LIQUID AND GRIT SOCIAL CASINO REPORT

Competitive research and actionable recommendations for product owners on innovations in social casino gaming February 2016

DOUBLEUP SLOTS DEEP DIVE



Introduction

Dear Product Owner,

DoubleUp Slots epitomizes a breakout success. The game was launched November 6, 2015 and is already a top 20 grossing casino game on iOS. How could this be? Isn't social casino an impenetrable market for new games? 2015 proved otherwise. Games like DoubleUp Slots, Scatter Slots, Viva Slots Las Vegas and more were released and rose to a top 30 status within only a few months.

This report thoroughly analyzes DoubleUp Slots. To identify the key features of this game we used market research, game analysis, and a technique used by the C.I.A. called Analysis of Competing Hypotheses.

Based on our research, we make three key recommendations: House Prize & Piggy Bank, Wallet Experience, and Progressive Jackpots. DoubleUp Slots also does a lot of little things well...like the Bonus Wheel, Daily Goals, Tournaments, and Conversion Dialogues...which are all summarized in the Additional Features section.

DoubleUp Slots has a strong economy. Therefore, we compare it to both the top 10 grossing slots games as well as the 2015 breakout slots games on iOS.

Pay close attention to the House Prize & Piggy Bank section as it includes a summary and analysis of Slotomania's very similar Piggy Bank feature. Both features are key buyer conversion and transaction mechanics. Some version of one, or both, should be seriously considered for an upcoming release.

All the best,

The Liquid and Grit Team



HIGH-LEVEL GAME OVERVIEW

DoubleUp Slots incorporates 30 fairytale themed slot machines, Progressive Jackpots, a heavily integrated Tournament system, a House Prize, and a Primary Coin Bonus

Lobby

- In the lobby, each of the 30 fairytale themed machines has a Progressive Jackpot
- To qualify for a Progressive Jackpot, players must bet at least the third lowest bet
- Progressive Jackpots are examined closely in this report



Primary Coin Bonus

- There is one coin bonus feature giving coins every four hours
- Players can purchase more spins for \$2.99, and one additional jackpot slide for \$4.99
- The jackpot is 100,000,000 coins, which is worth \$3.02





Tournaments

- Players can access Tournaments in the lobby and in each machine
- There are three Tournaments running concurrently that include 10 machines each
- Players are ranked by coins won
- All Tournaments are free

House Prize

- The House Prize is a progress bar that represents the amount of coins players have won in 50 spins
- If players reach the goal in 50 spins, they receive the House Prize, which is an additional bonus based on their winnings





KEY FEATURES AND RECOMMENDATIONS

Identification of the most valuable and innovative features in DoubleUp Slots and recommendations for how to best apply these features to your game

FEATURE RECOMMENDATIONS SUMMARY

controlled Wallet Experience with massive Progressive Jackpots on all machines

	Feature	Impact	
	House Prize & Piggy Bank	 Improve conversion Increase transactions Drive up bet per spin 	 Combine transaction Drive up I Piggy Bar
	Wallet Experience	 Improve D1, D7 retention Convert more players 	 Control th For best of wallets to
	Progressive Jackpots	 Drive up bet per spin Increase transactions per buyer 	 Add Progr Clearly display

The House Prize and Piggy Bank are effective conversion mechanics. DoubleUp Slots has a

Recommendations

e the House Prize and Piggy Bank mechanics to create a powerful conversion and ion mechanic

bet per spin initially with the House Prize, then create repeat spenders with the ank mechanic

he initial Wallet Experience for all players

conversion, start with moderate growth in wallets to feel realistic, then inflate o make players feel rich...before rapidly draining their wallets

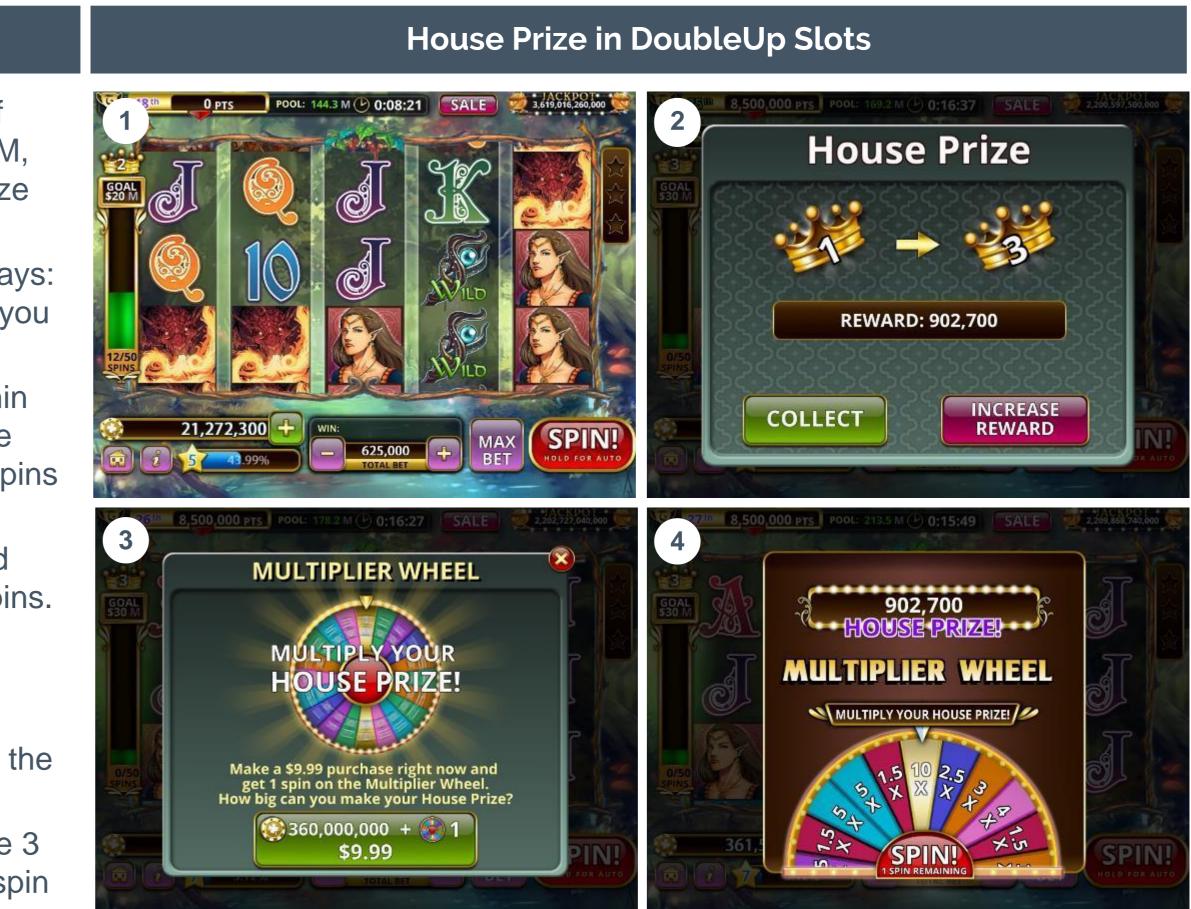
gressive Jackpots to all machines with similar sized jackpots to DoubleUp Slots display to players the bet amount needed to qualify for the Progressive Jackpots

HOUSE PRIZE & PIGGY BANK

HOUSE PRIZE: FEATURE SUMMARY

The House Prize drives transactions by increasing bet amounts and marketing a \$9.99 coin package with bonuses every 50 spins

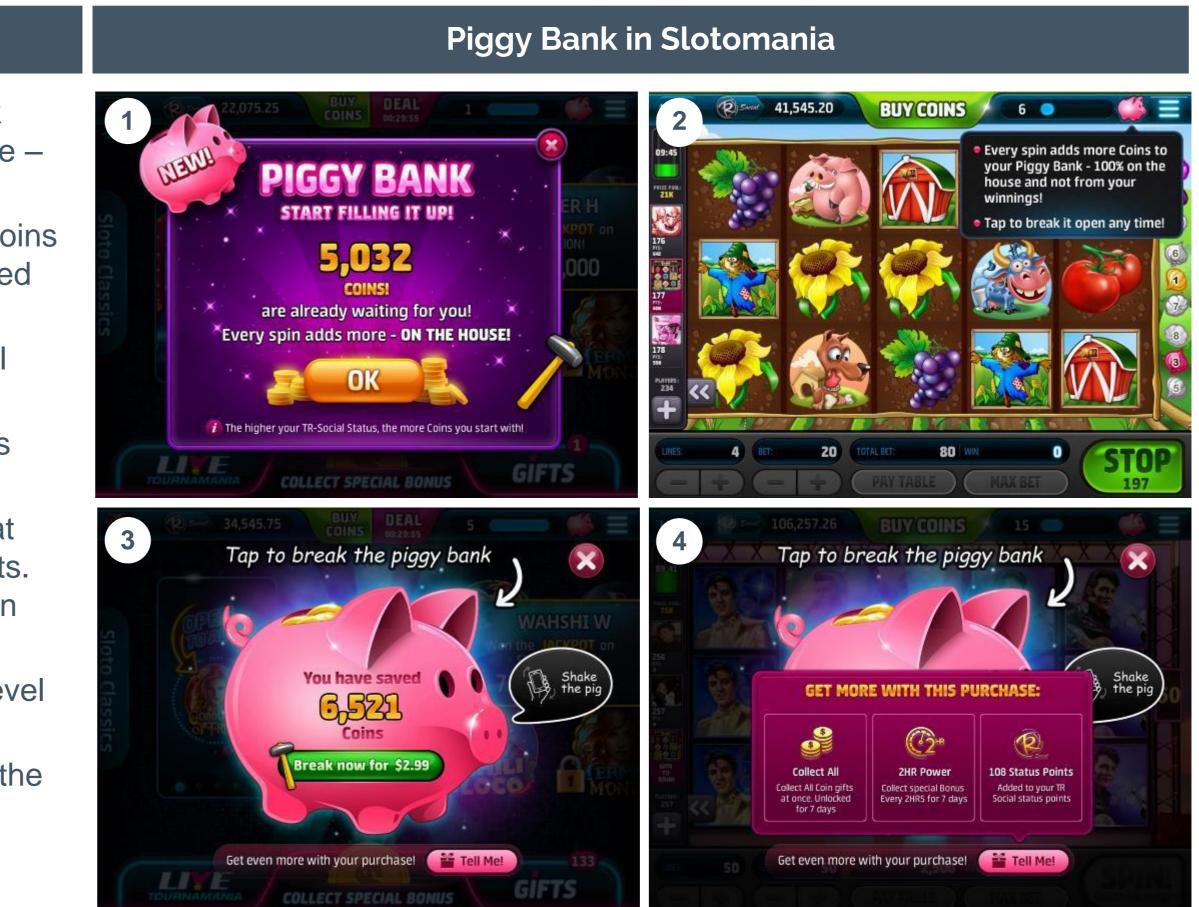
- A House Prize progress bar displaying the goal is located at the top of each machine. The goal starts at 10M coins and then increases to 20M, 30M, 40M, 50M, 75M, and 100M...and so on. There is one House Prize shared across all machines (image 1)
- When players click on the House Prize, an explanatory 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, etc. (image 4)



PIGGY BANK: FEATURE SUMMARY

Slotomania's Piggy Bank feature is very similar to the House Prize; but Slotomania players must make a purchase to unlock the Piggy Bank, *and* the Piggy Bank stores 73% of coins bet

- 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 amount of 5,000 coins and add coins with every bet. A massive amount of coins...73% of every bet...is added to the bank
- The Piggy Bank sits in the top right-hand corner of the screen. A small drop down 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 7 days, receive a 2 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 filling
- The higher a player's TR Social Points (loyalty points in Slotomania), the larger the starting coin balance for the Piggy Bank



HOUSE PRIZE & PIGGY BANK: BACKGROUND DATA

The Coin Pack 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

Packages ranked by transactions: <u>DoubleUp Slots</u>

Rank	Package	Price	Rank	Package	Price
1	Coin Pack 1	\$1.99	1	Mini package	\$1.99
2	Coin Pack 3	\$9.99	2	Advanced Package	\$4.99
3	Coin Pack 2	\$4.99	3	Pro Package	\$19.99
4	Coin Pack 4	\$19.99	4	Deluxe Package	\$9.99
5	Spin Chance 1	\$2.99	5	Break Piggy Bank	\$2.99
6	Coin Pack 5	\$49.99	6	Break Piggy Bank	\$19.99
7	Coin Pack 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

Source: iOS App Store In-App Purchases tab. For more information, see the data collection process description in the appendix

Packages ranked by transactions: Slotomania

BREAKOUT GAMES: MARKET INFORMATION

Konami Slots and DoubleUp Slots are the only 2015 breakout games that incorporate a House Prize or Piggy Bank type feature

Game	Strength of feature		
Konami Slots		٠	Konami Sl
Viva Slots Las Vegas		•	No House
Caesars Slots		٠	No House
Scatter Slots		•	No House
Quick Hit Slots		٠	No House
Old Vegas Slots		٠	No House
Slots - Classic Vegas Casino		٠	No House
DoubleUp Slots		•	House Priz

Comments Slots has a loyalty reward feature that fills with a few spins for new players e Prize or Piggy Bank feature e Prize or Piggy Bank feature

e Prize or Piggy Bank feature

rize feature that is universal across all machines

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 of feature		
Heart of Vegas		•	No House Pr
DoubleDown		٠	No House Pr
Big Fish Casino		٠	No House Pr
Hit it Rich		٠	Charm Meter
Slotomania		٠	Piggy Bank f
Wizard of Oz Slots		٠	No House Pr
DoubleU Casino		٠	No House Pr
House of Fun		٠	No House Pr
GSN Casino		٠	No House Pr
MyVegas		٠	No House Pr
Heart of Vegas		٠	No House Pr

Comments
rize or Piggy Bank feature
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rize or Piggy Bank feature
er: players fill the Charm Meter to win bonuses like XP, etc.
feature very similar to the House Prize
rize or Piggy Bank feature

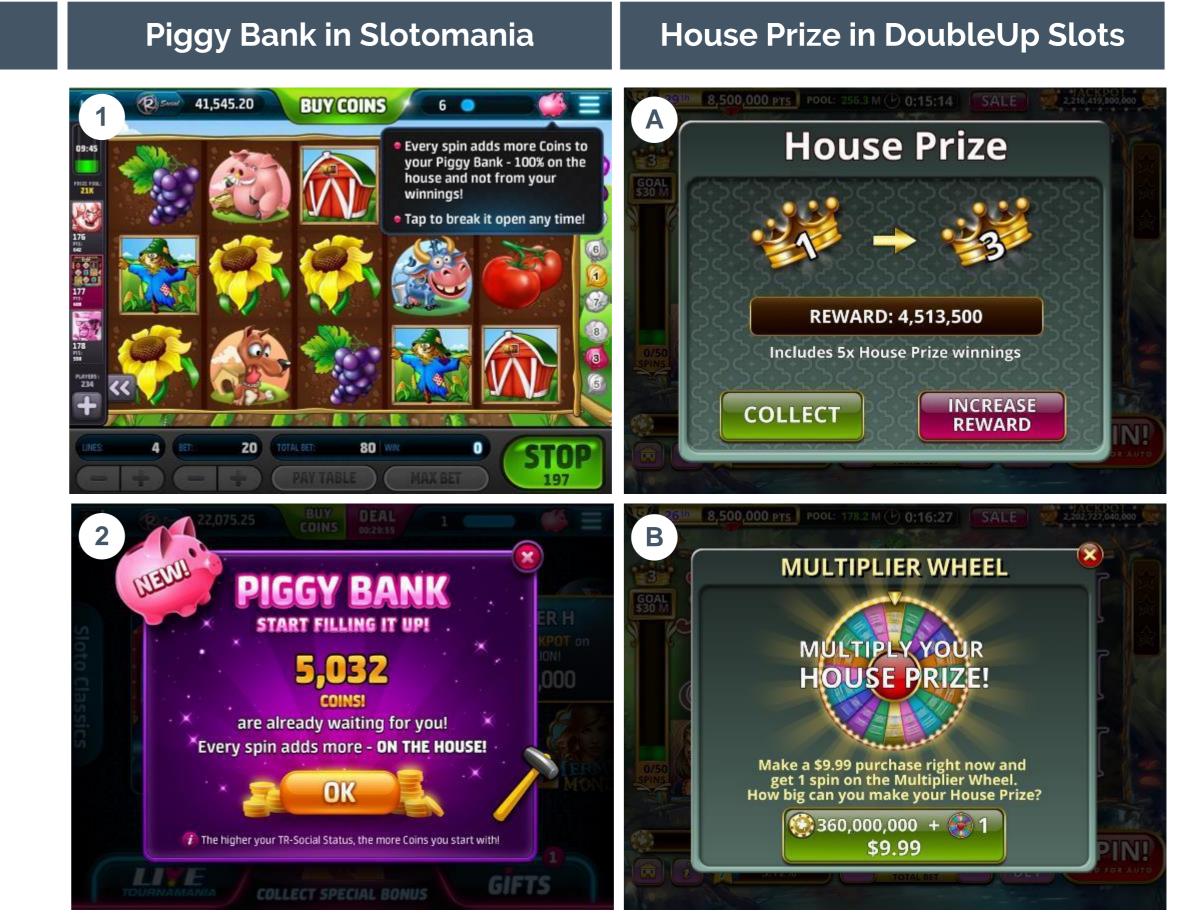
HOUSE PRIZE & PIGGY BANK: RECOMMENDATIONS

per spin initially with the House Prize, then create repeat spenders with the Piggy Bank

Details

- Add a simple Safe or other icon to the UI: Include this icon both in 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 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 or 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 amount of coins won. Also include other benefits, like coins, in that purchase (image A and B)
- Increase the price of the Safe: Like Slotomania, increase the price by level to drive whale spending behaviors over time

Combine both features to create a powerful conversion and transaction mechanic. Drive up bet



WALLET EXPERIENCE

WALLET EXPERIENCE: FEATURE SUMMARY

The economy is 100x larger than the next closest 2015 breakout slots game, and the Wallet Experience is solid: starting low, growing large, and falling off quickly after players are invested

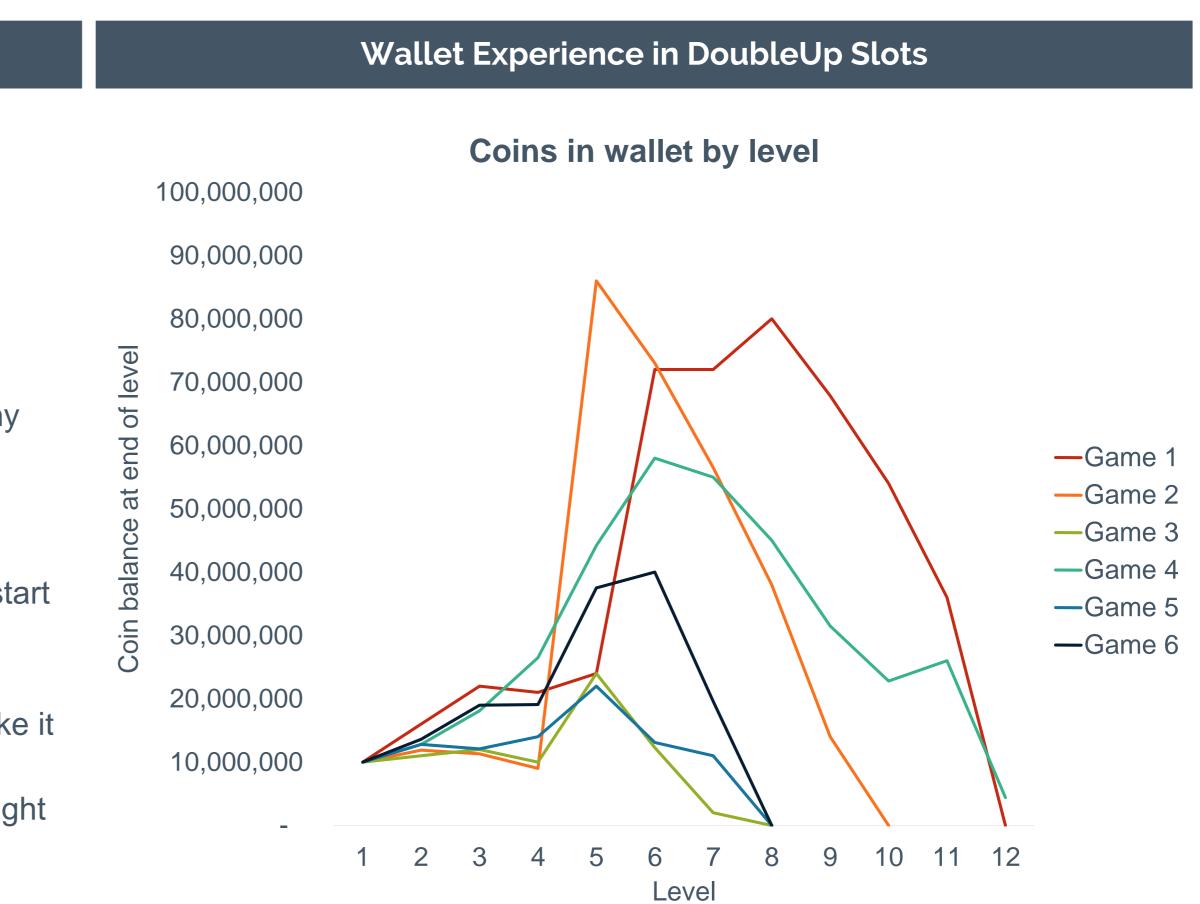
Details

Size of economy:

- DoubleUp Slots' economy is 100x larger than the next closest 2015 breakout slots game and 10x larger than the next closest top 10 grossing slots game on iOS
- DoubleUp Slots' economy is 10x larger than Slots Favorites, Super Lucky Casino's previous game
- However, No Limit Slots (Super Lucky Casino's latest game), has a smaller economy than DoubleUp Slots. This implies that the economy was too large in DoubleUp Slots (see the next slide for details)

Wallet Experience:

- The Wallet Experience is how players' wallets rise and fall from the start of the game until they run out of coins
- Players start out with 10M coins with a default bet of 65k
- Players receive 10M more coins at level 5, ensuring that players make it well past level 5
- The progression of players' wallets is clearly shown in graph to the right



WALLET EXPERIENCE: BACKGROUND DATA

DoubleUp Slots is <u>very similar but more successful</u> than previous Super Lucky Casino games. The economy value and Wallet Experience, which have been recently tweaked, are likely major contributors to this success

Slots

Romance



DoubleUp

Slots

Slots Favorites Shakespeare

Slots

*No Limit Slots was just released on 2/4/16

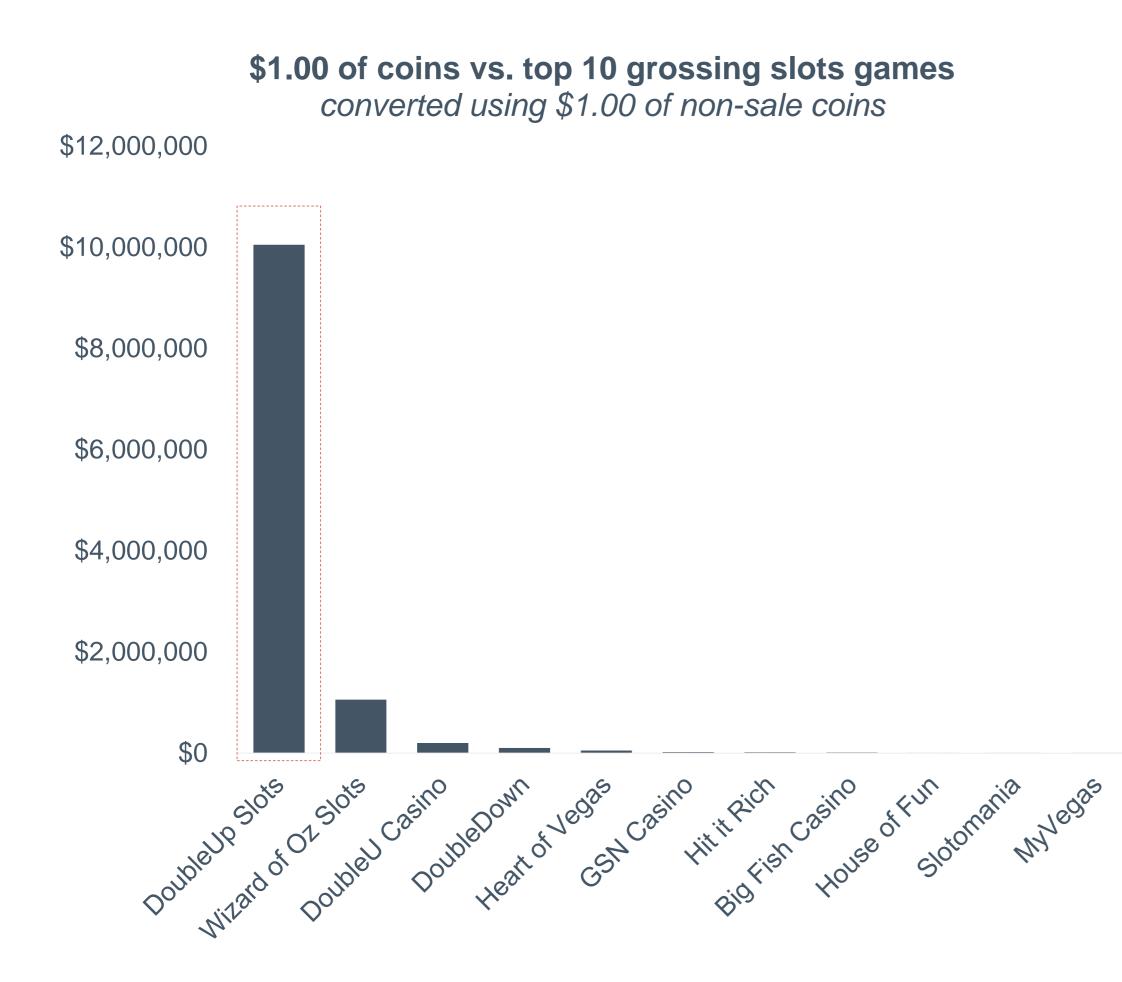
No Limit Slots

Feature	Contributing to success			
House Prize	Yes (added 9/22/15 and tweaked in new game)			
Economy features	Yes (10x larger in DoubleUp Slots and tweaked)			
Primary Bonus	Yes (new in DoubleUp Slots and Slots Favorites)			
Progressive Jackpots	Yes (first added 4/15/15)			
Machine themes	Meh (60% new machines in DoubleUp Slots)			
Daily Goals	Meh (added 1/5/15 but rewards increased 2/8/16)			
Clubs	No (added 8/4/14 to Bible Slotsnot in new game)			
Tournaments	No (added 7/19/12)			
Unlocked machines	No (Slot Favorites is the only game with level lock)			
Art quality	No (equal level art quality)			

Recently added or changed features

WALLET EXPERIENCE: MARKET INFORMATION

DoubleUp Slots' coin to dollar ratio is 10x larger than any other top 10 grossing slots game and 100x larger than any other 2015 breakout slots game on iOS



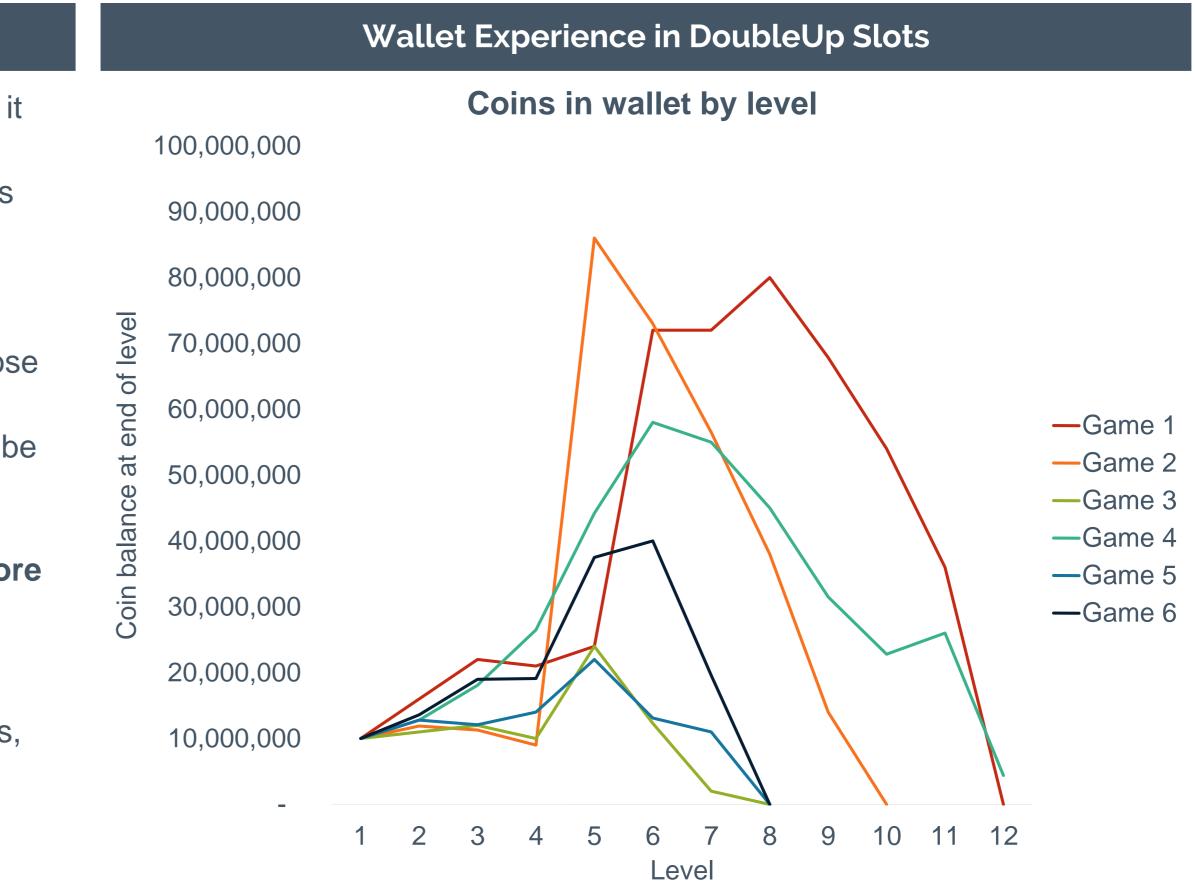


WALLET EXPERIENCE: RECOMMENDATIONS

Control the initial wallet experience for all players. Start with moderate growth to feel realistic, then inflate wallets to make players feel rich...before rapidly draining their wallets

Feature details

- Control the initial wallet experience: Players should always make it to a certain level, depending on your games' leveling curve
- Make the math feel legit: Do not add mechanics like automatic wins on first spin. Real players will detect these gimmicks
- Make players become rich: For example, DoubleUp Slots gives players an additional 10M coins at level 5 to help make this happen
- Keep players above a certain threshold: Do not let players get close to running out of coins until the designated level
- Drop players quickly at the designated level: The decline should be as abrupt as possible while feeling natural...this will increase conversion
- Make the economy large so players feel that they are getting more coins, comparatively, than in other games: Test coin values somewhere between 2 – 10M coins per dollar
- Consider releasing new games with different economies: Super Lucky Casino has released five games with nearly the same features, half new machines, and new economy changes

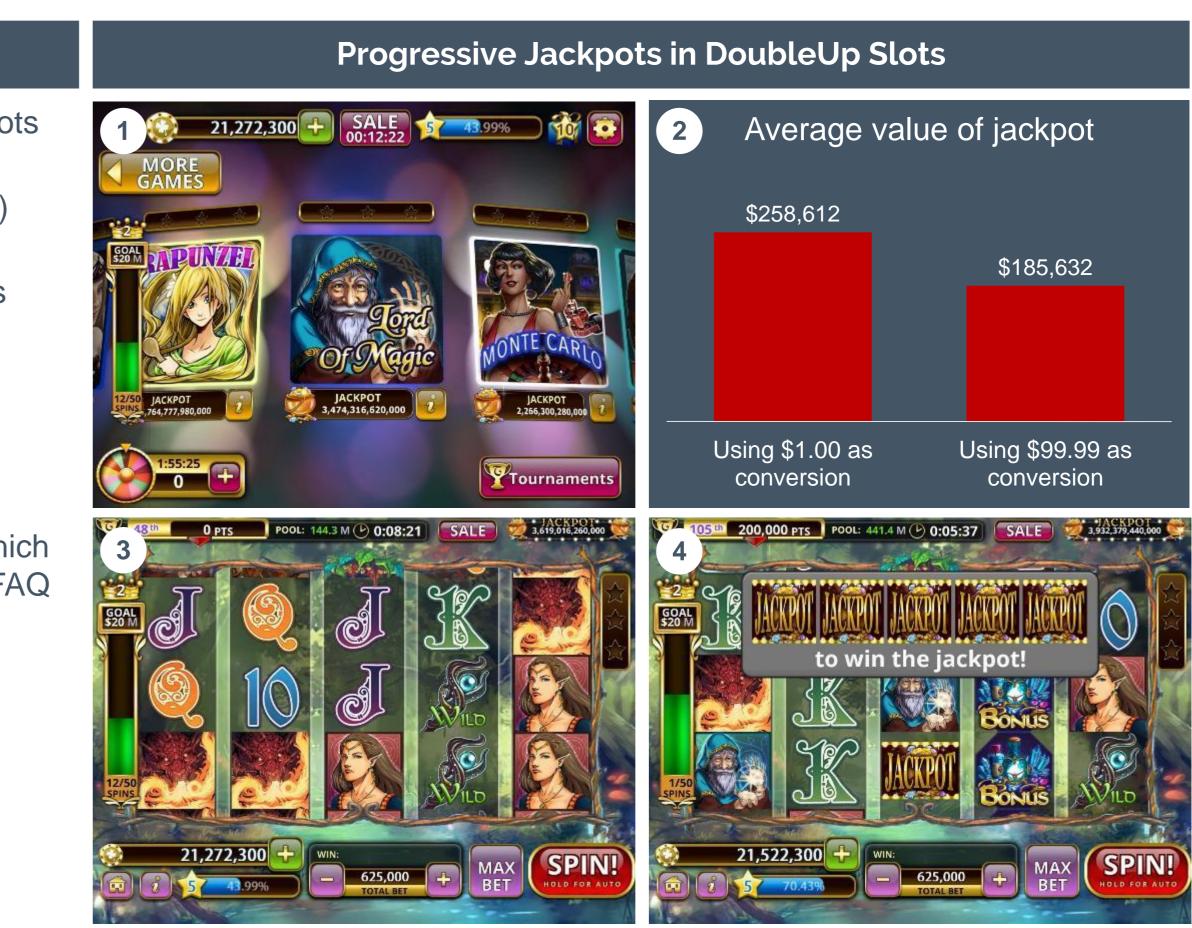


PROGRESSIVE JACKPOTS

PROGRESSIVE JACKPOTS: FEATURE SUMMARY

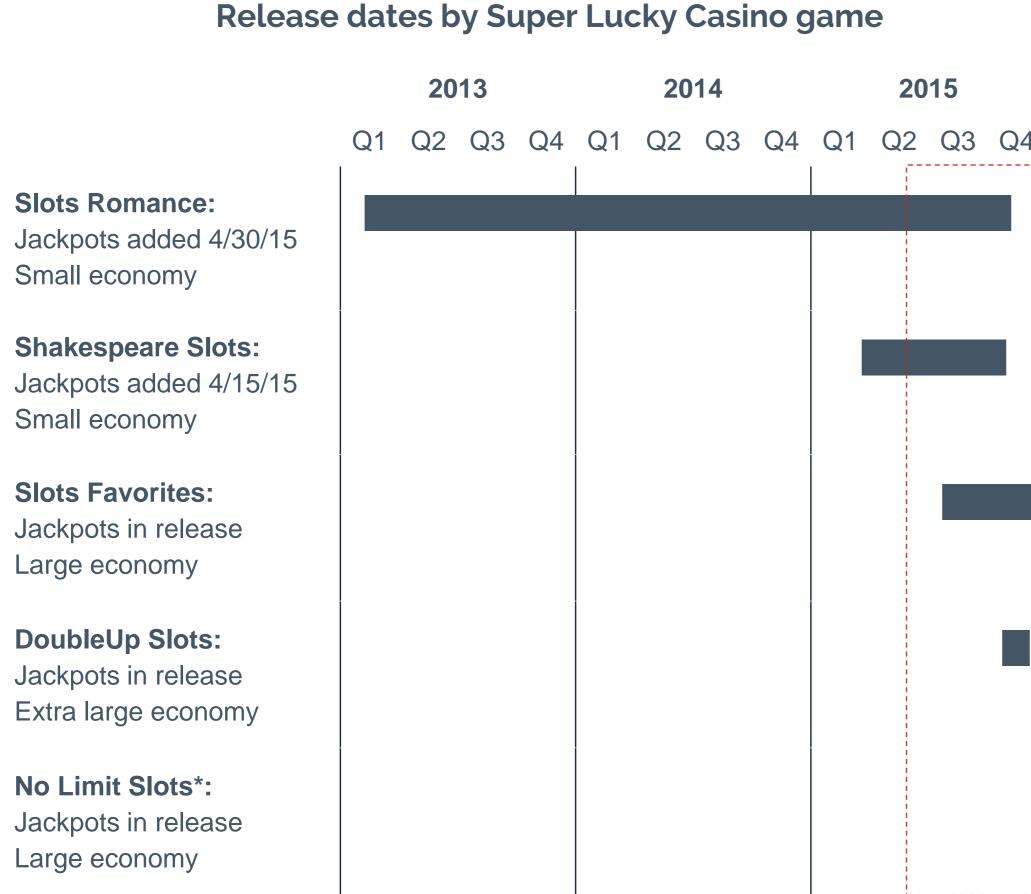
DoubleUp Slots has massive Progressive Jackpots on each machine with an average value worth \$258,612, converted using \$1.00 worth of non-sale coins

- All machines are unlocked to players and include Progressive Jackpots
- The Progressive Jackpot amounts, counting upwards, are clearly displayed to players in the lobby below every machine icon (image 1)
- The average value of a jackpot is \$258,612 if converted using \$1.00 worth of coins and \$185,632 if converted using \$99.00 worth of coins (image 2)
- The Progressive Jackpot amounts are also shown in the upper right hand corner of the machine room (image 3)
- Every machine includes jackpot symbols and players must hit five jackpot symbols to win the jackpot (image 4)
- The third lowest bet or higher qualifies players to win the jackpot...which is typically 250,000 or \$0.02 worth of coins. This is explained in the FAQ of the game



PROGRESSIVE JACKPOTS: BACKGROUND DATA

DoubleUp Slots is <u>very similar but more successful</u> than previous Super Lucky Casino games. Recently added Progressive Jackpots have likely contributed to this success



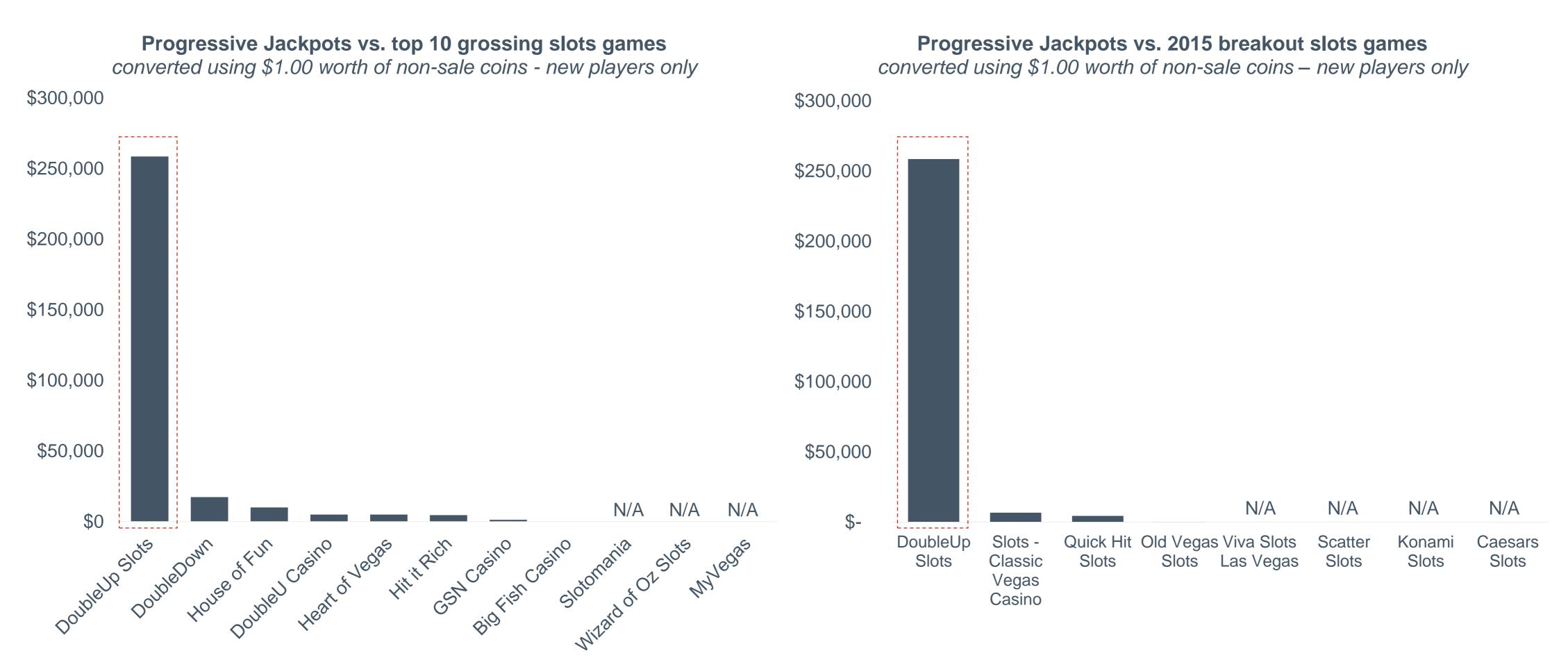
*No Limit Slots was just released 2/4/16

Recently added or changed features

)4	" 16 Q1	Feature	Contributing to success
		House Prize	Yes (added 9/22/15)
		Economy	Yes (10x larger in DoubleUp Slots)
		Progressive Jackpots	Yes (first added 4/15/15 to Shakespeare Slots)
		Primary Bonus	Yes (new in DoubleUp Slots and Slots Favorites)
		Machine themes	Meh (60% new in DoubleUp Slots)
		Daily Goals	Meh (added 1/5/15 but rewards increased 2/8/16)
		Clubs	No (added 8/4/14 to Bible Slots)
		Tournaments	No (7/19/12)
		Unlocked machines	No (Slot Favorites is the only game with level lock)
		Art quality	No (equal level art quality across all games)

PROGRESSIVE JACKPOTS: MARKET INFORMATION

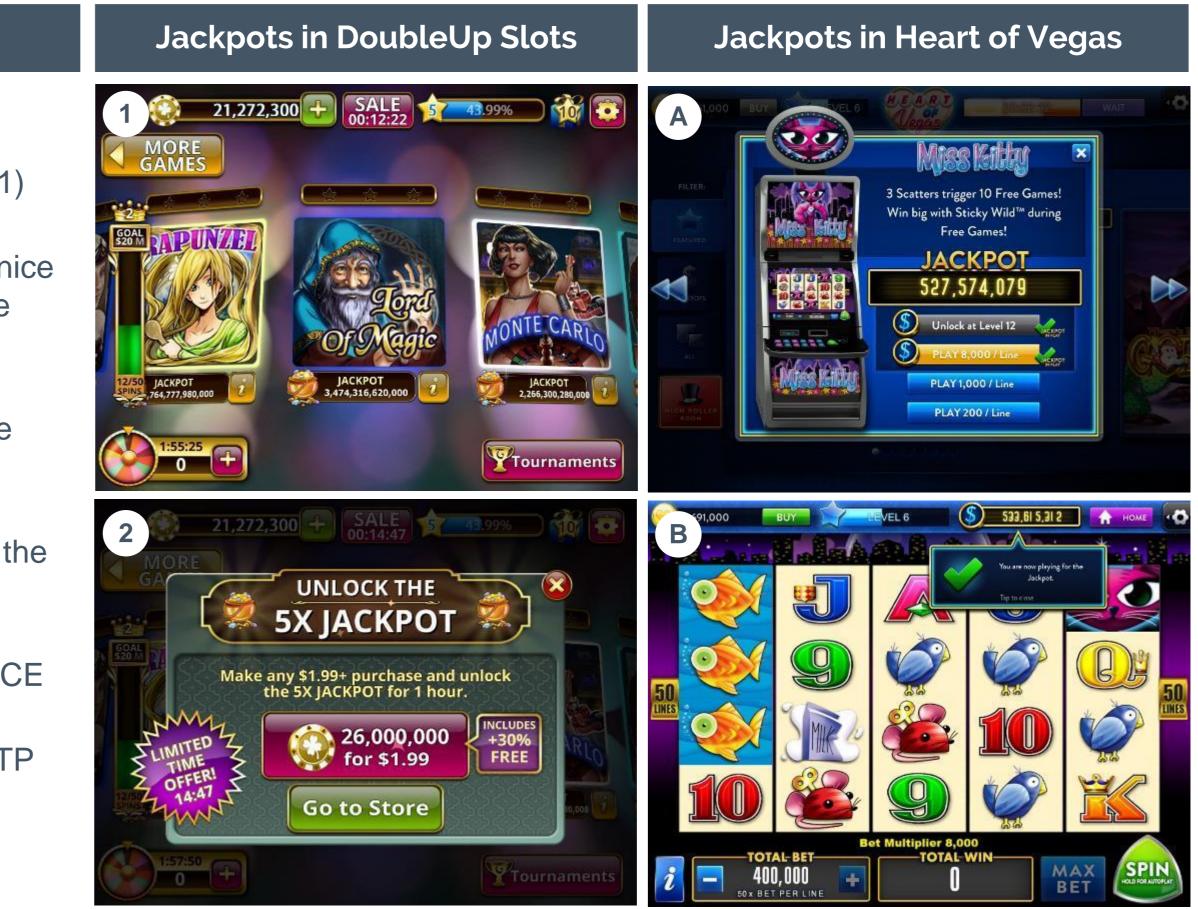
The average value of DoubleUp Slots' Progressive Jackpots is 14x greater than the next closest top 10 grossing slots game and 38x greater than the next closest 2015 breakout slots game



PROGRESSIVE JACKPOTS: RECOMMENDATIONS

Add Progressive Jackpots to all machines with similar sized jackpots to DoubleUp Slots. Clearly display to players the bet amount needed to qualify for the jackpots

- Make the Progressive Jackpots at least 5M times the minimum qualified bet: Jackpot wins should change players' virtual lives. For information on RMG MegaBuck Jackpots, see the Appendix (image 1)
- Clearly show bet amounts that qualify players to win the Progressive Jackpots upon machine-load: Heart of Vegas has a nice dialogue upon machine-load that explains the different bet levels, the jackpot amount (which counts upwards), and information about the machine (image A)
- Make the bottom two bet amounts inelligble to win: This will drive up bets per spin
- Incorporate the jackpot symbols in the machine: Retroactively adding jackpot symbols can be difficult, but ideally they should be in the machine
- Add jackpot benefits to coin packages to drive conversion: DoubleUp markets an UNLOCK THE 5X JACKPOT and a 2X CHANCE TO WIN package to drive player conversion (image 2)
- Track jackpot wins separately: Large jackpot wins can mess up RTP and other tracking information, so keep them separate in reporting
- Add Progressive Jackpot information during play (image B)



ECONOMY SCORECARD

ECONOMY SCORECARD

DoubleUp Slots' new-user economy is moderately tuned compared to the 2015 breakout slots games

	Value	Score vs. top 10	Score vs. breakout	Details on each metric
Coins to dollar ratio	10.0M	5.0	5.0	 The number of coins players receive for \$1.00
Initial coin balance (ICB)	\$1.00	1.8	1.3	 The value of coins players receive upon install
Default bet value	\$0.01	3.6	3.8	 The cost of the default bet in the first machine converted into a dollar value
Minimum bet value	\$0.01	2.3	3.1	 The cost of the minimum bet in the first machine converted into a dollar value
ICB/default bet	125	2.3	3.1	 The value of the initial coin balance divided by the cost to spin at the initial default bet
ICB/minimum bet	125	2.3	3.1	 The value of the initial coin balance divided by the cost to spin at the initial minimum bet
Total daily coin bonus	\$0.49	2.5	1.9	 The total average amount of value players receive from the primary and secondary coin bonuses
Score	-	2.8	3.0	 Average score of the individual parts of the new user economy

Very tight economy

2

3 Moderate economy



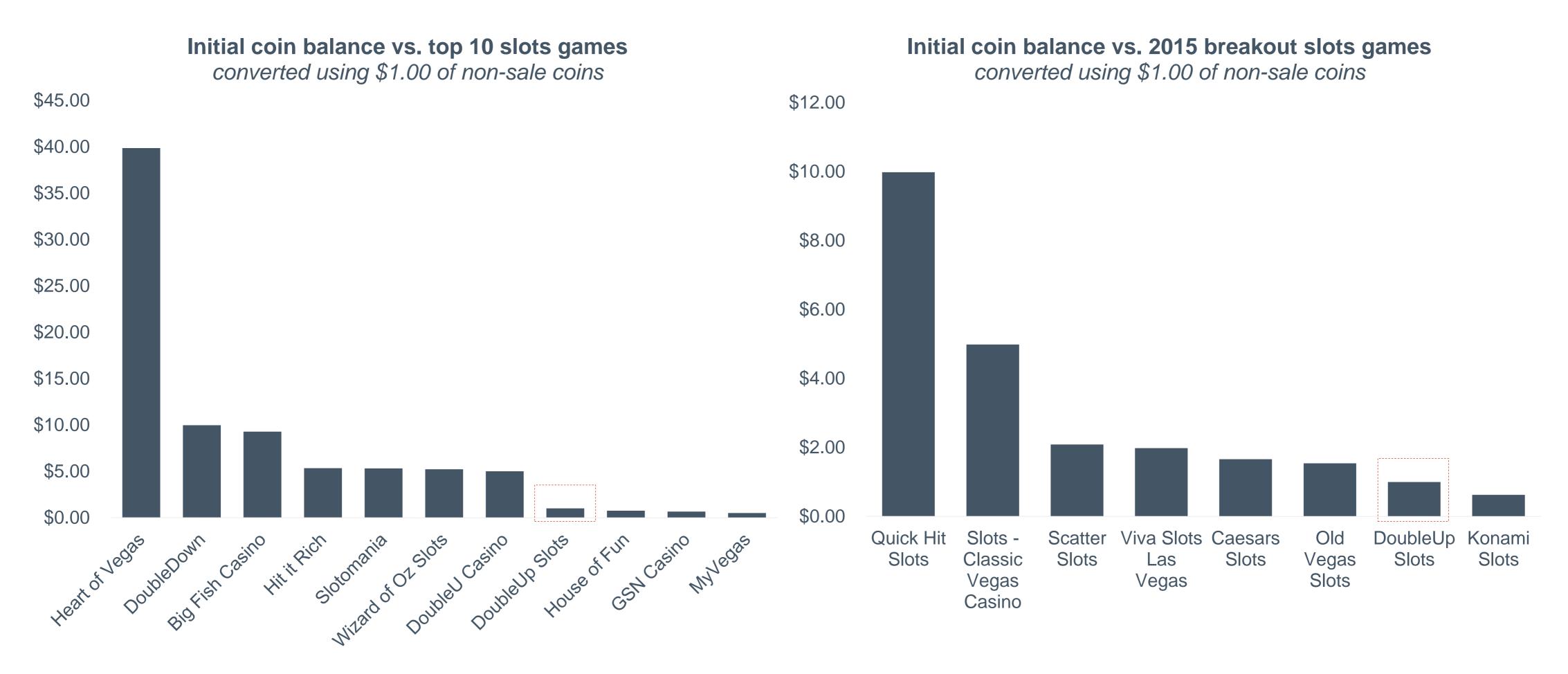
4 Moderately loose economy



5 Very loose economy

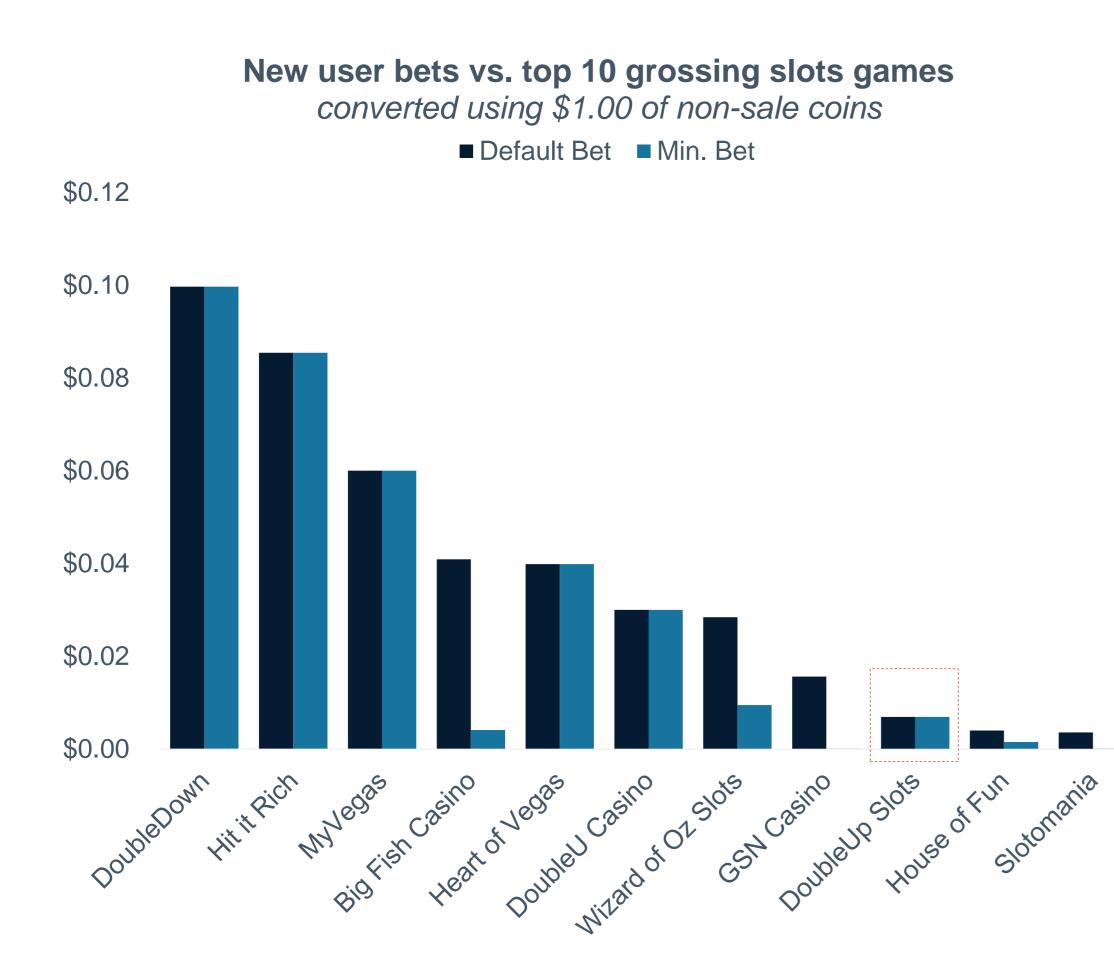
VALUE OF INITIAL COIN BALANCE

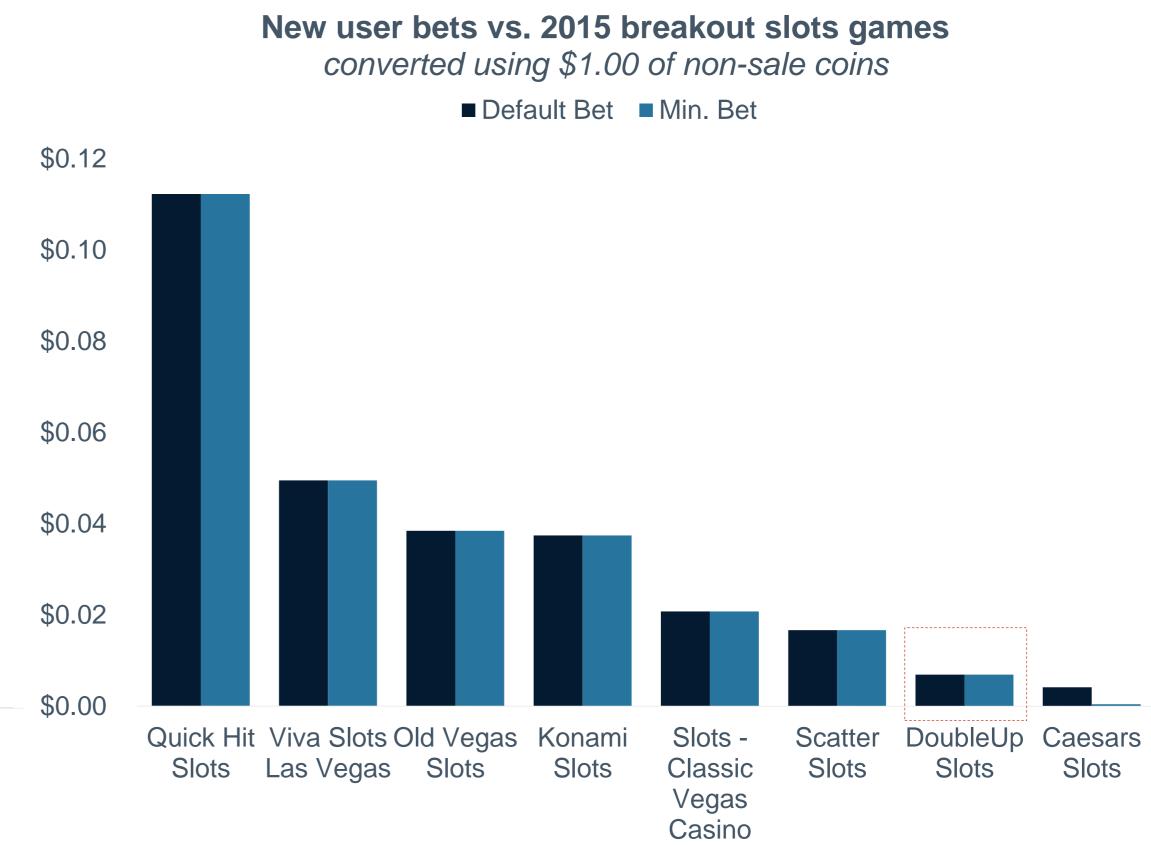
DoubleUp Slots' initial coin balance is <u>moderately tight</u> compared to the top 10 grossing slots games; but <u>very tight</u> compared to the 2015 breakout slots games



NEW USER DEFAULT & MINIMUM BET VALUES

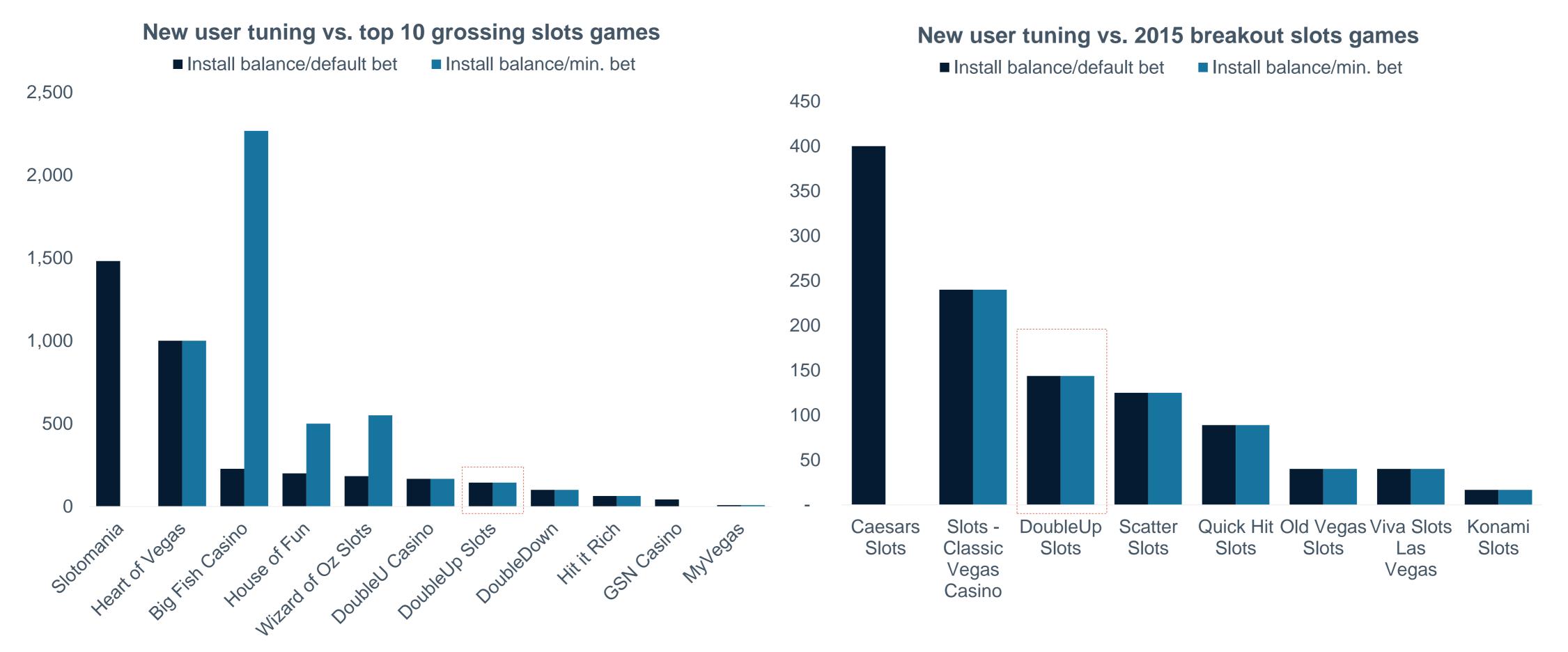
DoubleUp Slots' new user default and minimum bet values are <u>inexpensive</u> compared to both the top 10 grossing slots games and the 2015 breakout slots games





NEW USER TUNING

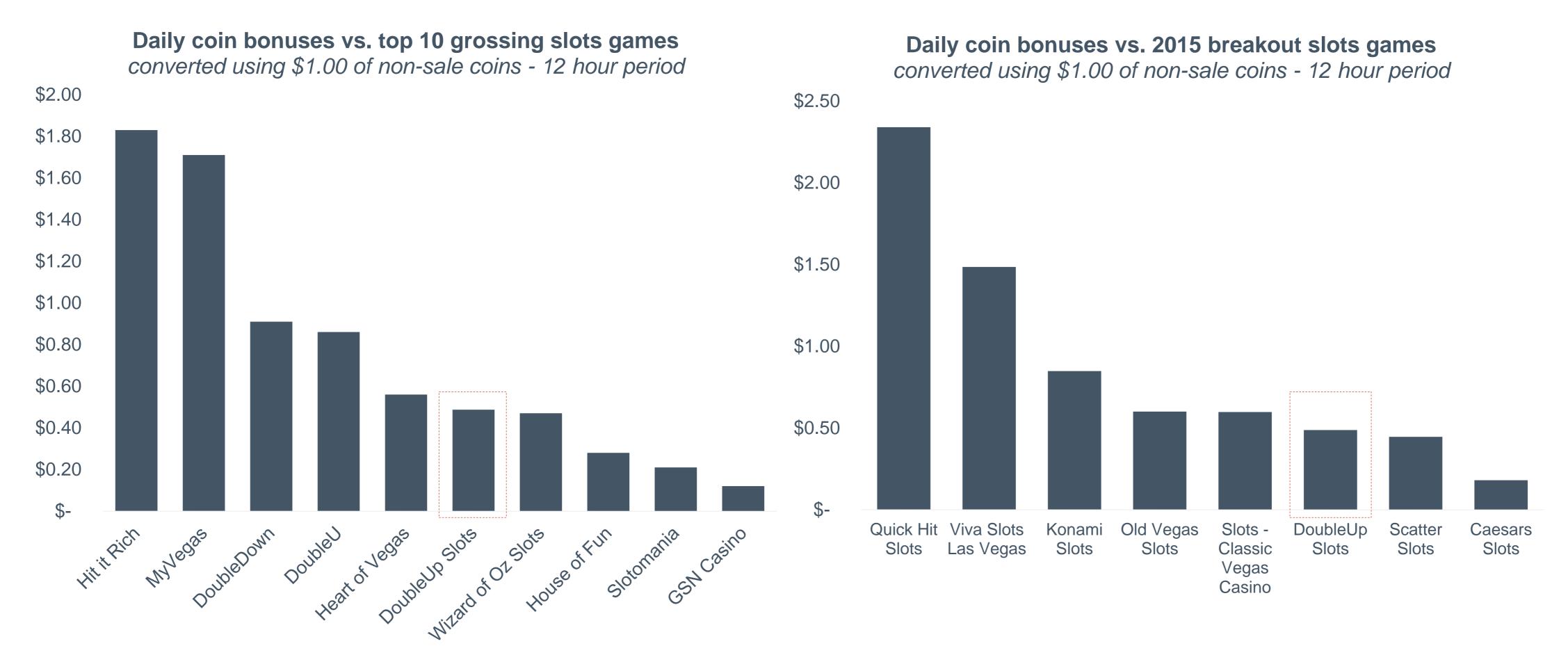
DoubleUp Slots' new user tuning is <u>moderately tuned</u> compared to the top 10 grossing slots games and <u>moderately loose</u> compared to the 2015 breakout slots games



Caesars Slots' install balance/min. bet was removed because it was 4,000 and too large for this graph

TOTAL VALUE OF COIN BONUSES

DoubleUp Slots' total daily coin bonuses are moderately tuned compared to the top 10 grossing slots games and moderately tight compared to the 2015 breakout slots games



Big Fish Casino was removed from the top 10 grossing slots games graph because the total value was too large for the graph

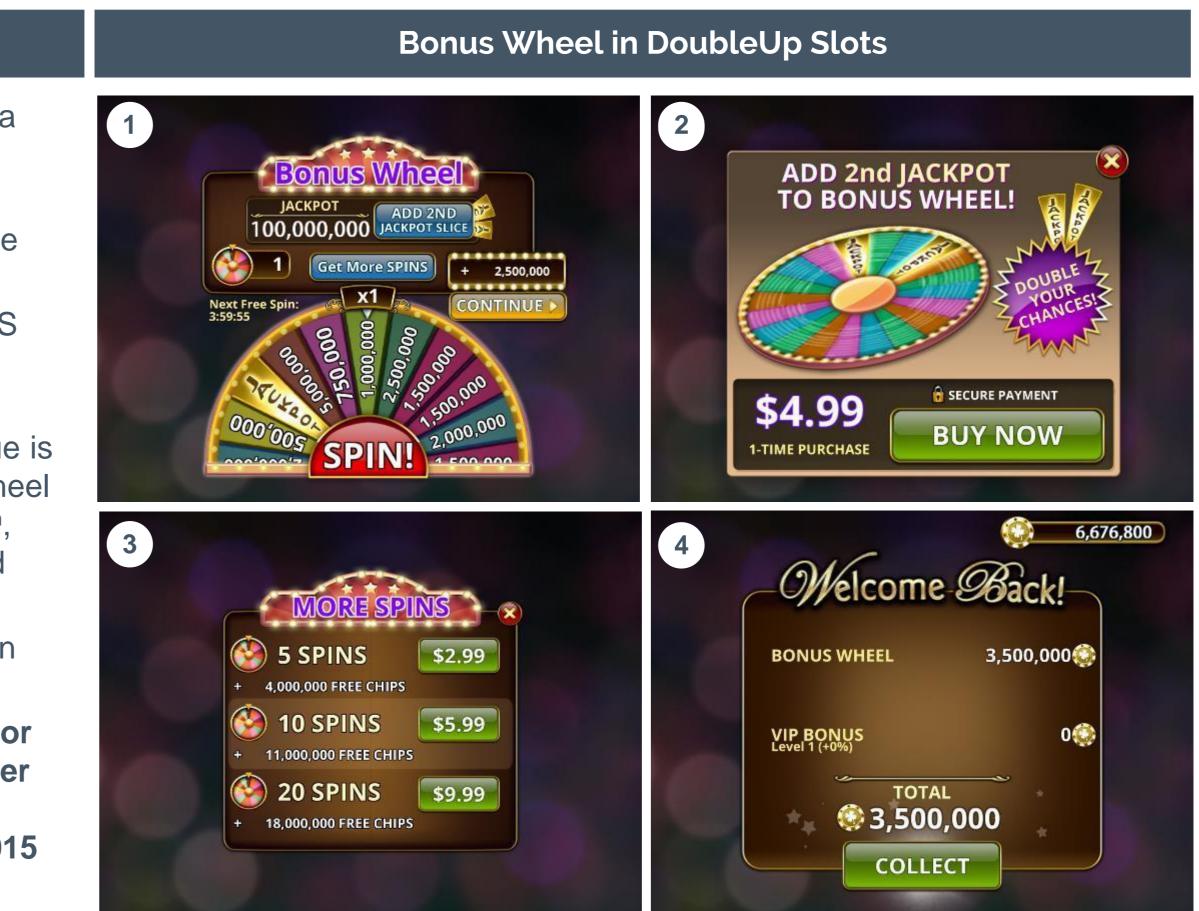


ADDITIONAL FEATURES

BONUS WHEEL: FEATURE SNAPSHOT

The Bonus Wheel, DoubleUp Slots' primary coin bonus, provides players with the opportunity to win a jackpot and make purchases

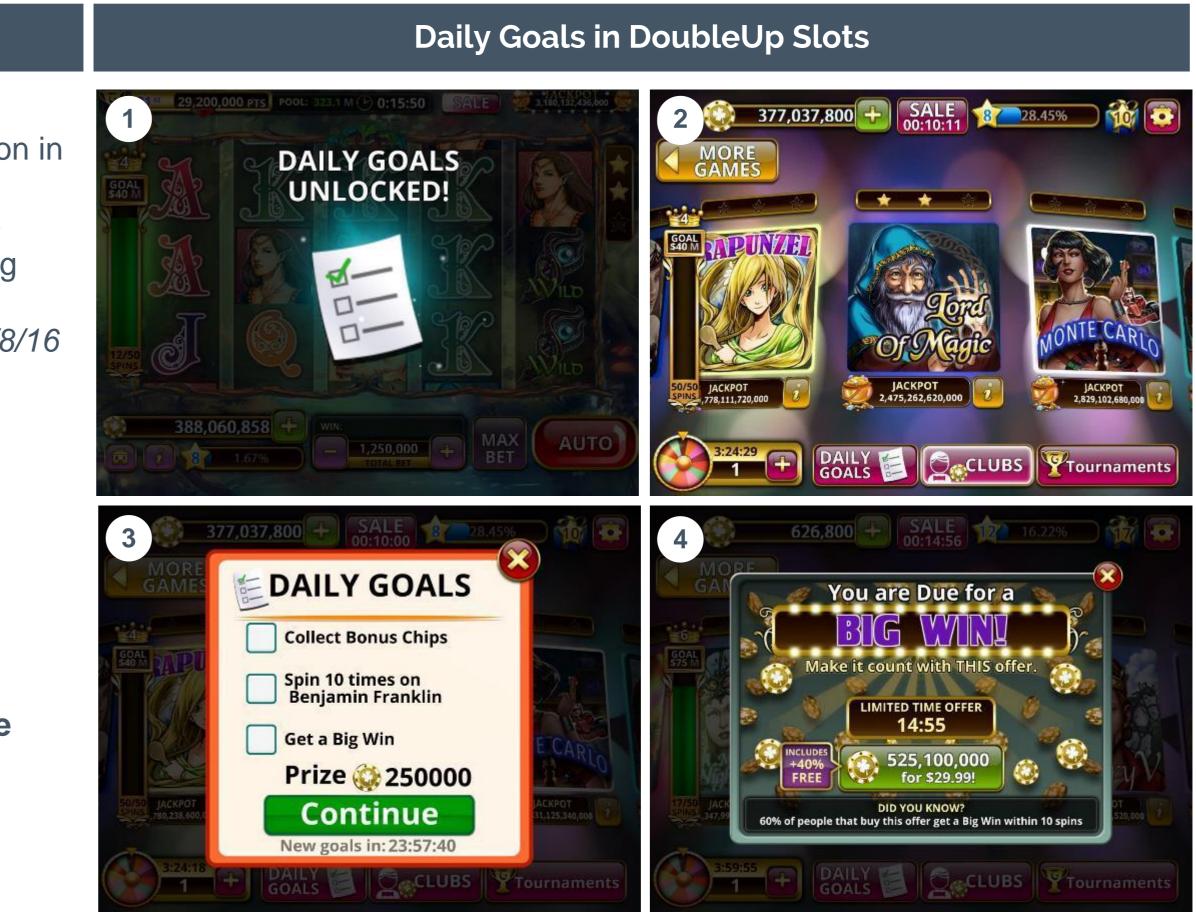
- Players receive a bonus every 4 hours. On the bonus wheel, there is a 100,000,000 jackpot worth \$3.02 (image 1)
- Players can add a 2nd jackpot slice for \$4.99 (image 2). Based on transaction rankings, this addition does not appear to be a big revenue driver
- Players can also purchase more spins by clicking the Get More SPINS button, which takes players to the MORE SPINS dialogue
- On this dialogue, players can purchase 5, 10, and 20 spins for \$2.99, \$5.99, and \$9.99. These purchases include bonus coins. This dialogue is surfaced before the Bonus Wheel image when players click on the wheel button in the lobby. The Spin Chance 1, 2, and 3 packages are the 5th, 9th, and 10th most-purchased packages in DoubleUp Slots...so a solid transaction mechanic (image 3)
- After players spin the Bonus Wheel, their winnings are summarized on the Welcome Back dialogue (image 4)
- The Bonus Wheel drives solid transactions and is one of the major features in DoubleUp Slots and Slots Favorites that is not in Super Lucky Casino's prior games. However, this feature is not unique enough to be the key driver of success compared to the other 2015 breakout slots games



DAILY GOALS: FEATURE SNAPSHOT

DoubleUp Slots adds Daily Goals at level 8; offering easy, medium, and hard daily goals

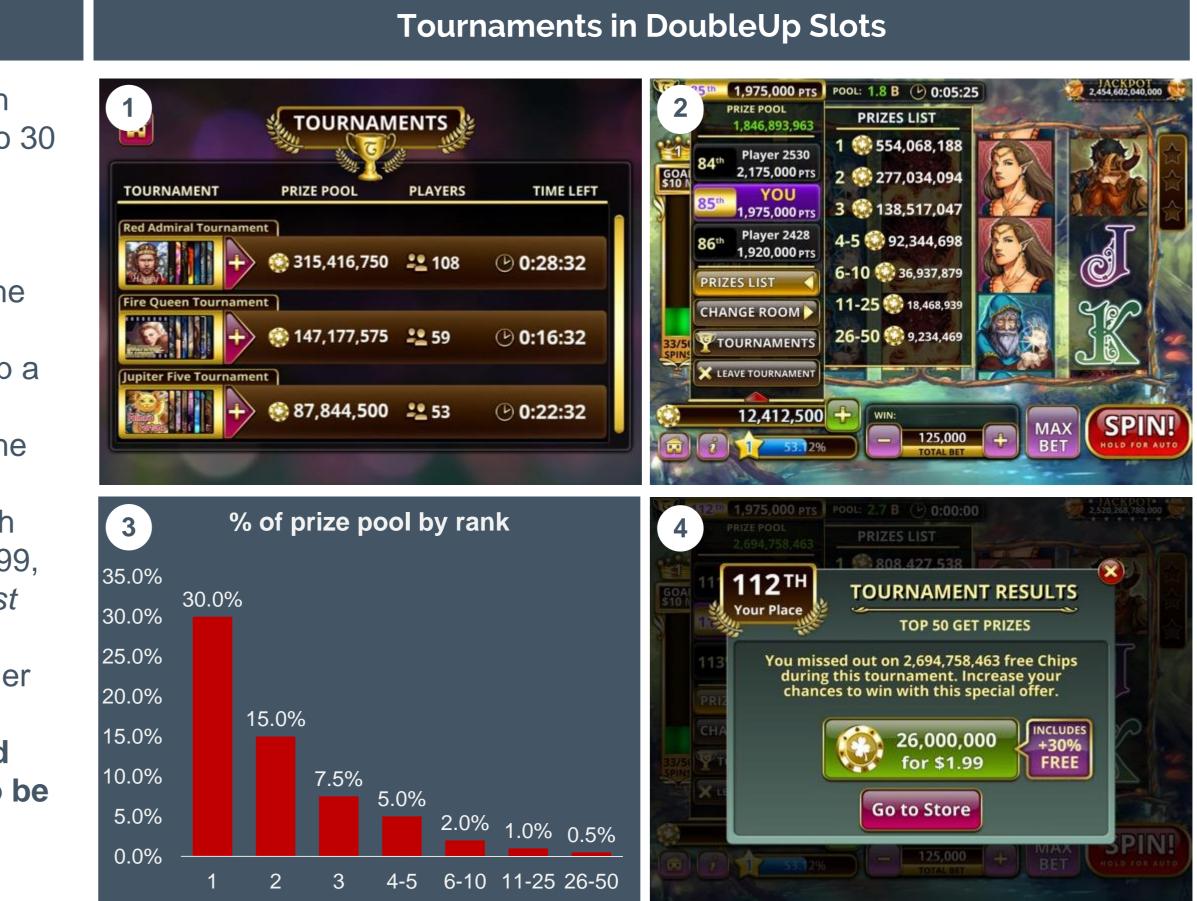
- Daily Goals, like Clubs, are unlocked at level 8 (image 1)
- Players access the Daily Goals by clicking on the DAILY GOALS button in the lobby (image 2)
- There are three tasks each day. The tasks often include collecting the bonus coins, spinning 10 times on a certain machine, and getting a big win. The prizes are not impressive: 250,000 coins is only worth \$0.02 (Daily Goal rewards were increased in Slots Favorites' most recent 2/8/16 release). One task asks players to add their email (image 3)
- When players reach a big win, they are shown the big win conversion dialogue with a limited time offer (image 4)
- Daily Goals is something DoubleUp Slots does very well. This feature is similar to Scatter Slots' Daily Challenge, which was reviewed in January's report
- In No Limit Slots, Super Lucky Casino's newest game, players receive Daily Goals at level 1
- Although this feature likely drives engagement, spins, and potentially some spend...it is not robust enough to drive massive value



TOURNAMENTS: FEATURE SNAPSHOT

Tournaments are a key component of DoubleUp Slots that end with a nice conversion mechanic

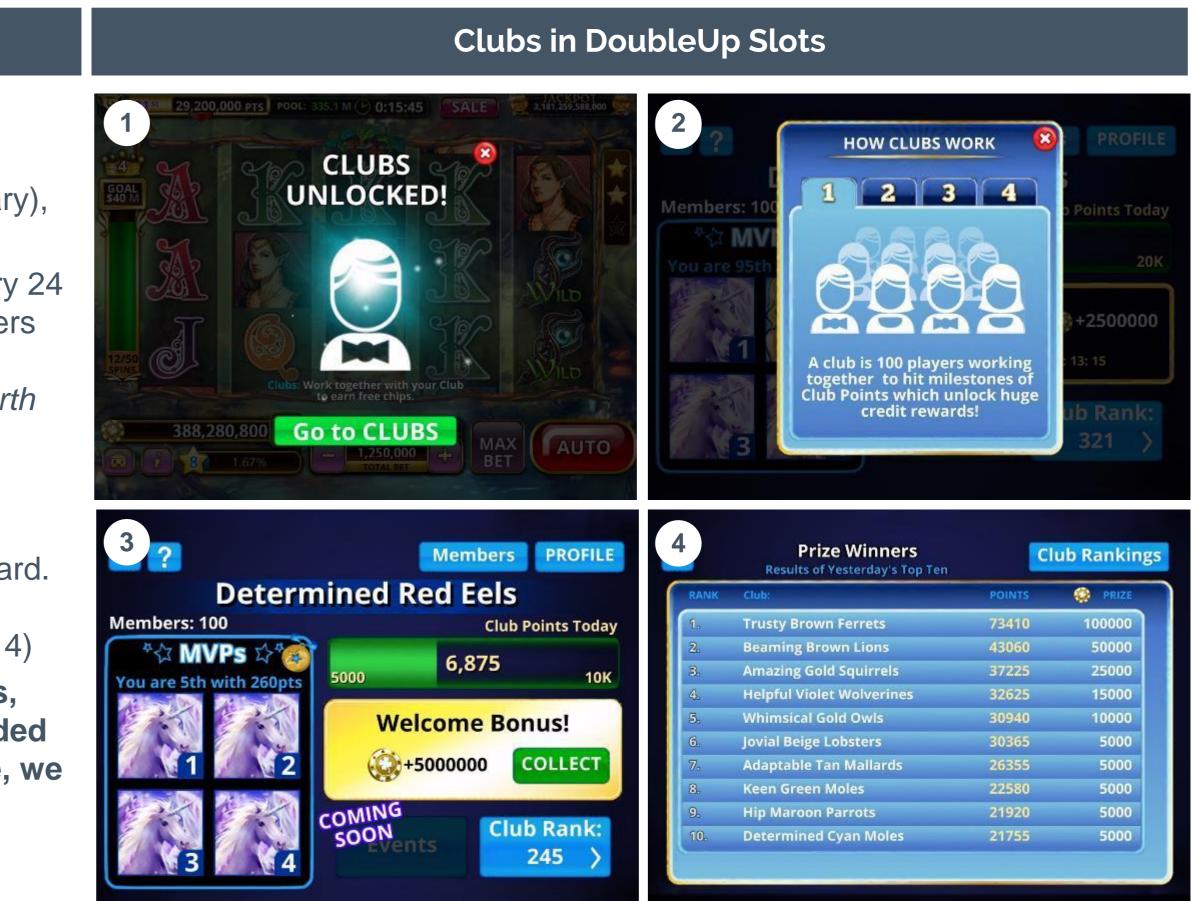
- Three Tournaments run concurrently across all 30 machines and each Tournament includes 10 machines. Tournaments typically run for 20 to 30 minutes (image 1)
- Tournaments are free and players are automatically entered into a Tournament upon spinning a machine (image 2)
- The Tournament prize pool is based on coins spent by all players in the Tournament
- Players are ranked in the Tournament based on points won. Each chip a player wins equals one point
- At the conclusion of the Tournament, 50 players receive a prize and the winner receives 30% of the prize pool (image 3)
- Players are then informed of their results and are notified of how much they missed out on. Players are also offered 26,000,000 coins for \$1.99, which is a solid deal for new players and 30% more coins than the first purchase bonus package offered on the buy page (image 4)
- When players are "in the money," a popup appears in the top left corner notifying players that they are "in the money"
- Tournaments are nicely done in DoubleUp Slots and likely a solid feature; but too prevalent in top grossing social casino games to be a real value-driver for DoubleUp Slots



CLUBS: FEATURE SNAPSHOT

DoubleUp Slots' Clubs gives players a group incentive to spend massive amounts of coins...a similar mechanic to the Big Win Tables outlined in December's Big Fish Casino report

- Players unlock Clubs at level 8 (image 1)
- The Club feature is clearly explained to players (image 2). To earn Club points, players collect bonuses (10 pts), make purchases (pts vary), and win big (100 pts) (image 2)
- Players are automatically placed into a Club. Club contests reset every 24 hours and the top 10 Club point earners receive an MVP bonus. Players also receive individual bonuses, like the Welcome Bonus for 5,000,000...*worth* \$0.50...and the Milestone Bonus for 1,250,000...*worth* \$0.12 (image 3)
- Players can edit their profile picture, name, and avatar. Approximately 25% of players change their profile picture
- Players can view the top teams and prizes in the Club Rank leaderboard. The top prizes are 100,000, 50,000, and 25,000... pretty small considering those amounts are worth \$0.10, \$0.05, and \$0.02 (image 4)
- Although there are no other breakout 2015 slots game with Clubs, the feature was added to Bible Slots on 8/4/2014 and is not included in No Limits Slots...Super Lucky Casino's latest game. Therefore, we do not believe this feature to be a huge win for DoubleUp Slots



CONVERSION DIALOGUES: FEATURE SNAPSHOT

DoubleUp Slots surfaces many conversion dialogues without feeling *too* spammy as the dialogues are often integrated into game features

- Conversion dialogues are attached to the House Prize, Tournaments, Bonus Wheel, Big Win, and more
- Not all dialogues are integrated into features...players do receive conversion dialogues upon app-entry (image 1)
- Big Wins are an important part of the game, as they are often required to achieve the Daily Goal (image 2)
- SKY'S THE LIMIT promotes the package as being purchased by high rollers (image 3)
- DoubleUp Slots also tries to convert players after the DOUBLE UP dialogue (image 4)
- The most valuable part of the conversion dialogues is the diversity ...players likely get less image fatigue in DoubleUp Slots





APPENDIX

PROGRESSIVE JACKPOTS: RMG INFORMATION

DoubleUp Slots is closer to a real-world MegaBucks jackpot. A MegaBucks win is 4.7M times the minimum bet amount. DoubleUp Slots' jackpot is 10.4M times the minimum bet amount

Real-world gambling MegaBucks information

Category	Information	
Average win	\$14,128,978	Based on Meg
Min. bet requirement	\$3.00	\$3.00 bet mus
Win to bet ratio	4,709,659x	Players win ~4
Time between wins (days)	162	Based on Meg
Reset amount	\$10M or \$7M	Based on Meg
Spins between wins	548,196,352	Estimated usir
Probability of winning	1 in 49,836,032	According to s
Jackpot reels / strip	1 / 368	Using John Ro
Non-jackpot RTP	78.4%	Amount return
Jackpot reset RTP	6.7%	Amount that c
Progressive Jackpot RTP	3.5%	Amount that c
Total RTP	88.6%	Total RTP of a

Source: online research from the Wizard of Odds

Comments

- gaBucks wins over the past 10 years
- ist be made to win jackpot. Machines often include \$1.00 and \$2.00 bets
- -4.7M times their bet
- gaBucks wins over the past 10 years
- gaBucks' online reports
- ing time between wins and probability of winning
- slots expert John Robinson
- Robinson's probability
- med to player during normal play
- contributes to the starting point for the next jackpot (\$7M or \$10M)
- contributes to the Progressive Jackpot (making it climb upward)
- a MegaBucks machine, including Progressive Jackpot

DATA COLLECTION PROCESS

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

Market research

- Transaction information comes from the iOS App Store, In-App Purchases tab. These packages are ranked based on number of transactions
- Trending revenue, downloads, and package-rank data comes from Priori Data, a Liquid and Grit partner
- 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 the Wizard of Odds

Analysis of Competing Hypotheses

- In our analysis, all the components of DoubleUp Slots: features, economy, theme, etc., compete against each other to determine the most impactful features
- In the Wallet Experience and Progressive Jackpots sections, 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 slots games and 2015 breakout slots games on iOS

• "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." – CIA.gov

Game information

- 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 economyrelated slides, the coin value is determined by converting coins into money using \$1.00 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 \$1.00, the value of the minimum bet is \$2.00. For games without a \$1.00 package, the next closest package is used

"If you know the enemy and know yourself, you need not fear the result of a hundred battles"

- Sun Tzu, The Art of War



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