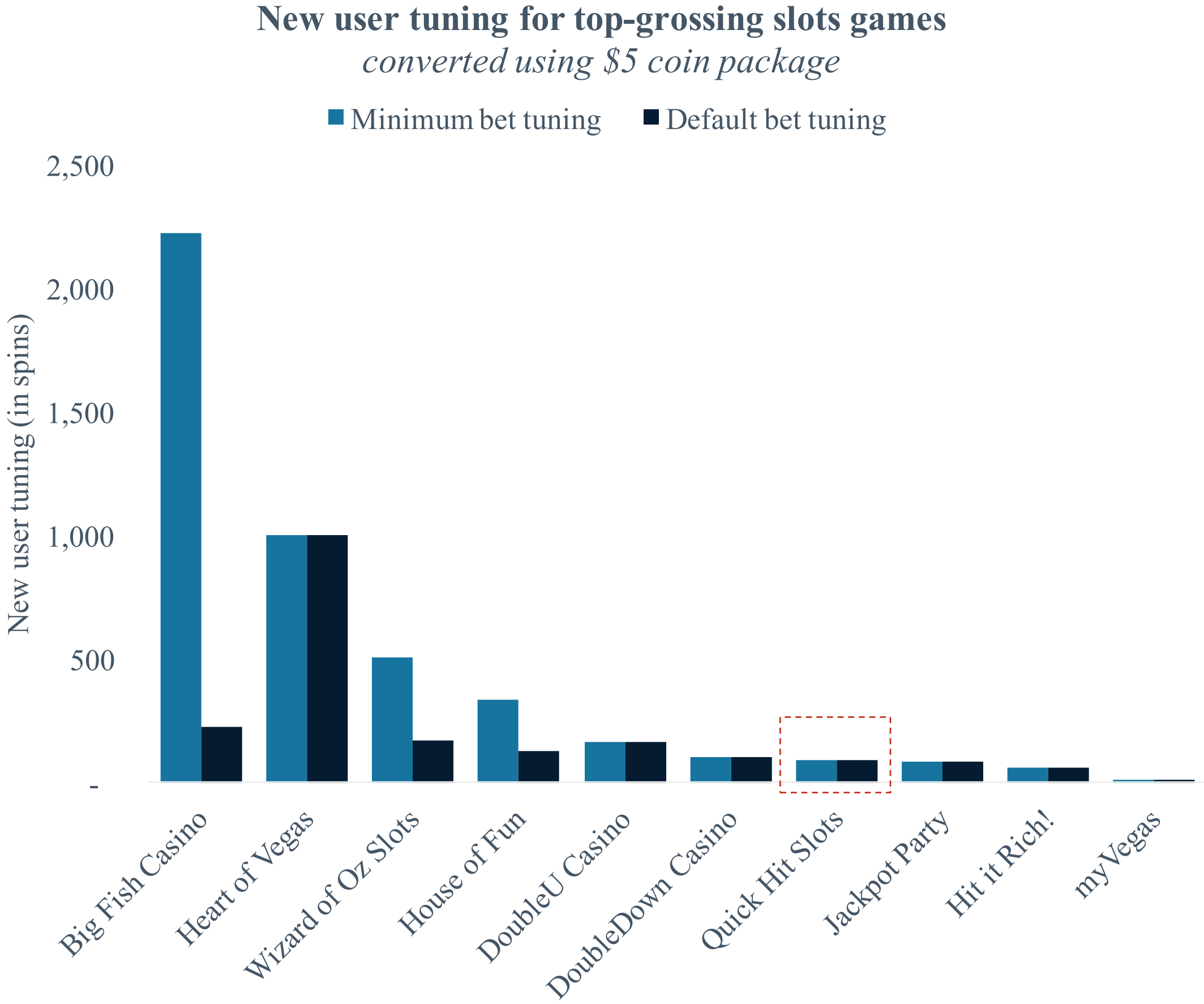
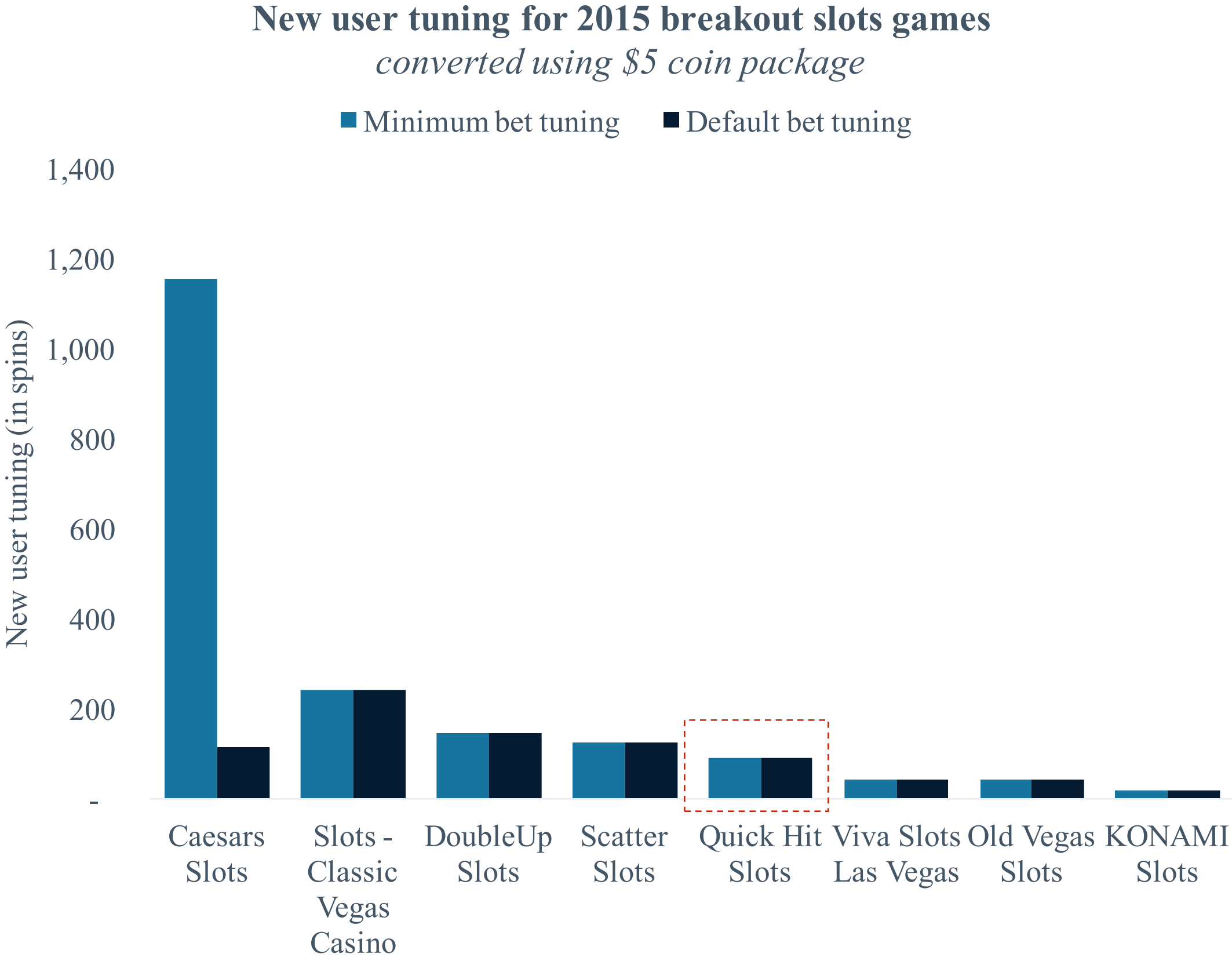
NEW USER MINIMUM AND DEFAULT BET

Quick Hit Slots has very expensive minimum and default bets for players comparatively



NEW USER TUNING

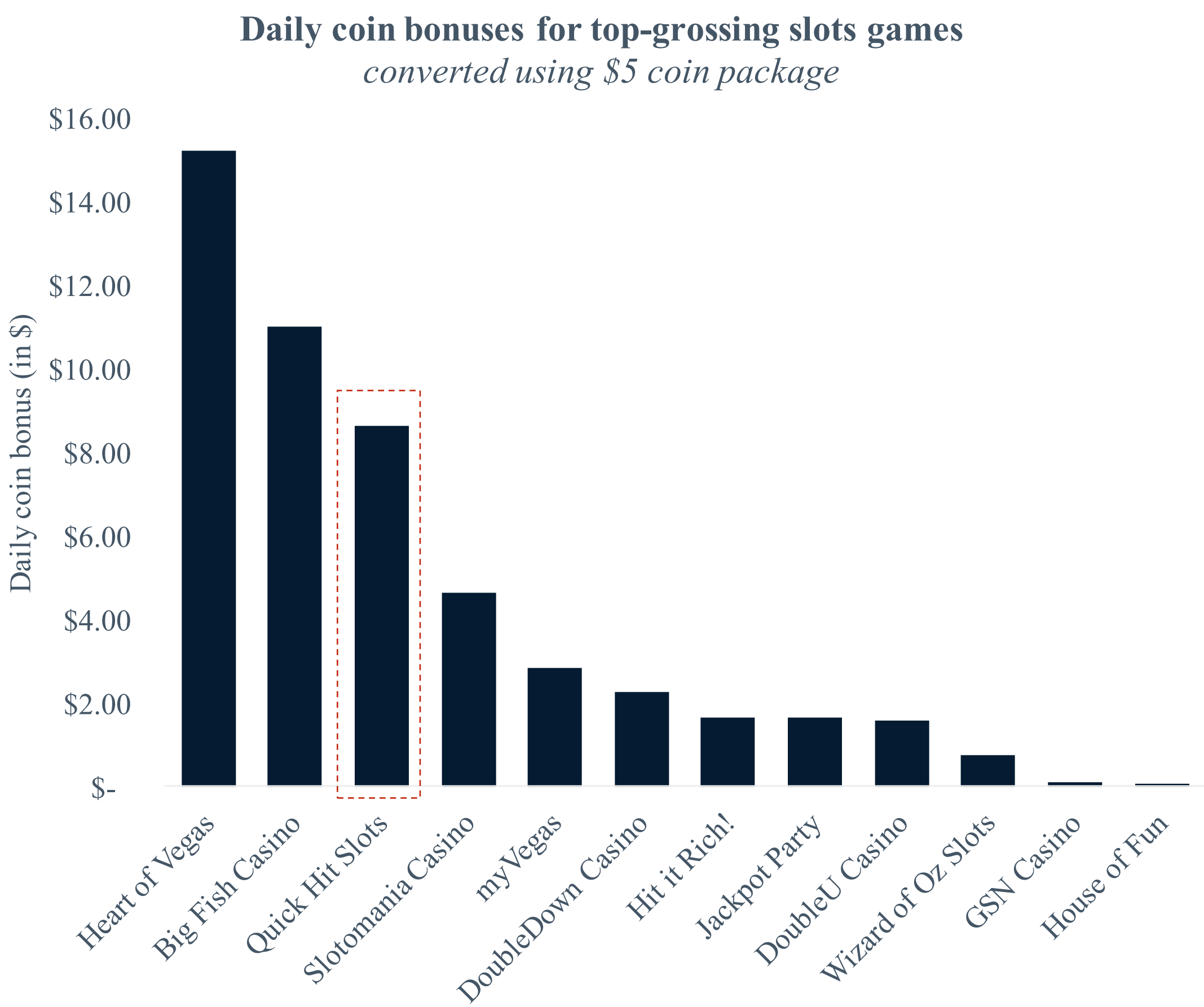
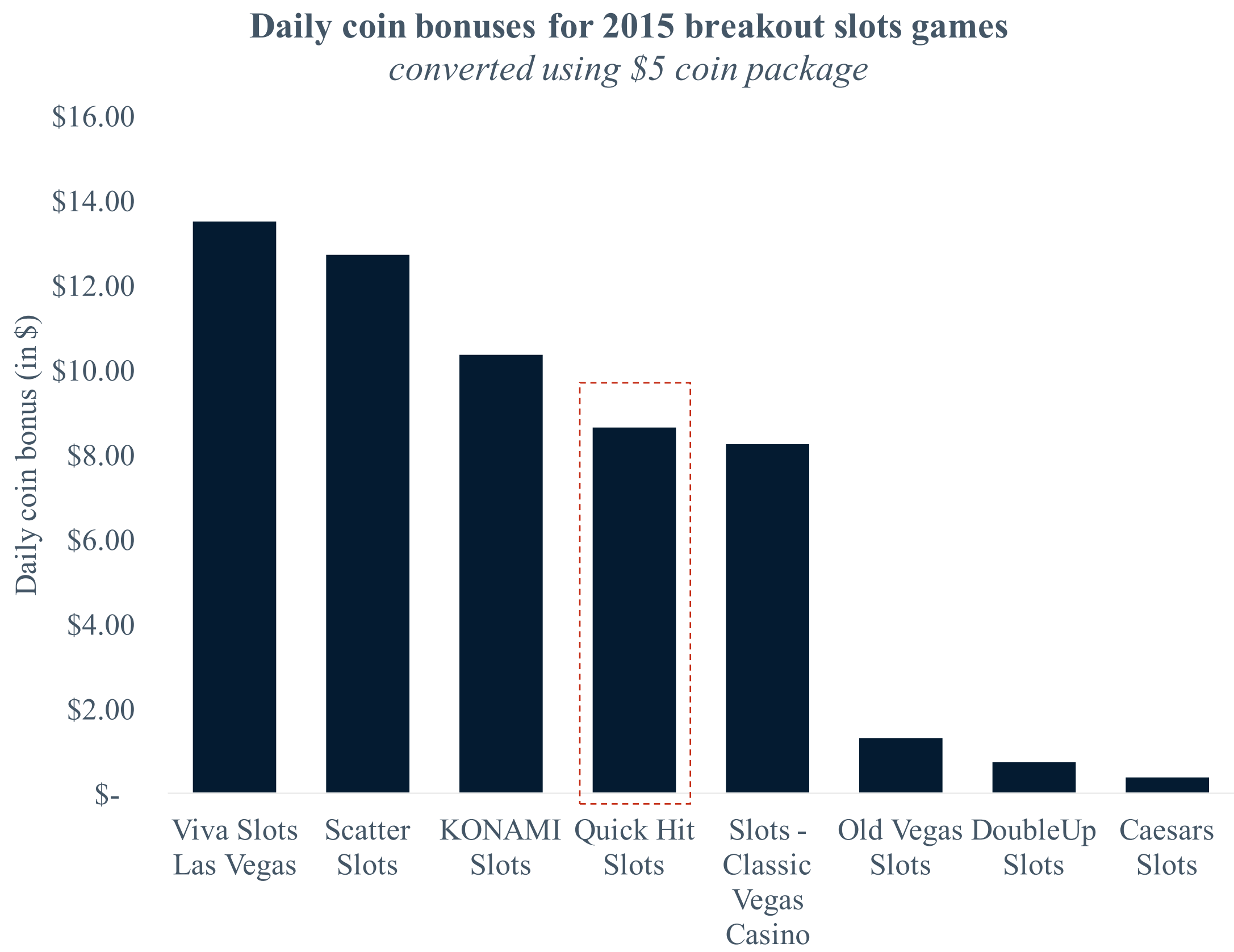
Although players start with deep pockets, the expensive minimum and default bets deplete wallets quickly, making the new user tuning moderately tight



Slotomania Casino and GSN Casino were removed because their tuning was too large for this graph

TOTAL VALUE OF COIN BONUSES

Quick Hit Slots has generous daily coin bonuses. This provides a rewarding but volatile wallet experience for players.







REFERENCED FEATURES

HOUSE PRIZE & PIGGY BANK

FEATURE SUMMARY: HOUSE PRIZE

DoubleUp Slots’ house prize drives transactions by increasing bet amounts and marketing a \$9.99 coin package with bonuses every 50 spins

| Details | House prize in DoubleUp Slots |
|---|---|
| <ul style="list-style-type: none">• A house prize progress bar displaying the goal is located at the top of each machine. The goal starts at 10M coins and then increases to 20M, 30M, 40M, 50M, 75M, 100M, and so on. There is one house prize shared across all machines (image 1)• When players click on the house prize, an explanatory dialogue displays: “Accumulate enough winnings in 50 spins, and the house will bestow you with a reward”• The progress bar fills based on coins won. If players hit their goal within 50 spins, the house prize automatically advances to the next goal, the number on the crown advances one, and the bar starts over until 50 spins are complete• When players achieve the goal, a dialogue surfaces showing a reward that is 1.18% (for each level achieved) of coins spent during the 50 spins. The dialogue also gives players a choice: “Collect: or “Increase reward” (image 2)• Pressing “Increase reward” takes players to the multiplier wheel dialogue, which offers players 360M coins (worth \$9.99) and a spin of the multiplier wheel (image 3)• Purchasing the \$9.99 multiplier wheel package – called coin package 3 in the app store – takes players to the multiplier wheel. Players then spin the wheel to win multipliers of 1.5X, 2.5X, 3X, and so on (image 4) | <div><div>1</div></div> <div><div>2</div></div> <div><div>3</div></div> <div><div>4</div></div> |

FEATURE SUMMARY: PIGGY BANK

Slotomania Casino’s piggy bank feature is very similar to the house prize; but Slotomania Casino players must make a purchase to unlock the piggy bank, *and* the piggy bank stores 73% of coins bet

| Details | Piggy bank in Slotomania Casino |
|--|---|
| <ul style="list-style-type: none">At level 1, players receive an explanatory dialogue for the piggy bank stating, “5,032 coins are already waiting for you! Every spin adds more – ON THE HOUSE!” (image 1)Players start off the game with a set number of 5,000 coins and add coins with every bet. A massive number of coins, 73% of every bet, is added to the bankThe piggy bank sits in the top right-hand corner of the screen. A small drop-down tooltip appears to explain the feature (image 2)Clicking on the piggy bank in the lobby opens a dialogue that prompts players, “Break now for \$2.99” (image 3)Players also receive bonuses with the purchase: collect all coin gifts at once for seven days, receive a two-hour special bonus, and earn status points. Players can find out this information by clicking on the “Tell me!” button (image 4)The price and starting coin amount increases based on the player’s level when the bank starts fillingThe higher a player’s TR social points (loyalty points in Slotomania Casino), the larger the starting coin balance for the piggy bank | <div><div>1</div></div> <div><div>2</div></div> <div><div>3</div></div> <div><div>4</div></div> |

BACKGROUND DATA: HOUSE PRIZE & PIGGY BANK

The coin package 3, driven by the multiplier wheel, is the second most purchased package in DoubleUp Slots. The piggy bank feature is a top transaction feature in Slotomania Casino

| Packages ranked by transactions: DoubleUp Slots | | | Packages ranked by transactions: Slotomania Casino | | |
|---|----------------|---------|--|------------------|---------|
| Rank | Package | Price | Rank | Package | Price |
| 1 | Coin package 1 | \$1.99 | 1 | Mini package | \$1.99 |
| 2 | Coin package 3 | \$9.99 | 2 | Advanced package | \$4.99 |
| 3 | Coin package 2 | \$4.99 | 3 | Pro package | \$19.99 |
| 4 | Coin package 4 | \$19.99 | 4 | Deluxe package | \$9.99 |
| 5 | Spin chance 1 | \$2.99 | 5 | Break piggy bank | \$2.99 |
| 6 | Coin package 5 | \$49.99 | 6 | Break piggy bank | \$19.99 |
| 7 | Coin package 6 | \$99.99 | 7 | Break piggy bank | \$11.99 |
| 8 | Epic sale 1 | \$2.99 | 8 | Break piggy bank | \$5.99 |
| 9 | Spin chance 2 | \$5.99 | 9 | Jumbo package | \$99.99 |
| 10 | Spin chance 3 | \$9.99 | 10 | 52,500 coins | \$19.99 |

TOP-GROSSING GAMES: MARKET INFORMATION

Hit it Rich! is the only other top-grossing iOS slots game with a feature similar to the house prize or piggy bank

| Game | Strength | Comments |
|--------------------|--|--|
| Heart of Vegas |  | <ul style="list-style-type: none">No house prize or piggy bank feature |
| DoubleDown Casino |  | <ul style="list-style-type: none">No house prize or piggy bank feature |
| Big Fish Casino |  | <ul style="list-style-type: none">No house prize or piggy bank feature |
| Hit it Rich! |  | <ul style="list-style-type: none">Charm meter: players fill the charm meter to win bonuses like XP |
| Slotomania Casino |  | <ul style="list-style-type: none">Piggy bank feature very similar to the house prize |
| Wizard of Oz Slots |  | <ul style="list-style-type: none">No house prize or piggy bank feature |
| DoubleU Casino |  | <ul style="list-style-type: none">No house prize or piggy bank feature |
| House of Fun |  | <ul style="list-style-type: none">No house prize or piggy bank feature |
| GSN Casino |  | <ul style="list-style-type: none">No house prize or piggy bank feature |
| myVegas |  | <ul style="list-style-type: none">No house prize or piggy bank feature |
| Heart of Vegas |  | <ul style="list-style-type: none">No house prize or piggy bank feature |

BREAKOUT GAMES: MARKET INFORMATION



KONAMI Slots and DoubleUp Slots are the only 2015 breakout slots games that incorporate a house prize or piggy bank type feature

| Game | Strength | Comments |
|------------------------------|----------|---|
| KONAMI Slots | | <ul style="list-style-type: none">KONAMI Slots has a loyalty reward feature that fills with a few spins for new players |
| Viva Slots Las Vegas | | <ul style="list-style-type: none">No house prize or piggy bank feature |
| Caesars Slots | | <ul style="list-style-type: none">No house prize or piggy bank feature |
| Scatter Slots | | <ul style="list-style-type: none">No house prize or piggy bank feature |
| Quick Hit Slots | | <ul style="list-style-type: none">No house prize or piggy bank feature |
| Old Vegas Slots | | <ul style="list-style-type: none">No house prize or piggy bank feature |
| Slots - Classic Vegas Casino | | <ul style="list-style-type: none">No house prize or piggy bank feature |
| DoubleUp Slots | | <ul style="list-style-type: none">House prize feature that is universal across all machines |

RECOMMENDATIONS: HOUSE PRIZE AND PIGGY BANK

Combine both features to create a powerful conversion and transaction mechanic. Drive up bet per spin initially with the house prize, then create repeat spenders with the piggy bank

| Details | Piggy bank in Slotomania Casino | House prize in DoubleUp Slots |
|--|---------------------------------|-------------------------------|
| <ul style="list-style-type: none">• Add a simple safe or other icon to the UI: Include this icon in both the lobby and game screen (image 1)• Clearly market the feature to players (image 2)• Put a percentage of every bet into the safe: This should be a lower percentage than Slotomania Casino, but much higher than DoubleUp Slots, depending on the other features contributing to the economy• Allow players to unlock the bank with coins won in 50 spins <i>or</i> with a direct purchase: Increase the goal rapidly. This will introduce the feature to players but quickly make it nearly unreachable without purchasing• If players unlock the bank through spinning, upsell players with a \$2.99 package: To save time on development, do not build the wheel, just sell a simple multiplier package, like 5X, depending on the number of coins won. Also include other benefits, like coins, in that purchase (image A and B)• Increase the price of the safe: Like Slotomania Casino, increase the price by level to drive whale spending behaviors over time | | |
| | | |

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• For example, in our analysis of DoubleUp Slots, all the components of DoubleUp Slots (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 both top-grossing and 2015 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 is 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 |

Strategy without tactics is the slowest route to victory. Tactics without strategy is the noise before defeat.

– Sun Tzu, *The Art of War*

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