Report prepared for

VAN Kansspelen

Gamgard Game Risk Review and Certification of four games

June 2021

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Background to Gamgard

Gamgard was originally developed in 2007 and was the first ever commercially available tool that utilized research findings to evaluate the risk of game characteristics for negatively influencing the behaviour of vulnerable players. Vulnerable players are defined as anyone who has an increased likelihood of developing a gambling problem due to a biological, psychological or emotional predisposition or who may be vulnerable due to specific situational influences (e.g., unemployment, bereavement, relationship breakdown). The first version of Gamgard was developed by Dr Richard Wood and Dr Mark Griffiths with input from seven leading world experts, in terms of responsible gambling issues and treatment of people with gambling problems. The later calibration stages of Gamgard development, utilized a further 15 experts in the field of responsible gambling and problem gambling treatment. The final *Gamgard tool* included ten structural characteristics that were deemed to be the most influential in affecting the gambling behaviour of vulnerable players. The final Gamgard report was evaluated by two independent peer reviewers and feedback was incorporated into the tool.

Each year, the Gamgard team reviews the available empirical evidence concerning responsible game design and considers whether updates to the tool are required. In 2012, Gamgard version 2.1 was launched with the inclusion of responsible gambling tools where there was evidence to show that they could measurably reduce game risks. This update involved input from 20 world-leading RG experts, 20 treatment providers and 20 people who had 'recovered' from a serious gambling problem.

In 2017-2018, a third-party evaluation of Gamgard, was conducted by Professor Emeritus J. Bradley Cousins, an internationally renowned evaluation specialist at the University of Ottawa's *Centre for Research on Educational and Community Services* (www.crecs.uottawa.ca).

The evaluation concluded that…….

- There was good evidence that **Gamgard is meeting its objectives** at the level of developers, operators, and regulators.
- **Gamgard has been overtly integrated into company social responsibility protocols worldwide**. Essentially, Gamgard assessments play an RG assurance role being seen as an early detection mechanism (i.e., one source of information that is used in conjunction with other SR strategies).
- There is widespread agreement among the game developers/operators and regulators interviewed that Gamgard is ***highly credible*** and grounded in science-based evidence. This observation was corroborated by close examination of the sophisticated and thorough processes that were used to develop and periodically update the tool.
- External validity of the tool was evaluated by comparing Gamgard risk ratings with game types reported as most and least problematic in a number of published treatment service provider reports. **Games that were scored as high-risk by Gamgard were found to be those games most often reported as problematic by problem gamblers seeking treatment.**

The full report can be downloaded here

In 2020, version 3.1 of Gamgard was developed that included the option to benchmark game scores against all those of the same game types in the Gamgard database. Going forward, all new games that are tested can be added to extend the benchmark database. The benchmarking option provides two key functions 1) the ability to compare game scores with all games of the same game type in the Gamgard benchmark database, from over 49 gaming operators and regulators from 22 countries. The average scores, the highest and lowest scores as well as

the median (middle) score and the upper and lower quartiles are provided. The score page also shows the modal (most frequent) score for each individual risk/RG factor in the Gamgard benchmark database. 2) An overview of all games tested in a client's individual portfolio. This feature provides the average scores, the highest and lowest scores and can be filtered by game type and game location (i.e., physical or online).

Interpreting and utilizing the results of Gamgard 3.1

This report relates to the certification of four games that were tested by Dr Richard Wood of Gamres Limited using Gamgard 3.1. The games were tested using the game parameters supplied by VAN Kansspelen and through observing video demos of each game. Gamgard 3.1 contains ten risk factors that relate to the structural and situational characteristics of games shown to influence vulnerable players. Each risk factor adds to the cumulative risk rating of the game being examined. Gamgard 3.1 also contains four responsible gaming (RG) features that have been shown to help reduce the risk of a game negatively impacting vulnerable players. Each RG feature has the potential to reduce the overall risk score of the game, depending upon how the RG feature is configured. The final Gamgard 3.1 risk ratings give two sets of scores. The first score describes the basic risk rating of the game before any RG features are added and the second score gives the final (overall) risk rating with the RG features included. Risk scores range from 'very-low' to 'very-high.' In addition, Gamgard 3.1 compares the final scores of the game being tested (with and without RG features) to those of other games of the same type in the Gamgard database. In this way, it is possible to see how the game being tested scores higher, lower or about the same as similar games being offered around the world.

The overall Gamgard 3.1 score indicates whether a game may require some further examination for potentially harmful features. A high score by itself does not necessarily indicate that a proposed game is harmful. That is, the scores are indicative and not literal. However, a high score should initiate further investigation of the individual risk factors to identify areas that may be problematic and require further attention. In this way Gamgard 3.1 works as a guide to aid responsible game design. Similarly, it is important to note that a high rating does not necessarily imply or mean that a game should not be introduced into the marketplace or be abandoned. If a game is identified as having some high scoring features there are several options and strategies that can be considered and implemented:

(1) Change one or more of the risk factors of the game, and/or introduce responsible gaming features that can lower the score: It is possible to use Gamgard 3.1 to identify the specific risky features of a game in order to adjust the game accordingly. For example, if the game scores very high on *event frequency*, then measures can be introduced to slow the game down and lower the overall score. If a game scores high on *continuity of play,* then breaks could be put in place between the end of one game and the start of another.

(2) Employ more market protection and/or restrictions on play: If a game score is considered too high, other protective and preventative responsible gambling features might be introduced to limit, control, or minimize the impact of the game. For example, advertising of a game may be restricted or access to a game may be limited in terms of the hours that it is made available.

(3) Abandon the game: In some cases, the game may be abandoned or require such serious modifications that the game becomes unfeasible, unprofitable and/or unattractive to players.

Gamgard game test results: *Multiplayer Slot Machine*

Table 1. Multiplayer Slot Machine	Very low 20 or less	Low 21-40	Medium 41-60	High 61-80	Very high 81-100
Risk score (no RG features)				**77**	
Risk score (with RG features)				**77**	
Benchmark (no RG features)	In comparison with 303 other games of this type tested by operators and regulators world-wide, Multiplayer Slot Machine scored 6 points higher than the average score recorded in the benchmark database for this game type (without RG features) and 18 points lower than the maximum score recorded. The game score is between the upper quartile and the maximum score recorded, meaning that the risk rating is in the top 25% of games of this type recorded in the benchmark database.				
Benchmark (with RG features)	No relevant RG tools are available for this game				
Possible options to reduce the risk score					
Multiplayer Slot Machine scored in the "high-risk" category for this game type meaning that it is likely to have a negative impact on a significant number of vulnerable players. Suggestions to lower the risk include extending the duration of the game and re-purchase time to 6 seconds or more, which would reduce the score by -4 points. Introducing a continuity break of at least 30 seconds after every hour of continuous play, to reduce the risk score by -10 points. Adding a player-set spend/deposit limit at the start of play would reduce the score by -5 for a mandatory player-set limit or -3 for a limit that is voluntary to set. Similarly, a player-set time limit at the start of play would reduce the score by -5 for a mandatory player-set limit or -3 for a limit that is voluntary to set. A combination of these changes could be employed to reduce the risk level down to "medium-risk."					

Note: See page 6 for full scoring details

gamgard
GUIDING RESPONSIBLE DESIGN

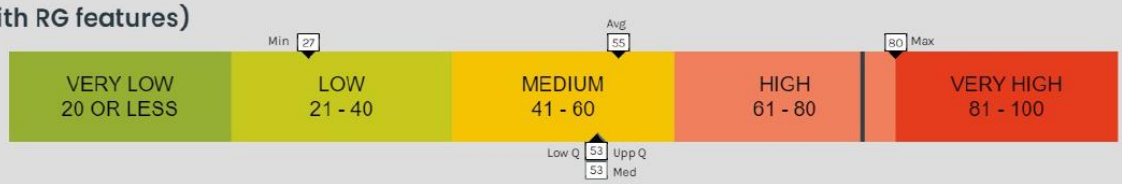
Game: Multiplayer Slot Machine
File Created On: June 2, 2021 by Dr Richard Wood

Your Game Rating (no RG features)

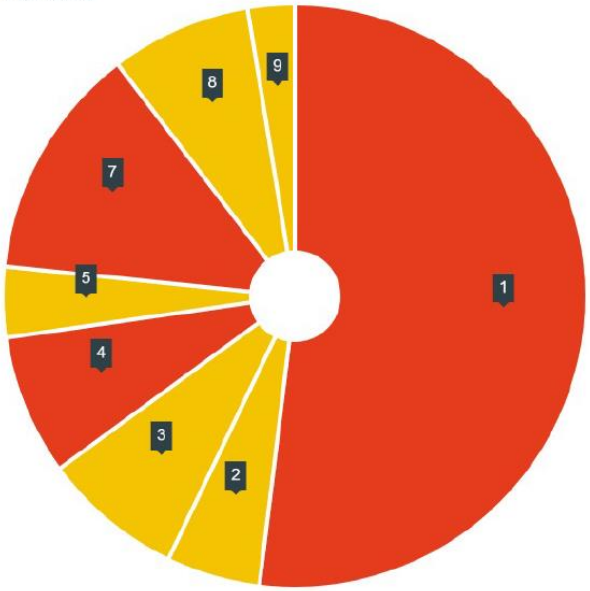
RATING
77
International benchmarks for this game type based on **303** similar games

Your Game Rating (with RG features)

RATING
77
International benchmarks for this game type based on **303** similar games



Breakdown of Risk Factors



Game Risk Factors

Your Scores	Modal Scores*
1. Event Frequency: 40	40 (76%)
2. Multi Game: 4	2 (84%)
3. Fixed/Variable Stake: 6	6 (91%)
4. Prizeback: 6	6 (95%)
5. Jackpot: 3	3 (83%)
6. Near Win: 0	0 (89%)
7. Continuity: 10	0 (78%)
8. Accesibility: 6	10 (83%)
9. Payment Options: 2	4 (86%)
10. Illusion of Control: 0	0 (91%)

Responsible Gaming Features

11. Popup Reminders: 0	-3 (84%)
12. Spend Limits: 0	-5 (90%)
13. Time Limits: 0	-5 (83%)
14. Feedback Tools: 0	-5 (77%)

*The modal score is based on the most popular risk/RG score out of 303 games of this type. The (%) shows the percentage of this game type in the GamGard database that had the modal score for this risk/RG factor.

Risk Factors	Risk Score	Description
Event Frequency	40	5 secs or less (40)
Multi-game/stake opportunities	4	Fixed number of multi-purchases allowed per transaction (e.g. several games/stakes/bets/lines/ tickets) (4)
Variable/fixed stake size	6	Several fixed stake sizes offered (6)
Prizeback percentage	6	71%+ (6)
Jackpot size	3	€1,341 - 13,417 (3)
Near win opportunities	0	Near wins/losses are not programmed into the game (0)
Continuity of play	10	Game can be played more than 5 hours without a mandatory break in play (10)
Accessibility points	6	Local gambling access (e.g., convenience store, gas station, casino or gaming centre within walking distance of residential or city centre area) (6)
Payment options	2	Cash only - ATM in gaming area (2)
Illusion of control elements	0	No illusion of control elements per game (0)
Responsible Gaming Features		
Pop-up reminders	0	No time warnings either before or at 5 hours of play (0)
Player-defined spend, loss or deposit limits	0	There is no option available to set a limit (0)
Player-defined time limits	0	There is no option available to set a time limit (0)
Behavioural feedback tools	0	No behavioural feedback is given to players (0)

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Gamgard game test results: *Single Player Slots Cat A*

Table 2. *Single Player Slots Cat A*	Very low 20 or less	Low 21-40	Medium 41-60	High 61-80	Very high 81-100
Risk score (no RG features)				**76**	
Risk score (with RG features)				**76**	
Benchmark (no RG features)	In comparison with 303 other games of this type tested by operators and regulators world-wide, *Single Player Slots Cat A* scored 5 points higher than the average score recorded in the benchmark database for this game type (without RG features) and 17 points lower than the maximum score recorded. The game score is between the upper quartile and the maximum score recorded, meaning that the risk rating is in the top 25% of games of this type recorded in the benchmark database.				
Benchmark (with RG features)	No relevant RG tools are available for this game				
Possible options to reduce the risk score					
Single Player Slots Cat A scored in the "high-risk" category for this game type meaning that it is likely to have a negative impact on a significant number of vulnerable players. Suggestions to lower the risk include extending the duration of the game and re-purchase time to 6 seconds or more, which would reduce the score by -4 points. Introducing a continuity break of at least 30 seconds after every hour of continuous play, to reduce the risk score by -10 points. Adding a player-set spend/deposit limit at the start of play would reduce the score by -5 for a mandatory player-set limit or -3 for a limit that is voluntary to set. Similarly, a player-set time limit at the start of play would reduce the score by -5 for a mandatory player-set limit or -3 for a limit that is voluntary to set. A combination of these changes could be employed to reduce the risk level down to "medium-risk."					

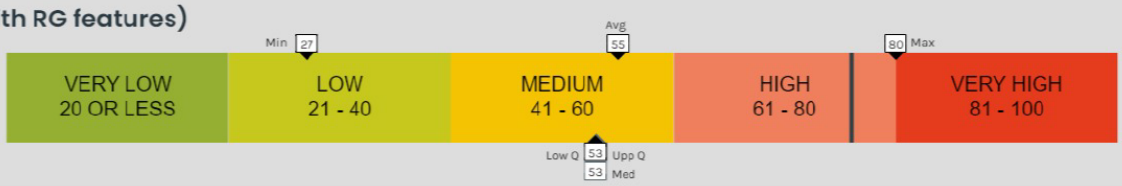
Note: See page 8 for full scoring details

Your Game Rating (no RG features)

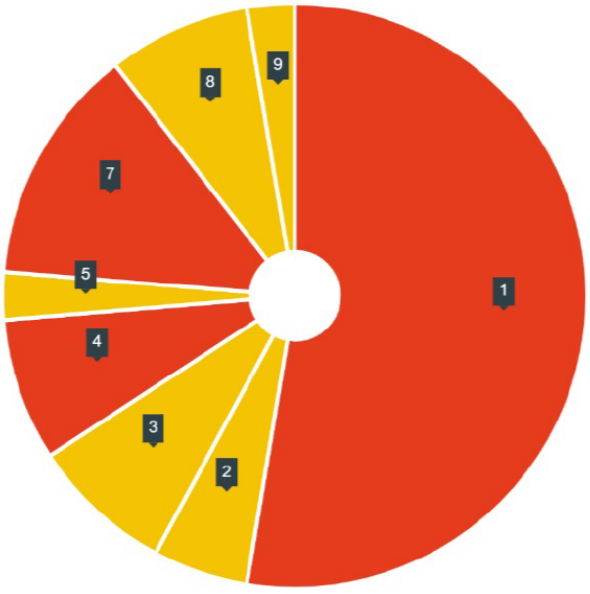
RATING
76
International benchmarks for this game type based on **303** similar games

Your Game Rating (with RG features)

RATING
76
International benchmarks for this game type based on **303** similar games



Breakdown of Risk Factors



Game Risk Factors

Your Scores	Modal Scores
1. Event Frequency: 40	40 (76%)
2. Multi Game: 4	2 (84%)
3. Fixed/Variable Stake: 6	6 (91%)
4. Prizeback: 6	6 (95%)
5. Jackpot: 2	3 (83%)
6. Near Win: 0	0 (89%)
7. Continuity: 10	0 (78%)
8. Accessibility: 6	10 (83%)
9. Payment Options: 2	4 (86%)
10. Illusion of Control: 0	0 (91%)

Responsible Gaming Features

11. Popup Reminders: 0	-3 (84%)
12. Spend Limits: 0	-5 (90%)
13. Time Limits: 0	-5 (83%)
14. Feedback Tools: 0	-5 (77%)

*The modal score is based on the most popular risk/RG score out of 303 games of this type. The (%) shows the percentage of this game type in the GamGard database that had the modal score for this risk/RG factor.

Risk Factors	Risk Score	Description
Event Frequency	40	5 secs or less (40)
Multi-game/stake opportunities	4	Fixed number of multi-purchases allowed per transaction (e.g. several games/stakes/bets/lines/ tickets) (4)
Variable/fixed stake size	6	Several fixed stake sizes offered (6)
Prizeback percentage	6	71%+ (6)
Jackpot size	2	€135 - 1,340 (2)
Near win opportunities	0	Near wins/losses are not programmed into the game (0)
Continuity of play	10	Game can be played more than 5 hours without a mandatory break in play (10)
Accessibility points	6	Local gambling access (e.g., convenience store, gas station, casino or gaming centre within walking distance of residential or city centre area) (6)
Payment options	2	Cash only - ATM in gaming area (2)
Illusion of control elements	0	No illusion of control elements per game (0)
Responsible Gaming Features		
Pop-up reminders	0	No time warnings either before or at 5 hours of play (0)
Player-defined spend, loss or deposit limits	0	There is no option available to set a limit (0)
Player-defined time limits	0	There is no option available to set a time limit (0)
Behavioural feedback tools	0	No behavioural feedback is given to players (0)

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Gamgard game test results: *Single Player Slots Cat B*

Table 3. *Single Player Slots Cat B*	Very low 20 or less	Low 21-40	Medium 41-60	High 61-80	Very high 81-100
Risk score (no RG features)				**77**	
Risk score (with RG features)				**77**	
Benchmark (no RG features)	In comparison with 303 other games of this type tested by operators and regulators world-wide, *Single Player Slots Cat B* scored 6 points higher than the average score recorded in the benchmark database for this game type (without RG features) and 16 points lower than the maximum score recorded. The game score is between the upper quartile and the maximum score recorded, meaning that the risk rating is in the top 25% of games of this type recorded in the benchmark database.				
Benchmark (with RG features)	No relevant RG tools are available for this game				
Possible options to reduce the risk score					
Single Player Slots Cat B scored in the "high-risk" category for this game type meaning that it is likely to have a negative impact on a significant number of vulnerable players. Suggestions to lower the risk include extending the duration of the game and re-purchase time to 6 seconds or more, which would reduce the score by -4 points. Introducing a continuity break of at least 30 seconds after every hour of continuous play, to reduce the risk score by -10 points. Adding a player-set spend/deposit limit at the start of play would reduce the score by -5 for a mandatory player-set limit or -3 for a limit that is voluntary to set. Similarly, a player-set time limit at the start of play would reduce the score by -5 for a mandatory player-set limit or -3 for a limit that is voluntary to set. A combination of these changes could be employed to reduce the risk level down to "medium-risk."					

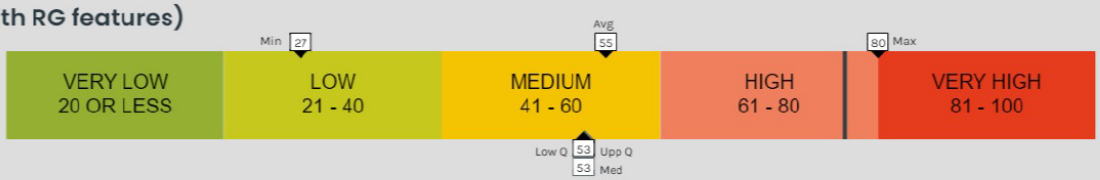
Note: See page 10 for full scoring details

Your Game Rating (no RG features)

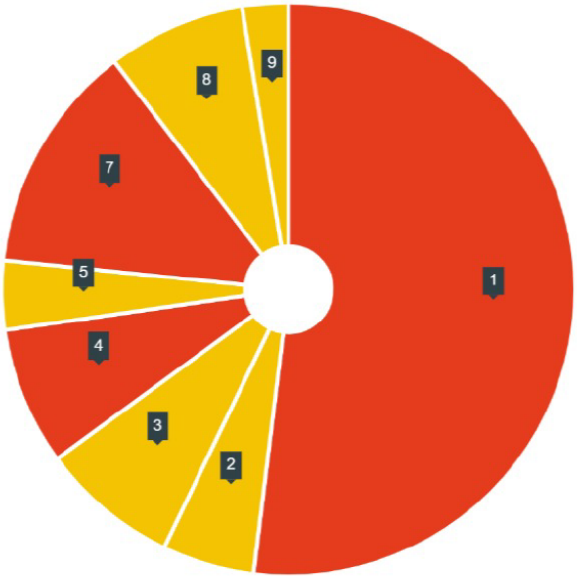
RATING
77
International benchmarks for this game type based on **303** similar games

Your Game Rating (with RG features)

RATING
77
International benchmarks for this game type based on **303** similar games



Breakdown of Risk Factors



Game Risk Factors

Your Scores	Modal Scores
1. Event Frequency: 40	40 (76%)
2. Multi Game: 4	2 (84%)
3. Fixed/Variable Stake: 6	6 (91%)
4. Prizeback: 6	6 (95%)
5. Jackpot: 3	3 (83%)
6. Near Win: 0	0 (89%)
7. Continuity: 10	0 (78%)
8. Accesibility: 6	10 (83%)
9. Payment Options: 2	4 (86%)
10. Illusion of Control: 0	0 (91%)

Responsible Gaming Features

11. Popup Reminders: 0	-3 (84%)
12. Spend Limits: 0	-5 (90%)
13. Time Limits: 0	-5 (83%)
14. Feedback Tools: 0	-5 (77%)

* The modal score is based on the most popular risk/RG score out of 303 games of this type. The (%) shows the percentage of this game type in the GamGard database that had the modal score for this risk/RG factor.

Risk Factors	Risk Score	Description
Event Frequency	40	5 secs or less (40)
Multi-game/stake opportunities	4	Fixed number of multi-purchases allowed per transaction (e.g. several games/stakes/bets/lines/ tickets) (4)
Variable/fixed stake size	6	Several fixed stake sizes offered (6)
Prizeback percentage	6	71%+ (6)
Jackpot size	3	€1,341 - 13,417 (3)
Near win opportunities	0	Near wins/losses are not programmed into the game (0)
Continuity of play	10	Game can be played more than 5 hours without a mandatory break in play (10)
Accessibility points	6	Local gambling access (e.g., convenience store, gas station, casino or gaming centre within walking distance of residential or city centre area) (6)
Payment options	2	Cash only - ATM in gaming area (2)
Illusion of control elements	0	No illusion of control elements per game (0)
Responsible Gaming Features		
Pop-up reminders	0	No time warnings either before or at 5 hours of play (0)
Player-defined spend, loss or deposit limits	0	There is no option available to set a limit (0)
Player-defined time limits	0	There is no option available to set a time limit (0)
Behavioural feedback tools	0	No behavioural feedback is given to players (0)

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Gamgard game test results: *Multiplayer Roulette, Bingo etc.*

Table 4. *Multiplayer Bingo, Roulette etc.*	Very low 20 or less	Low 21-40	Medium 41-60	High 61-80	Very high 81-100
Risk score (no RG features)			**57**		
Risk score (with RG features)			**57**		
Benchmark (no RG features)	In comparison with 303 other games of this type tested by operators and regulators world-wide, *Multiplayer Bingo, Roulette etc.* scored 14 points lower than the average score recorded in the benchmark database for this game type (without RG features). The game score is between the minimum score and the lower quartile, meaning that the risk rating is in the bottom 25% of games of this type recorded in the benchmark database.				
Benchmark (with RG features)	No relevant RG tools are available for this game				
Possible options to reduce the risk score					
Multiplayer Bingo, Roulette etc. scored in the "medium-risk" category for this game type, meaning that it is unlikely to have a negative impact on most vulnerable players, but possibly some players. Whilst it may not be deemed necessary to modify the game, suggestions to lower the risk, include introducing a continuity break of at least 30 seconds after every hour of continuous play. Such an action would reduce the risk score by -10 points. Adding a player-set spend/deposit limit at the start of play would reduce the score by -5 for a mandatory player-set limit or -3 for a limit that is voluntary to set. Similarly, a player-set time limit at the start of play would reduce the score by -5 for a mandatory player-set limit or -3 for a limit that is voluntary to set.					

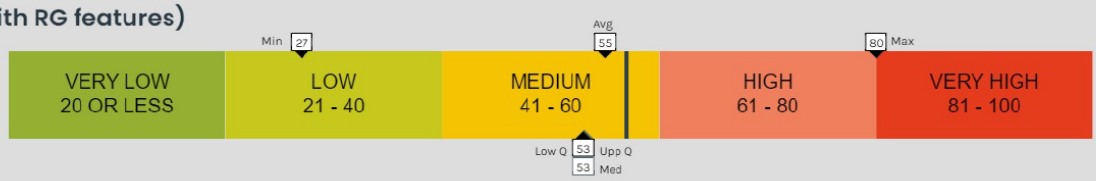
Note: See page 12 for full scoring details

Your Game Rating (no RG features)

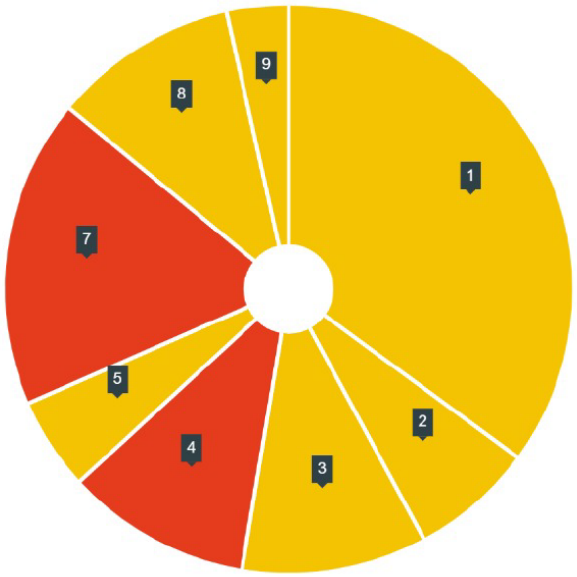
RATING
57
International benchmarks for this game type based on **303** similar games

Your Game Rating (with RG features)

RATING
57
International benchmarks for this game type based on **303** similar games



Breakdown of Risk Factors



Game Risk Factors

Your Scores	Modal Scores*
1. Event Frequency: 20	40 (76%)
2. Multi Game: 4	2 (84%)
3. Fixed/Variable Stake: 6	6 (91%)
4. Prizeback: 6	6 (95%)
5. Jackpot: 3	3 (83%)
6. Near Win: 0	0 (89%)
7. Continuity: 10	0 (78%)
8. Accesibility: 6	10 (83%)
9. Payment Options: 2	4 (86%)
10. Illusion of Control: 0	0 (91%)

Responsible Gaming Features

11. Popup Reminders: 0	-3 (84%)
12. Spend Limits: 0	-5 (90%)
13. Time Limits: 0	-5 (83%)
14. Feedback Tools: 0	-5 (77%)

* The modal score is based on the most popular risk/RG score out of 303 games of this type. The (%) shows the percentage of this game type in the GamGard database that had the modal score for this risk/RG factor.

Risk Factors	Risk Score	Description
Event Frequency	20	31 secs to 2 mins, 59 secs (20)
Multi-game/stake opportunities	4	Fixed number of multi-purchases allowed per transaction (e.g. several games/stakes/bets/lines/ tickets) (4)
Variable/fixed stake size	6	Several fixed stake sizes offered (6)
Prizeback percentage	6	71%+ (6)
Jackpot size	3	€1,341 - 13,417 (3)
Near win opportunities	0	Near wins/losses are not programmed into the game (0)
Continuity of play	10	Game can be played more than 5 hours without a mandatory break in play (10)
Accessibility points	6	Local gambling access (e.g., convenience store, gas station, casino or gaming centre within walking distance of residential or city centre area) (6)
Payment options	2	Cash only - ATM in gaming area (2)
Illusion of control elements	0	No illusion of control elements per game (0)
Responsible Gaming Features		
Pop-up reminders	0	No time warnings either before or at 5 hours of play (0)
Player-defined spend, loss or deposit limits	0	There is no option available to set a limit (0)
Player-defined time limits	0	There is no option available to set a time limit (0)
Behavioural feedback tools	0	No behavioural feedback is given to players (0)

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