

# 2003 NS VL Responsible Gaming Features Evaluation

# Final Report

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## **EXECUTIVE SUMMARY**

The following study was undertaken to assist the Nova Scotia Gaming Corporation (NSGC) in evaluating a second series of modified responsible gaming features (RGFs) implemented for video lottery terminals in Nova Scotia. An *“in vivo”* live market test was conducted using a Pre Post return-to-sample methodology with a Test and Control Market comparison. In total, 329 Regular VL Players participated in all phases of the study conducted over a six-month period (October 2003 to April 2004): Test Market (South Shore: n=168) and Control Market (Valley: n=161). Pre Survey benchmarks were obtained in each market (Total: n=409; Test Market (South Shore): n=206, Control Market (Valley): n=203). The new RGFs were introduced on selected terminals in the Test Market area only (PS5 terminals). A Post Survey was conducted approximately four months following the introduction of new terminals with approximately 81% of players in each market completing the Post Survey measure.

The principal changes to the RGFs include:

- Option to set time limits for play (new feature)
- 30-minute pop-up message (new feature)
- Introduction of mandatory response requirement for all on-screen pop-up messages (i.e. messages remain on the screen until player makes a response selection for continued play (e.g. “Yes or “No”)) (modified feature)
- Changes to permanent on-screen clock to make time of day more prominent (modified feature)
- Extending time between warning message and mandatory cash-out from 5 to 10 minutes (modified feature)
- Replacing all references to “credits” with cash amounts and giving cash display more prominence (modified feature)

The purpose of the RGFs is to introduce reality checks, breaks in play and encourage responsible gaming. To assess the impact of the RGFs, NSGC identified three primary objectives for the current research:

1. Awareness levels of the modified features
2. Effectiveness of the modified features
3. Possible improvements to existing features

The modifications related to the mandatory cash-out and cash display were minor and either generated low awareness or, in the case of the cash-out feature, low exposure.

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Therefore, the research evaluation largely focused on the three primary modifications introduced; time limit option, 30 minute pop-up message and on-screen clock.

## **Summary of Key Findings**

### **General Pre Market Profile**

Overall, the profiles for the Test and Control Markets in terms of VL play patterns were highly similar. There were no significant differences on any of the key measures for those participating in the two Markets including:

- Monthly playing patterns (2% daily; 61% weekly; 36% monthly),
- Frequency of play (median = 4 times/month),
- Type of location frequented (Bars: 51%; Legion/Private Clubs: 36%; Sports Bars: 24%; licensed Restaurants: 8%; Native Gaming Establishments: 7%)
- VL expenditure (median = \$40.00 per play session),
- Length of time spent playing (median= 60 minutes)
- Percent of times played that the player engaged in the following play behaviours:
  - Let bank go down to zero before putting in more money (60%)
  - Cashed out and then continuing to play (53%)
  - Used the stop button (34%)
  - Played at “max” bet (16%)
  - Set a time budget before starting to play (24%)
  - Set a money budget before starting to play (79%)
- Percent of times played that the player reported the following outcomes:
  - Spent more time than desired (23%)
  - Spent more money than desired (31%)
  - Lost track of time spent while playing (27%)
  - Lost track of money spent while playing (16%)
  - Were up any amount of money when done playing (47%)
- Percent of times played that the player was exposed and/or used standard RGFs:
  - Awareness (86%) and use (32%) of the on-screen clock
  - Saw pop-up reminders at 90 minutes or 120 minutes (11%)
  - Saw cash out warning and were forced to cash out (6%)
- Nearly half of participating VL players in each of the test and Control Markets score at “No Risk” for problem VL gambling on the CPGI (47%). The remaining players are fairly evenly divided among the three risk categories (16% to 18%). There are no differences between the two markets in the level of players at each level of risk on the CPGI scale.

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The only notable significant differences between the two markets at the Pre Survey stage were:

- Players in the Test Market (South Shore) reported spending more of their time at a VL location playing VLTs rather than engaging in other activities at the site as compared to players in the Control Market (Valley) (on average, 66% of their time at the location, is spent playing VLTs versus 58% for Control Market players).
- On average, players in the **Test Market (South Shore)** reported seeing the **60 minute pop-up reminder message slightly more often during play** than those in the Control Market (Valley) (33% of times played versus 26% of times played for Control Market players).

## **Post Evaluation – Changes In Key Measures**

### **Market Changes – Pre To Post**

In total, 19% of players who completed a Pre Survey subsequently had stopped playing VL games during the three months between the two measures (“Droppers”).

- The percent of players who stopped playing VLTs over the course of the study was similar in both the Test and Control Markets and is consistent with previous research results (market “churn” for regular VLT play typically falls at 20-25%, with about one-quarter of the regular player base stopping or starting play over the course of a 12 month period).
- Compared to those who continued to play regularly over the course of the study, those who stopped playing, the “Droppers”, tended to be less involved in VL play at the time of the Pre Survey. They played less often and spent less each time than those who kept playing regularly. The majority (71%) of Droppers had no difficulties in giving up VL play and did so primarily for monetary reasons (e.g. couldn’t afford it, trying to save money).

Approximately 81% of those players taking part in the Pre- Survey continued to be involved in VLT play. The Pre Survey profiles of the Test and Control Markets remained highly similar even after excluding “Droppers” from the analysis.

Over the course of the study (Pre versus Post) there were no significant changes in key measures in the Control Market. The only changes observed occurred in the Test Market.

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## **Response To RGFs (Post Only)**

### **Awareness of Modified RGFs**

- When asked to describe any changes made to VLTs during the three months between the Pre and Post surveys, few players in the Test Market (South Shore) indicated top-of-mind awareness of the RGF modifications (option to set a time limit: 11%; 30-minute pop-up reminder: 3%; change in on-screen clock: 2%). Once prompted, 72% of South Shore players recalled playing on a VLT with an option to set a time limit, and 34% reported exposure to the 30-minute pop-up message.

### **Set Time Limit Option (New Feature)**

- Overall, 84% of players who have been exposed to the **Set Time Option** indicate that it has no effect on any of their play habits or patterns (i.e., their enjoyment of the games, the amount of time or money they spend playing, frequency of playing or cashing out, or their ability to set and keep a money budget). Nearly all players exposed to this new RGF felt it will have no effect on helping them to manage their VL play, and 62% respond neutrally when rating how much they liked the new feature. The remaining players were slightly skewed towards finding the feature unappealing (Dislike: 21% versus Like: 17%).
- Only 13% of players in the Test Market (South Shore) have ever set a time limit for their VL play using the new **Set Time Limit Option**, primarily choosing the 30-minute limit. Only 10% have ever seen the notification screen when the selected time period elapsed, and 2% have ever cashed out and stopped playing at that point.

### **30 Minute Pop-up Message (New Feature)**

- Players in the Test Market (South Shore) (75%) are more likely to report having seen any pop-up messages than those in the Control Market (Valley) (63%), reflecting the impact of a **30-minute message versus standard pop-up messages at 60+ minutes** in leading to increased exposure to the messages. The earlier exposure during play does not influence either the likelihood of reading the message or choosing to stop play instead of selecting “Yes” to continue.
- Almost half of players in the Test Market (South Shore) who played VL games on the modified terminals specifically noted seeing the **30-minute pop-up reminder come up during play**, and 13% of these players were motivated to cash out and stop playing after seeing it. As noted for the Set Time feature, more than 8 out of 10 players exposed to the RGF believe it will have no impact on any of their play behaviours, and 84% indicate that it will not assist them in managing their VL play. Again, two-thirds of those exposed to the

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There were very few distinctions between Adopters and Non-Adopters at the Pre stage, and there continues to be little difference in play patterns or behaviours between the two groups at the Post measure. This indicates that, for players in general (at an aggregate level), adoption of play on the modified VLTs has *not* led to any significant changes in reported play behaviours or patterns measured among regular VL players in the Test Market (South Shore).

feature respond neutrally in terms of liking for the 30-minute reminder message, with the remainder more inclined to express dislike (20%) than liking (13%).

#### **On-Screen Clock (Modified Feature)**

- The majority of players in both markets ( $\approx 61\%$ ) refer to the **on-screen clock while playing**, and 71% believe it to have no effect in helping them to personally manage their VL play. While the changes to the on-screen clock (colour scheme, consistent screen placement) aren't engendering negative responses, they have not served to increase appeal of this RGF as Valley players (Control Market, unmodified) are more inclined to like the on-screen clock than South Shore players (Test Market, modified). Regardless, the on-screen clock continues to be positioned as the most preferred RGF with 38% indicating liking for the feature and only 6% finding it to be unappealing.

#### **Managing VL Play**

- Strategies described by players as helpful in managing their VL play primarily involve **money budgeting** (e.g., setting a spending budget or limit and sticking to it (42%), taking only a budgeted amount of money to play (17%), leaving the location once their budgeted money had been spent (14%), etc.), similar in both markets. This suggests that assistance with budgeting and maintaining a VL play budget is a worthwhile avenue for responsible gaming efforts, although the Set Time limit is not (yet) recognized by players specifically as useful in this regard. Therefore a focus on assistance with **money budgeting** rather than **time budgeting** may have greater utility to players.

#### **Impact of RGFs (Test Market – South Shore Only)**

In order to determine the effects of the modified RGFs, results in the Test Market only (South Shore) were examined and compared for those who played mainly on the modified machines (Adopters: n=65) versus those who continued to play on the unmodified terminals (Non-Adopters: n=70). Repeated Measures Models (General Linear Modeling with covariates) were then created to isolate and test for the effects of each RGF on key play players for Adopters over the test period.

#### **Pre Survey Differences**

At the time of the Pre Survey measures, there were few distinctions in player behaviours, profiles and characteristics in the Test Market between those who ended up playing on the modified terminals (Adopters) as compared to those who kept played primarily on the unmodified terminals (Non-Adopters). The only differences observed at the 90%+ confidence level include:

- Frequency of referring to the **on-screen clock** was higher among those who who were exposed to the modified feature (*Adopters*) (average score for

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frequency of referring to the on-screen clock was 3.1 out of 5 for Adopters, versus 2.6 out of 5 for Non-Adopters;  $t=1.984$ ,  $p=.05$ ).

- Before the changes were introduced Adopters, on average, spent lower amounts of money each time they played ( $\approx \$50$  versus  $\approx \$74$  for Non-Adopters;  $t=1.675$ ,  $p=.097$ ), but tended to play more often (7.8 times per month versus 6.0 times per month for Non-Adopters;  $t=1.605$ ,  $p=.111$ ) such that average monthly expenditures did not differ significantly between the two groups during the Pre-survey measurement ( $\approx \$385$  to  $\$440$  per month,  $p=.794$ ).

### Post Survey Differences

The results indicate that, overall, adoption of play on the modified VLTs did not lead to significant changes in play behaviours or playing patterns among regular VL players in the Test Market (South Shore). The only significant changes observed (90%+ confidence level) included:

- After the trial period, those who took up play on the machines with the modified RGFs (Adopters) tended to spend more of the time they were at a VL location playing the machines rather than doing other things such as socializing (Adopters spent approximately 62% of their time in a VL location playing the machines versus Non-Adopters who spent only 45% of their time at the location playing the machines;  $t=-2.953$ ,  $p=.004$ ).
- There are no longer any significant differences between the two groups in frequency of play or amount spent per play session as was the case at the Pre measures. However, average monthly expenditure per month remains similar for both Adopters and Non-Adopters at both the Pre and Post measures.

**ADOPTERS (48% of South Shore players) are defined as those participating players in the South Shore who, between the Pre and Post measures, played 75%+ of their VL play sessions on the modified VLTs with the adjusted RGFs.**

### Effects Of Modified RGFs On Play Behaviours (Adopters Only) – Analysis Approach

The new RGFs are intended to provide players with additional “tools” for time and budget management. Due to individual differences in play behaviours, not all players will be exposed to certain RGFs (e.g., 30 minute pop-up message, mandatory cashout) or, due to personal choice, may not decide to use optional features (e.g., Set Time Limit Option). Therefore, in order to evaluate the impact of the new RGFs on players’ ability to manage their play, comparisons on key indicators must be made between those Adopters who are exposed to or use the features versus those Adopters who do not, to see if any changes can be attributed to the effects of the RGFs.

The key indicators of success identified by NSGC for the RGFs consist of:

- Expenditure

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- Impact of modifications in supporting players in setting and maintaining personal budgets for play
- **Time Limits**
  - Impact of modifications in supporting players in setting and maintaining time limits for play and in keeping track of time spent on the activity.

There were 6 specific measures obtained in the Pre and Post surveys that were used to operationally define time and money management (dependent variables):

- *Changes in frequency of losing track of time*
- *Changes in frequency of spending more time than wanted*
- *Changes in frequency of spending more money than wanted*
- *Changes in frequency of exceeding budget*
- *Changes in session length (minutes played)*
- *Changes in per session expenditure (amount spent)*

There are three responsible gaming features tested in the analysis, the **time limit option**, **30 minute pop-up message** and **on-screen clock**. These RGFs are designed primarily to gain gamblers' attention by interrupting play and having them focus on the length of time they have been playing: For testing purposes use of the three RGFs were operationally defined based on frequency of use or exposure:

**1. Time limit option (new feature)**

- Frequency of using the new option to set a time limit for play (set a time limit 25%+ of times played during the past three months)

**2. 30-minute pop-up message (new feature)**

- Frequency of seeing the 30 minute pop-up reminder (reported seeing the 30 minute pop-up reminder at least once, 50%+ of times played in past three months)

**3. On-screen clock (modified feature)**

- Frequency of referring to the on-screen clock during each play session (referred to the on-screen clock at least once to check time of day 50%+ of times played in the past three months)

The effects of the RGFs are also examined in association with risk for problem gambling (No/Low Risk (CPGI Score <3) versus Moderate+ Risk Players (CPGI Score 3+)) to assess any differences in the effect of the features among the target segments.

A separate analysis was conducted for each of the three RGFs modeled. In total, 18 separate models were developed – 3 RGFs with each of the six dependent variables identified above.

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## **Impact Analysis - Key Findings**

There were only two models in which the use of the new RGFs was found to have a small yet significant effect on reported play behaviour:

- There was a significant interaction effect identified for use of the **time limit option and risk for problem gambling**, explaining 6.2% ( $p=.054$ ) of the variance associated with changes in *losing track of time while playing*.
- There was also an interaction effect observed for **exposure to the 30 minute message and risk for problem gambling** ( $\text{Eta}^2 \approx 10.0\%$ ,  $p=.047$ ) associated with *changes in budget management*.

### **Frequency of Losing Track of Time**

- *Frequency of spending beyond desired money limits* ( $\text{Eta}^2 = 21.1\%$  to  $43.9\%$ ,  $p=.000$ ) is most strongly related to *changes in losing track of time* while playing, found in all models for each of the RGFs.
- It is also noteworthy that *frequency of playing the modified terminals* ( $\text{Eta}^2 = 8.1\%$ ,  $p=.027$ ) also contributed significantly to *increases in losing track of time* between the Pre and Post measures, despite the provision of new time management tools on the machines.
- However, in terms of the new RGFs, there was a small yet significant interaction effect observed for use of the **Time Limit Option** and *changes in frequency of losing track of time* during play ( $\text{Eta}^2 = 6.2\%$ ,  $p=.054$ ).

Once the effects of frequency of play on the modified terminals was removed, use of at least one of the new RGFs, **Time Limit Option**, had a positive impact in reducing some players' tendency to *lose track of time* during play.

For players scoring at **High Risk** for gambling problems (CPGI 3+), use of the **Time Limit Option** was associated with a decline in the *frequency of losing track of time* while playing. There was no effect observed for Low Risk Players.

### **Frequency of Spending Beyond Budgeted Amount**

- *Chasing losses* ( $\text{Eta}^2 \approx 44.4\%$ ,  $p=.000$ ) and, to a much lesser extent, *cashing out and continuing to play* ( $\text{Eta}^2 \approx 12.9\%$ ,  $p=.025$ ) are both behaviours strongly associated with *exceeding pre-set money budgets for play*. Frequency of trying to win back losses on its own explains almost half of the variance in changes observed between the Pre and Post measures. **The more you chase losses, the more you are likely to exceed pre-set money budgets.**
- However, high exposure to the **30 minute pop-up reminder** (50%+ times played) was significantly related to *changes in budget management* among those players scoring at different levels of risk for problem gambling. In fact, exposure to the 30

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There was only a small significant effect associated with any of the new RGFs for only two of the six targeted behaviours:

- Frequency of losing track of time
- Frequency of exceeding budgeted amount of money

None of the new RGFs had any significant impact on any of the other behaviours measured in the analysis:

- Frequency of spending beyond desired time limits.
- Frequency of spending beyond desired money limits.
- Per session expenditure (amount of money spent per time)
- Session length (amount of time spent playing)

minute pop-up reminder explains about 10% of the variance in changes between the Pre and Post measures ( $\text{Eta}^2 \approx 10.0\%$ ,  $p = .047$ ).

For Low Risk Players, high rates of exposure to the 30 minute pop-up reminder were associated with increased frequency of exceeding their money budgets for play. This is not necessarily a consequence of seeing the message but rather suggests that other factors (e.g., wins, play with others) may be influencing length of play, in turn increasing their likelihood of seeing the pop-up reminder. This suggests that Low Risk Players are likely to be seeing the message at a time that may be of benefit in alerting them to a change in their playing patterns.

For those Players scoring at High Risk, exposure to the 30 minute pop-up reminder was related to declines in the frequency of exceeding pre-set budgets. Again, the effect is small but occurs in the desired direction.

#### Frequency of Spending Beyond Desired Time Limits

• None of the three RGFs had any detectable impact on reducing the frequency of players' spending more time than desired playing the machines.

• Losing track of time ( $\text{Eta}^2 \approx 22.8\%$  to  $27\%$ ,  $p = .000$ ), chasing losses ( $\text{Eta}^2 \approx 15.4\%$  to  $19.9\%$ ,  $p < .003$ ) and cashing out and continuing to play ( $\text{Eta}^2 \approx 8.0\%$ ,  $p < .04$ ) are all significant factors contributing to playing beyond desired time limits.

• It is noteworthy that while the Time Limit Option had a small but significant effect in helping players keep track of time, there is no appreciable impact of this feature as yet in assisting players to play within desired time limits. Given that losing track of time explains about 25% of the variance in the frequency of exceeding time budgets for play, there may be further potential for the Time Limit Option to exert a positive influence for players' time management. However, players would have to be convinced of the value of using the option as the feature currently elicits low enthusiasm as a management tool.

#### Frequency of Spending Beyond Desired Money Limits

• None of the three new/modified features had any detectable impact on reducing the frequency of players' spending more money than wanted while playing the machines.

• Again, losing track of time ( $\text{Eta}^2 \approx 20.5\%$  to  $23.2\%$ ,  $p = .000$ ) and chasing losses ( $\text{Eta}^2 \approx 27.4\%$  to  $29.6\%$ ,  $p = .000$ ) are significantly related to overspending while playing the machines. Frequency of losing track of money is also significantly related to spending beyond desired money limits, but at a rate of about half that observed for the former two behaviours ( $\text{Eta}^2 \approx 11\%$ ,  $p < .02$ ).

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**Average Per Session VL Expenditure**

- ♦ *Frequency of playing on the modified terminals* had the most significant influence on changes in *per session expenditure* ( $\text{Eta}^2 \approx 19.9\%$  to  $23.8\%$ ,  $p = .000$ ). As frequency of playing on the modified terminals increases, so too does per session expenditure. This relationship between frequency of play and expenditure was not observed for those playing on the unmodified terminals.
- ♦ The effect of *chasing losses* was only half that observed for the influence of the modified terminals ( $\text{Eta}^2 \approx 13\%$ ,  $p < .007$ ).
- ♦ **None of the three RGFs had any significant effect on changes in the amount of money players spend each time they play the machines.**

**Average VL Session Length**

- ♦ *Chasing losses* ( $\text{Eta}^2 \approx 11.7\%$  to  $19.2\%$ ,  $p < .01$ ) again had the greatest effect in explaining changes in *the amount of time spent* playing the machines.
- ♦ However, *frequency of playing on the modified terminals* ( $\text{Eta}^2 \approx 8\%$ ,  $p < .04$ ) was also significantly related. The more often players used the modified terminals, the more likely that there was an increase in the *amount of time spent playing*. This is consistent with findings for expenditure. Thus, despite the fact the modified features are specifically intended to assist players with time management, frequency of play on the modified machines was related to increases in session length.
- ♦ In part, it could be argued that extended session length may be affected by the introduction of more “interruptions” to playing time by having the **Time Limit Option** and **30 minute pop-ups** now included on the terminals. However, there was no significant main effect or interaction effects for “length of play” associated with high exposure to or use of the features.

## Summary of Conclusions

### 1. Awareness of and exposure to the Enhanced RGFs was high

#### A. Optional Time Limits

- ♦ 72% of players tried the Enhanced RGF VLTs and therefore were exposed to this feature.
- ♦ 98% of players exposed to the feature (“Adopters”) perceived it to have no effect on helping them manage a budget.

#### B. 30 Minute Pop-Up

- ♦ 75% of players in the South Shore (Test Market) reported seeing any pop-up messages, significantly more than in the Valley (Control Market) (63%)

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suggesting that the message at 30 minutes was successful in reaching more players.

- ♦ 84% of “Adopters” perceived it to have no impact on their play behaviours.

### C. Modified Features

- ♦ 61% of players refer to the on-screen clock during play.
- ♦ 71% of players perceived the clock to have no effect on helping them to manage their VL play.

## 2. Usage of the features was low

### A. Optional Time Limits

- ♦ Although players had high exposure to the feature, due to its voluntary nature, it was easy for players to choose not to use it. The Optional Time Limit(s) feature was used by only 13% of players. In addition, only 2% of players ever cashed out when the time limit was reached.

### B. 30 Minute Pop-Up

Because the players have become more accustomed to the Pop-Up messages, they find it very easy to automatically reply “yes” to continue playing without reading the message. Only 13% of those exposed to the 30 Minute Pop-Up messages reported any associated cash-out behaviour.

### C. Other Modified Features

- ♦ There was no evidence of use of the modified features other than the on-screen clock, which was perceived as having a neutral impact on behaviour by players.
- ♦ Depending on the feature, players either chose not to use them or used play strategies that precluded exposure to them. These behaviours impacted awareness and usage of the features.

## 3. The Enhanced RGFs had marginal impact on play behaviour

### A. Optional Time Limits

- ♦ The provision of a voluntary feature that allows players to set optional time limits for their play was only found to be effective in influencing one of the six behaviours being targeted for improvement. Although use of the feature was found to be associated with a small yet significant decline in how often High Risk Players reported *losing track of time during play*, use of the feature had no detectable impact in assisting players in *staying within intended time* and *money limits, playing within budgeted amounts, managing session length or in managing the amount of money spent per session*.

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- ♦ The following findings support the conclusion that optional time limit feature, tested in the current study, offers limited effectiveness as a player management tool:
  1. lack of use – only 13% of players even tried the feature (mostly due to curiosity), the majority of users do not see the elapsed time message come up after setting a time limit and only 2% of players actually cashed out in response to their set time;
  2. piloted feature had little perceived value to players (98% of those exposed to the feature feel it would have no effect on helping them manage a budget);
  3. the time tracked by the feature is re-set every time the player inserts money at a zero bank or cashes out. Therefore, it doesn't track the total amount of time a person plays overall, only on a per session basis. The majority of those who tried the feature reported they never or rarely ever see the "lapsed time message" come up although they played beyond the time set;
  4. feature is voluntary and therefore easily bypassed by players however making the feature mandatory is predicted to have no impact on its effectiveness given the other shortcomings identified; and,
  5. once the time limit is set, there is no mechanism to enforce the players' own decision (i.e. when the time limit is up, it is easy for the player to choose "yes" to continue playing without consequence).

**B. 30 Minute Pop-Up**

- ♦ The research concludes that the introduction of a 30 Minute Pop-Up message had a marginal impact on player behaviour.
- ♦ Only one of the six targeted behaviours was impacted positively by exposure to the 30 Minute Pop-Up messages (*playing within monetary budgets*), among High Risk Players only. Low Risk Players were more likely to report exposure when exceeding desired money budget suggesting some benefit in alerting these players to potential problems, however, the effect was again small.
- ♦ Exposure to the new messages at 30 minutes had no measurable influence on *session length, amount spent per session, playing within desired time limits or keeping track of time and money during play*.
- ♦ This feature negatively impacted the entertainment value of the games for 11% of players.

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- The following findings support the conclusion that 30 Minute Pop-Ups, as currently configured, are marginally effective as a responsible play management tool:
  1. lack of use – although the messages are seen in about half of all play sessions only 13% report ever cashing out and stopped play after exposure;
  2. piloted feature has little perceived value to players (88% of those exposed to the feature feel it would have no effect on helping them manage their VL play); and,
  3. the time tracked by the feature is re-set every time the player inserts money at a zero bank or cashes out. Therefore, it doesn't track the total amount of time a person plays overall, only on a per session basis. This limitation can be overcome by replacing ALC's central system.

**C. Modifications to On-Screen Clock**

- Although awareness of the feature is high, the modifications to this feature changes have not resulted in any appreciable changes to usage rates. The research showed that 71% of players perceive the clock to have no play management value.

**Other Research Conclusions**

The research evidence also provides insight into what would make RGFs more effective. Such conclusions include requiring that RGFs:

- are designed to give players features that are triggered by their individual behaviour and address behavioural factors that influence money management and overspending such as chasing losses;
- should allow players to set and enforce spending limits;
- be triggered by individual behaviours, be tied to individual player recognition and interactivity, provide access to player account activity, allow for time and money limits to be set prior to play sessions; and,
- provide consequences to reaching limits to enable the features to be enforced at the individual level.

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## Recommendations

Based on the study findings the following recommendations are submitted for consideration:

**1. Develop an interactive player tracking system for the video lottery network.**

This would allow for players to be recognized individually and to interact with the system through the use of a player card. The ability of the player to monitor their own activity, set limits or restrict access at the machine level is the ultimate empowerment model for responsible gaming and appears to be the ideal “tool” for effective play management.

**2. Focus on assisting players to manage money rather than time.**

Strategies described by players as helpful in managing their video lottery play primarily involve money budgeting. This would be relevant to players and an effective responsible gaming measure.

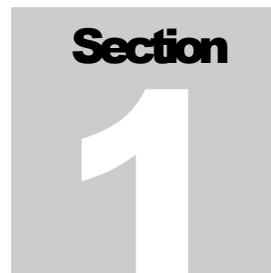
**Implementation of recommendations 1 & 2 pre-empt the need for the following recommendations 3 & 4. However, in the absence of a central operating system for VLTs that allows for player interactivity recommendations 3 & 4 are included for consideration.**

**3. Consider maintaining the Optional Time Limit and 30 Minute Pop-Up if there are no compelling reasons to reject.**

Although the features had a marginal impact on supporting responsible play behaviours, they weren't harmful to players and did provide some benefit.

**4. Consider maintaining the other feature modifications if there is no compelling reason to reject.**

These modifications were not harmful to players and seem to be reasonable adjustments. However, there is no compelling evidence that these modifications have served to satisfy the objectives of the features.



# **INTRODUCTION**

## **Background**

In May 2001, the Nova Scotia Gaming Corporation (NSGC), through the Atlantic Lottery Corporation (ALC), began introducing new video lottery terminals with responsible gaming features (RGFs) in various sites across Nova Scotia. This initiated the first of three phases comprising the VLT Replacement Plan scheduled to occur over a two to three year period. Phase 1 took place from May 2001 to January 2002, during which time 1000 new model terminals and approximately 400 upgraded older model terminals were rolled-out in specific locations and communities throughout the province.

The changes introduced to the machines included new games and improved graphics, the addition of a bill acceptor and four responsible gaming features intended to assist players in managing the amount of time and money spent while playing the games:

- ♦ Permanent on-screen clock denoting time-of-day;
- ♦ Display of betting activity in cash amounts rather than credits;
- ♦ Pop-up reminders of time spent playing after 60, 90 and 120 minutes of continuous play;
- ♦ 5 minute cash out warning at 145 minutes of continuous play and mandatory cash out at 150 minutes.

Part of the Replacement Plan with VLTs offering RGFs included evaluation of the effectiveness of each feature in assisting players to manage their VL play. In October 2002, Focal Research Consultants Ltd. completed an in-depth longitudinal research study which evaluated the features and recommended various changes and enhancements to improve the effectiveness of the RGFs. Based on these findings, the NSGC identified six RGF modifications for pilot testing. A detailed plan for the pilot test was designed and submitted for approval consisting of a Pre-Post return-to-sample methodology, using both a Test (South Shore Area) and Control (Valley Area) market for comparative analysis. The modifications were implemented only on PS5 terminals located in the selected Test Market. The modified terminals were introduced commencing October 2003.

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The changes to the RGFs include:

- Implement the optional time limits for play
- Implement the 30-minute pop-up enhancement and remove the 60-second display requirement
- Implement the recommended changes for the permanent clock
- Implement the 10-minute warning for the Mandatory Cashout
- Keep the wagers registered in currency format and make the display change

## **Modified/Additional RGF Descriptions**

### **Set Time Limit Option**

A new feature included on selected terminals (PS5s) in the Test Market is the option for players to choose a time limit for their play session. Whenever any money is put into the machine, a pop-up screen appears presenting the player with five options for setting a time limit for their play. ***“Would you like to set a time limit for your play session?”*** and five buttons featuring the following choices: ***“15 minutes” “30 minutes” “45 minutes” “60 minutes”*** and ***“I do not wish to set a time limit”***. The message remains in place until the player has selected one of the options. If one of the four time options is selected, the internal clock is set to that time limit and the player is returned to the main game “chooser” screen. The internal clock begins countdown of the play session once the player is returned to the main game screen. If the ***“I do not want to set a time limit”*** option is selected the player is returned to the main game “chooser” screen and the terminal returns to normal functionality.

If a time limit has been set, once the selected time elapses a pop-up screen will be partially displayed over the game screen that says ***“Your play time has elapsed. Select a new time period or cash-out to end your play session.”*** Six options are presented to the player; ***“15 minutes” “30 minutes” “45 minutes” “60 minutes” “Cash-out”*** and ***“I do not wish to set a time limit”***. If one of the four time limit options is selected play will again resume and the timer will be reset to zero with a new maximum time of play. If ***“Cash-out”*** is chosen, the normal cash-out sequence is initiated. If the ***“I do not want to set a time limit”*** option is selected the player is returned to the game and play resumes.

### **30-Minute Pop-Up Reminder**

Once cash is inserted into the VLT, the internal clock used to track time for the purpose of generating pop-up reminders is initiated. After 30 minutes of continuous

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play (i.e., no cash-outs or bank running down to zero), all players who did not choose to set a time limit for their play are presented with a pop-up message on the screen reading *“You have been playing for 30 minutes, do you wish to continue?”* with *“Yes”* and *“No”* buttons displayed below the message. The message remains on the screen, precluding continued play, until the player selects one of the two options. If the player chooses to continue, thirty minutes after the original message (i.e., after 60 minutes of continuous play), the 60-minute pop-up reminder message will appear and so on, for the 90-minute, 120-minute and 150-minute mandatory cash-out pop-ups.

If players choose to set a time limit, the pop-up reminders are not activated until the player switches out of timed play mode (i.e., the player selects *“I do not wish to set a time limit”* from the pop-up screen appearing once the selected time limit has elapsed). The elapsed time from the onset of play, regardless of when a time limit was implemented, determines the next pop-up message to appear. For example, if a player initially selects the timed play option of 15 minutes of play, then on the next pop-up selects 30 minutes of play, and finally on the next pop-up box selects “I do not want to set a time limit”, once back in pop-up play, after 15 minutes of play they would be presented with the 60 minute pop-up reminder and would continue with the normal pop-up sequence thereafter.

As with all pop-up reminder messages, the 30-minute reminder message display does not obscure the on-screen clock or cash display and is queued for display if the game is in bonus or special feature mode. Selecting the *“No”* option on the reminder screen results in a forced cash-out.

**On-Screen Clock**

The on-screen clock displays local time of day (e.g., 9:45 PM) and its size and position on the screen are now consistent across all games on a given manufacturer’s VLT. The clock has a “button-look” format and its background colours differ from all existing colour schemes used in the functional aspects of the game graphics, in order to improve the distinctiveness and prominence of the clock.

**10-Minute Warning For Mandatory Cashout**

The original RGFs include a mandatory cashout feature after 150 minutes of continuous play. A pop-up message warning players of the mandatory cashout feature would appear at 145 minutes, giving players a 5-minute warning. Given player feedback in the October 2002 study, the warning screen was adjusted to appear after 140 minutes of continuous play, reading *“The maximum playing time will elapse in the next 10 minutes and you will be required to cashout.”* Touching the *“OK”* button on the screen resumes play for the final 10 minutes before triggering the mandatory cashout.

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### **Wagers In Dollar Amounts**

All references to credit amounts on the terminals (i.e., balances, bets, rack-ups, wins and paytables, help and rule screens) are displayed in dollars and cents. The terminology above players' currency bank also now reads "Cash" instead of "Credits".

### **RGFs Evaluated**

There was no detectable awareness of the minor modifications to the mandatory cashout feature (changed from 5-minute warning to 10-minute warning) or the cash display (all references to dollars and cents versus using the term "credits"). Therefore, these features are not evaluated in the current study or included in the impact analysis. Evaluation is limited to the 30-minute pop-up message, the on-screen clock and the new Set Time Limit option.

## **Objectives**

There are three primary objectives for the current research:

1. Awareness levels of the modified features
2. Effectiveness of the modified features
3. Possible improvements to existing features

The concept of effectiveness presents some interesting challenges. According to NSGC's objectives "*the RGFs are targeted towards the low and moderate risk VLT player. For these groups, the features are intended as a tool to help players manage or keep track of their play. As the majority of VLT players play for entertainment the features should not be so intrusive as to deter from their enjoyment. Clearly, to be deemed "effective", RGFs must play a different role with different audiences. To measure this, the evaluation must include samples from multiple player segments with some different measures or desired outcomes for each segment.*"

Some specific outcome measures used in the 2002 study included:

- ♦ Frequency of play
- ♦ Length of time played
- ♦ Expenditure per session

It was concluded that these outcome measures, while important, are not defined as the primary determinants of success for the RGFs. It is not the goal of the NSGC to reduce any of these measures through the responsible gaming features. RGFs are intended as tools to help individuals manage their play. Specifically, this current set of

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RGFs is intended to provide players with additional tools for managing VL play session length.

Thus, while for tracking and comparison purposes many of the same measures used in 2002 are replicated in the 2003 study, additional measures are included and utilized in the analysis to provide further insight in the areas of how these RGFs help individuals manage their play.

To that end, there were 6 specific measures obtained in the Pre and Post measures used to operationally define time and money management:

- **Changes in frequency of losing track of time**
- **Changes in frequency of spending more time than wanted**
- **Changes in frequency of spending more money than wanted**
- **Changes in frequency of setting and exceeding budgets for play**
- **Changes in session length (minutes played)**
- **Changes in per session expenditure (amount spent)**

These measures represent the key indicators for comparative analysis between control groups and/or different player segments. The critical difference between this study and the 2002 study is that the focus will not be directly on expenditure levels and session lengths, rather on the role the RGFs play in allowing players to play within their pre-defined limits, one of the tenets of a responsible gamer as identified by NSGC.

## **Methodology**

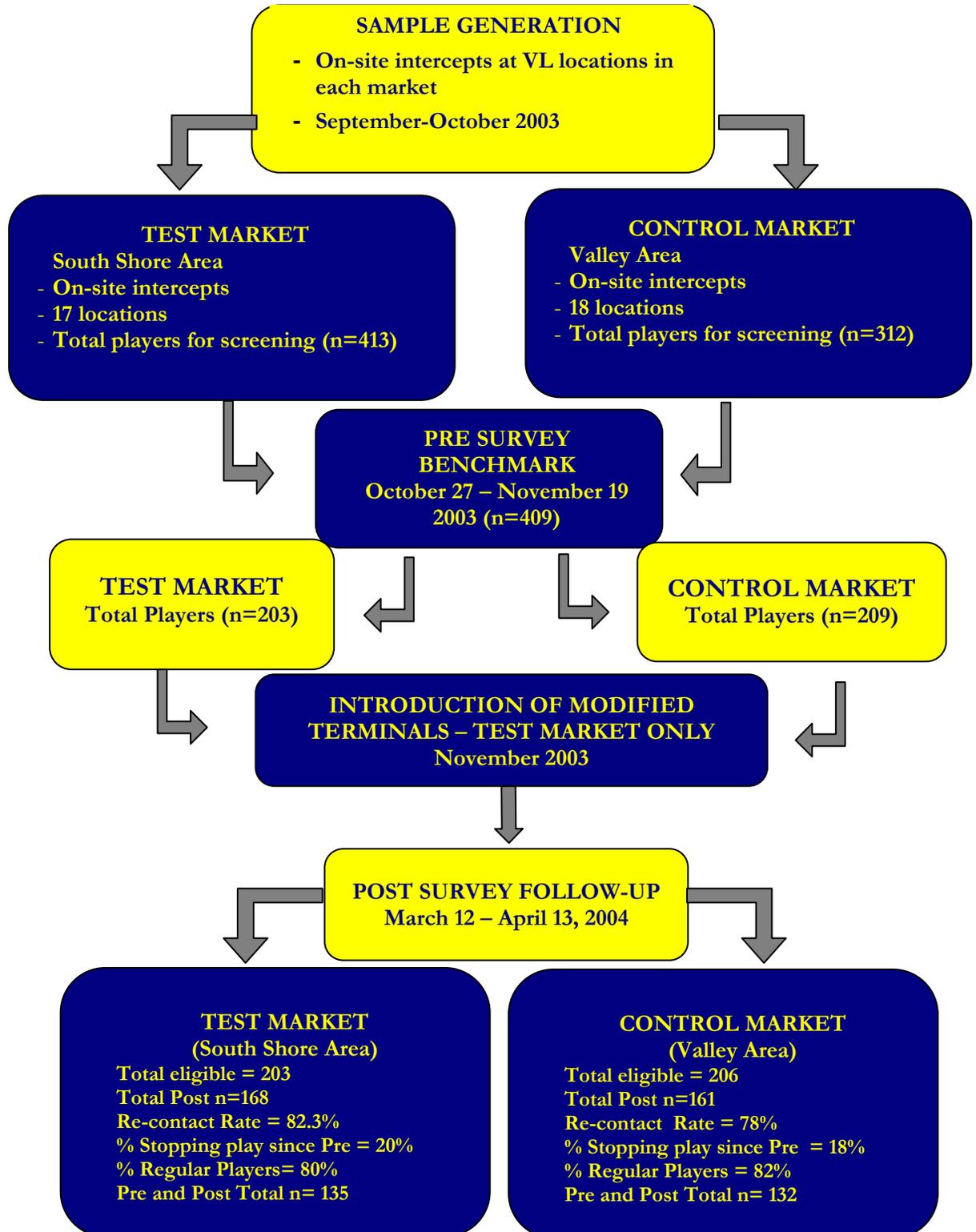
As in 2001, this evaluation study employs a return-to-sample model for measurement. Simply, the individuals who participated in the “Pre” study were re-interviewed in the “Post” study. The sample was developed using on-site recruitment. The evaluation uses a control test model, where two groups are formed. The first group is exposed to the new/enhanced features, while the second group is not. Following the trial test period, differences in key indicators between the two groups are assessed. Since all other VLT environmental influences should be consistent for both groups (new games, other RG initiatives, etc.), the differences in play between the two groups can likely be attributed to the RG features.

The evaluation consists of three broad stages:

- ♦ Pre launch survey, conducted prior to the launch of the features,
- ♦ Test period (VLTs with modified RGFs rolled out in the Test Market area),
- ♦ Post-test evaluation, completed approximately three months after the introduction of the new features.

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**Research Model**



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**Test Locations**

The two markets that are evaluated include the Annapolis Valley Region as the Control Group (no changes introduced) and the South Shore Region as the Test Group (modified RGFs). These regions were selected due to their similar profile in terms of number of VLT sites, terminals and player population. In addition, due to previous work completed in these areas, existing player contact information reduced recruitment efforts and related costs.

**Recruitment Screening**

Approximately 18 VL sites from each region were selected for on-site recruitment. The selected site communities are in close proximity to each other to create a pod of sites intended to limit the player spill to non-participating retailers.

- Test Market (South Shore): Bridgewater, Liverpool, Mahone Bay, Shelburne;
- Control Market (Valley): Wolfville, New Minas, Kentville, Greenwood, Middleton.

All players were initially recruited through on-site intercepts. Players were then re-contacted by telephone and screened for study eligibility to meet target profiles. Approximately 800 adults were screened for participation. Participant screening criteria included:

- adults aged 19 years or older;
- involvement in regular monthly VL play;
- permanent residency in the selected market;
- anticipated residency in the selected market for next 6 months;
- regular monthly VL patronage at participating VL sites;
- employment restrictions including marketing, marketing research, advertising, any media, lobby or political party, Nova Scotia Gaming Corporation, Atlantic Lottery Corporation, District Health Authorities, Addiction Services.

**Pre-Launch Survey (Benchmark)**

A total of 409 Regular VL Players were screened and successfully completed the Pre-Launch Survey; Test Market (South Shore): n=203, Control Market (Valley Area): n=206. The survey included benchmark measures for detailed play behaviours, attitudes and perceptions, Canadian Gambling Problem Index (scored items of the CPGI), awareness and use of information and support services, and demographic characteristics.

The Pre Survey for the Study was conducted from October 27 to November 19, 2004 from Focal Research's fully supervised data collection facility in Halifax Nova Scotia.

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**Test Pilot**

No changes to the machines were introduced in the Control Market (Valley) during the Test Pilot (trial) and follow-up period. In the Test Market, the new RGFs were only included on the PS5 terminals. The PS5 terminals represented just under half of the VLTs available at the selected test sites. Therefore, players in the test sites still had the option to play on unmodified terminals during the test phase. There were no other modifications, new games or features introduced in either market to ensure any differences in response could be isolated to the changes being tested.

The modified terminals were rolled out starting in Shelburne, October 31, 2003. The remaining terminals were not introduced until after data collection was completed in each of the test communities (approximately November 16 to 30, 2003). The Test Pilot Period for the study occurred from approximately December, 2003 to March 2004.

**Post-Test Evaluation**

The Post Survey replicated key measures initially defined in the Pre Survey benchmarks following approximately 3 to 4 months of exposure to the modified PS5 terminals in the Test Market. A return-to-sample methodology was used to enhance the sensitivity of the measures in detecting changes over time. Results from the survey were contrasted to those from the Pre-Launch survey to determine what effects, if any, the new features had on play. The results from the control group are used to identify any other factors that may have contributed to changes in play, thus allowing for a more accurate measure of the impact of the features on the test group.

**Analysis**

Descriptive statistics used in analysis for this study include:

- Chi square tests for distribution comparisons
- Z-tests and/or independent t-tests for mean comparisons
- Two tailed z-tests for proportions
- Mann-U-Whitney tests for median comparisons
- Correlation Analysis (Pearson for interval level, Spearman for rank ordered level)

For detecting within-subject differences over time, dependent t-tests and unianova tests for repeated measures were used. General Linear Modeling with covariates for repeated measures was used to identify the effects of the RGFs on changes in key time and money management measures. Given the exploratory nature of the research, all tests of significance were conducted based on a 90%+ confidence level for two-tailed tests of significance. All analysis was conducted using SPSS version 12.0.

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## **Study Limitations**

As with all research there are certain limitations that arise from the methodological design that have implications for interpreting study results.

In the current study the findings are based on self-reported play behaviours, attitudes and characteristics obtained at a Pre-Survey measure for comparison to Post-Survey measurements. The primary criticisms surrounding this methodology center on the accuracy of player reports and the lack of any reliable method of independent verification of the information provided. While an observational approach is seen to address these limitations such methodology is insufficient for assessing “non-observable” changes in play behaviour and attitudes that are critical to feature evaluation such as awareness of the features, reasons for use, player preference for the features and, perceptions of how the features work. Moreover, observational methodologies have other significant shortcomings including limited ability for yielding reliable data in tracking behaviour over time for a large number of subjects in a natural setting, and that the act of being observed changes participant behaviour.

Care and rigor were invested in the design and analysis to control for use of player reported measures. A Test and Control Market comparison was incorporated to test for any differences between the two samples observed over the course of the trial period. Any changes in responses are assessed to ensure differences observed among those in the Test Market could be attributed to exposure to the modifications rather than other extraneous or confounding effects

It should be noted that the Post Survey was only conducted once, four months following the introduction of changes in the Test Area. Therefore, there may be further changes in responses as Player’s become more familiar with the modified features. Also the new and modified RGF’s were only available on approximately half of the terminals in the Test Market, meaning that participants still had the option of playing on other unmodified terminals. To control for the potential effect on results, the impact analysis within the Test Market (South Shore Area) focused on comparisons between those who played primarily on the modified terminals during the trial period (Adopters) versus those who played primarily on the standard, unmodified machines (Non-Adopters).

The Nova Scotia Gaming Corporation can also examine and compare study results within the context of revenue outcomes and related activity currently monitored on the modified versus unmodified terminals in the Test and Control areas (e.g. coin-in, coin-out,).

## GENERAL "PRE" MARKET PROFILE

*To provide context for any observed changes between Pre and Post measures, a general market profile discussing and comparing key measures for the Control Market (Valley) and Test Market (South Shore) is included.*

*The following section discusses and compares key market characteristics for the Valley (Control Market) and South Shore (Test Market) regions during the "Pre" phase of the study.*

### General Playing Patterns

#### VL Play Characteristics

Overall, the characteristics of video lottery play reported by participants in the Valley and South Shore markets are highly similar:

- The majority play VL games on a weekly basis (61%), with 36.5% playing monthly and 2% playing VL games on a daily basis.
- Both markets are mature, with only one in ten having started playing VL games within the past year. The average length of time since first trying VLTs about 7.5 years, and players in both markets have been playing on a regular monthly basis for approximately 6 years, on average.
- For each VL player, the frequency of playing is typically 6 times per month (median of 4 times), primarily at one (60%) or two (23%) regular locations. Most players go most often to a VL retail location within 5 kilometers of their home (58%), although some (≈8%) play regularly at a location that is more than 20 kilometers away.
- There are no differences between the Control (Valley) and Test Market (South Shore) in regular VL play at various types of establishments; regular monthly play is primarily at Bars/Pubs/Lounges (51%) and/or Legions/Community Centres (36%). Nearly one-quarter of VL players regularly play VLTs at Sporting Establishments (e.g., pool halls, bowling alleys) (24%) with fewer than 10% regularly playing at either Licensed Restaurants (8%) or Native Gaming Establishments (7%).
- Average monthly expenditure on VL gaming is nearly identical for both areas. Players are spending, out-of-pocket, approximately \$316 per month on VL games.

**SECTION 2 - GENERAL "PRE" MARKET PROFILE  
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- The only difference in overall VL play characteristics between the two markets is in the amount of time spent playing VL games while in a retail location. Overall, players spent an average of 62% of their time in a VL retail location actually playing video lottery games. On average, players in the Test Market (South Shore) spend more time playing the machines in a VL retail location than participating in other activities (e.g., socializing, eating or playing pool). About two-thirds of the time South Shore players were in VL locations was spent playing (66%), while Valley players spent about 58% of their time playing the VLTs. In fact, 50% of all South Shore players spent three-quarters of their time playing VLTs (median of 75%) while 50% of Valley players spent equal amounts of time playing VL games as they did on other activities (median of 50%).

*The only difference in VL play characteristics between the two markets is that South Shore players spend more time at the machines while in a retail location than Valley players. Half of all Valley players spend just as much time doing other activities (e.g., play pool, eat, dance, socialize) as playing VLTs when in a retail location. Conversely, South Shore players, on average, spend two-thirds of their time in a VL retail location playing the machines.*

**Table 1 – VL Games Played Most Often During Past 3 Months**

	Valley (Control Market) (n=161)	South Shore (Test Market) (n=168)	TOTAL (n=329)
Royal Spins	38%	46%	<b>42%</b>
Magic Merlin	16%	20%	<b>18%</b>
Double Diamond	16%	18%	<b>17%</b>
Swinging Bells	18%	11%	<b>14%</b>
Texas Tea	14%	12%	<b>13%</b>
Alien Attack	13%	12%	<b>13%</b>
Bullfroggin'	11%	15%	<b>13%</b>
Cash Climb	8%	13%	<b>11%</b>
Cod Father	9%	10%	<b>10%</b>
Beaver Fever	8%	11%	<b>10%</b>
Lion Fish	10%*	4%*	<b>7%</b>
Double Bonus	8%*	3%*	<b>6%</b>

NOTE: Table lists only games played by 5%+ of players.

\* - indicates difference between areas significant at the 95%+ Confidence Level (p<.05).

- Game preferences are also similar among players in both areas. Royal Spins is the most popular VL game, followed distantly by Magic Merlin and Double Diamond. Players in the Valley are more inclined to play Lion Fish and/or Double Bonus, but both of these games are typically played by comparatively few VL players overall.

### **Attempts To Stop/Reduce VL Play**

- Approximately 42% of players have ever stopped or tried to stop playing VLTs, primarily within the last 6 months (28%).
- A similar 44% have ever reduced or tried to reduce the amount of time or money spent playing VLTs, again with no difference by area. The majority of those players who attempted to reduce the time/money spent playing VLTs were successful (36% of all players, or 81% of those who have ever tried to reduce).

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*Less than half of all players, regardless of area, have attempted to reduce the amount of time and/or money spent on VLTs (44%). The strong majority of those who have tried to reduce (81%) experienced some level of success.*

*The majority of players (84%) usually set a money budget before their VL play, mainly on a "per time" basis. These players tend to be successful in maintaining their self-imposed limits, with 77% rarely or never exceeding the money budget they set.*

- ♦ More than one-quarter of players reduce or try to reduce their VL play once every few months or more frequently (26%, accounting for 60% of those who have ever tried to reduce). For 12% of players (26% of those who have ever tried), it is an on-going effort. Overall, nearly half of all players (48%) indicate that it is currently "extremely easy" for them to reduce the amount of time or money they are spending on VL play (difficulty rating of 1 out of 10) while 7% are finding it "extremely difficult" to realize any reductions (difficulty rating of 10 out of 10).

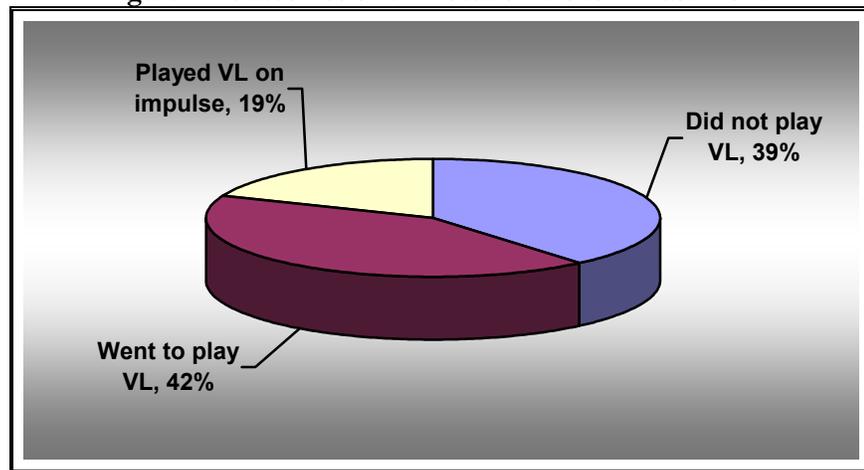
### **Budgeting**

- ♦ Approximately 84% of players usually set a money budget before playing VLTs, similar in both the Valley and South Shore areas. Only 19% of all players typically set a time budget before playing, although this behaviour is more prevalent in the South Shore (25%) than the Valley (13%).
- ♦ Players are more than twice as likely to set money budgets per play session (44%) than on a weekly (19%) or monthly basis (21%). Average budget amounts per time range from \$5 to \$250, with an average budget amount of \$42 per play session (among those who set a money budget each time, with no difference by area).
- ♦ Nearly two-thirds of all players (65%, or  $\approx 77\%$  of those who set money budgets) rarely or never exceed their self-imposed limit for VL spending. In fact, those players who set a money budget exceeded their limit fewer than one out of 5 times playing over the past three months (budget was exceeded  $\approx 17\%$  of the times played).

### **Behaviours During VL Play**

#### **VL Location Visits**

Figure 1 – Outcomes of VL Location Visits In Last Month



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- On average, players in each of the Valley (Control Market) and South Shore (Test Market) were in a licensed establishment that had VLTs approximately 10.7 times in the last month. In total, players played VLTs during the majority of these visits (61% of the time), having gone to the location specifically to play 42% of the time and playing on impulse during nearly one in five visits.

**Frequency of Various Play Behaviours During Past Three Months**

**Table 2 – Average Frequency of Various Play Behaviours While Playing VLTs**

WHAT % OF THE TIMES YOU PLAYED VL IN THE PAST 3 MONTHS DID YOU...	Valley (Control Market) (n=161)	South Shore (Test Market) (n=168)	TOTAL (n=329)
Before you started to play, <b>set a budget</b> or limit of how much <b>money</b> you wanted to spend each time you played?	77%	80%	<b>79%</b>
<b>Let the credits/bank go down to zero</b> before you put in more money?	60%	60%	<b>60%</b>
<b>Cash out and then continue</b> to play?	51%	54%	<b>53%</b>
<b>Were up any amount of money</b> when you were done playing, that is you had more money in your pocket when you finished playing than when you started?	47%	46%	<b>47%</b>
<b>Use the stop button</b> to stop the spin or play instead of letting it play out on its own?	34%	35%	<b>34%</b>
<b>Spend more money</b> playing than you would like?	31%	31%	<b>31%</b>
See the <b>60 minute</b> pop-up reminder?	26%*	33%*	<b>30%</b>
<b>Tried to win back money</b> that you had already lost through gambling?	29%	29%	<b>29%</b>
<b>Lose track of time</b> while playing the machines?	26%	27%	<b>27%</b>
Before you started to play, <b>set a budget</b> or limit of how much <b>time</b> you wanted to spend each time you played	21%	26%	<b>24%</b>
<b>Spend more time</b> playing VLTs than you would like?	24%	22%	<b>23%</b>
<b>Lose track of how much money</b> you are spending while playing the machines?	18%	15%	<b>16%</b>
<b>Play at max bet</b> , that is, bet at the maximum bet level per spin of \$2.50?	18%	14%	<b>16%</b>
See <b>any other pop-up reminders at 90 or 120 minutes</b> of play?	9%	12%	<b>11%</b>
See the <b>cash-out warning</b> and were forced to cash-out?	6%	5%	<b>6%</b>

\* - indicates difference between areas significant at the 95%+ Confidence Level (p<.05).

*The only play behaviour differentiating Valley and South Shore players is the frequency of exposure to the 60 minute pop-up reminder. South Shore players saw the 60 minute pop-up message, on average, one out of every 3 times they played in the last month, while Valley players saw the message about 1 in 4 times they played.*

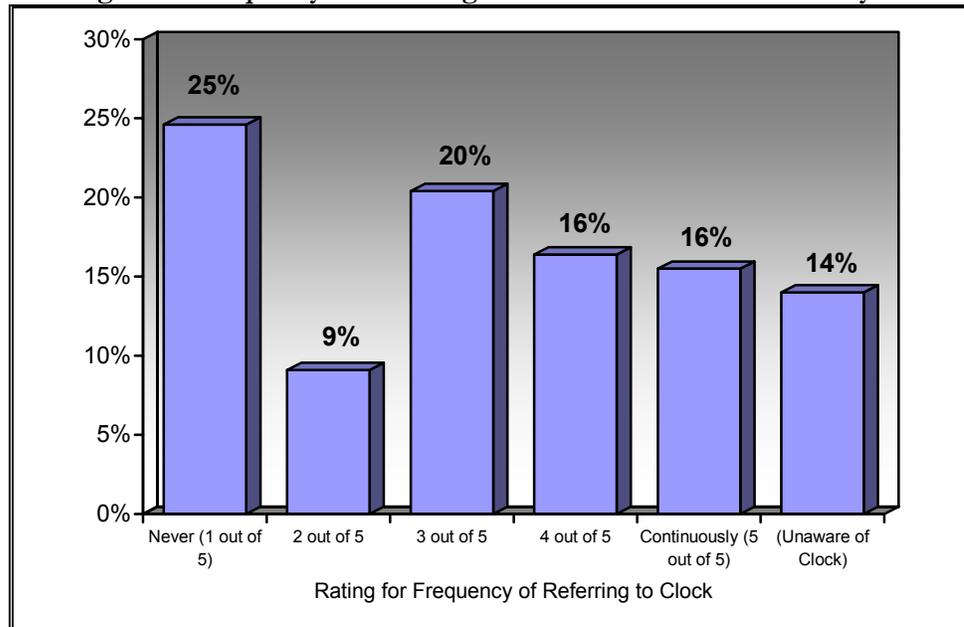
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- The most prevalent behaviours among players include setting a money budget before playing (79% of the times played, on average), letting the credits run down to zero before putting in more money (60% of times played), and/or cashing out and continuing to play (53% of times played).
- The only play behaviour measured in the survey differentiating Valley and South Shore players is the frequency of exposure to the 60 minute pop-up reminder. South Shore players saw the 60 minute pop-up message, on average, one out of every 3 times they played in the last month, while Valley players saw the message about 1 out of every 4 times they played.

**Reference To The On-Screen Clock**

*Awareness and reference to the on-screen clock are virtually identical in each of the control and Test Markets. Players are just as likely to refer to the clock on a fairly regular basis (~32%) as they are to rarely or never refer to the clock (~34%).*

Figure 2 – Frequency Of Referring To On-Screen Clock – Total Players



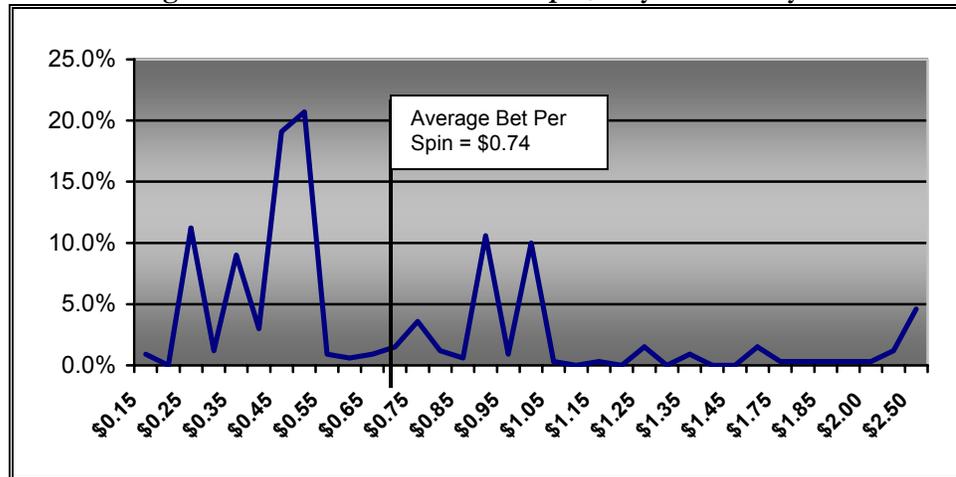
- Approximately 86% of players are aware of the on-screen clock on the VL games they usually play. Frequency of referring to the clock is varied, with a similar proportion indicating they *rarely* or *never* refer to the clock (34%) as those who *often* or *continuously* refer to the clock (32%). There are no differences in awareness or reference to the on-screen clock between players in the Valley and South Shore.

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## VL Play In The Past Month

### Amount Bet On Each VL Spin/Play

Figure 3 – Usual Amount Bet Per Spin/Play – Total Players



*The average amount of time spent playing VLTs is ≈83 minutes per play session, and the average amount of money spent is ≈\$51 per time. There are no differences in per session time or money expenditures between the test and Control Markets.*

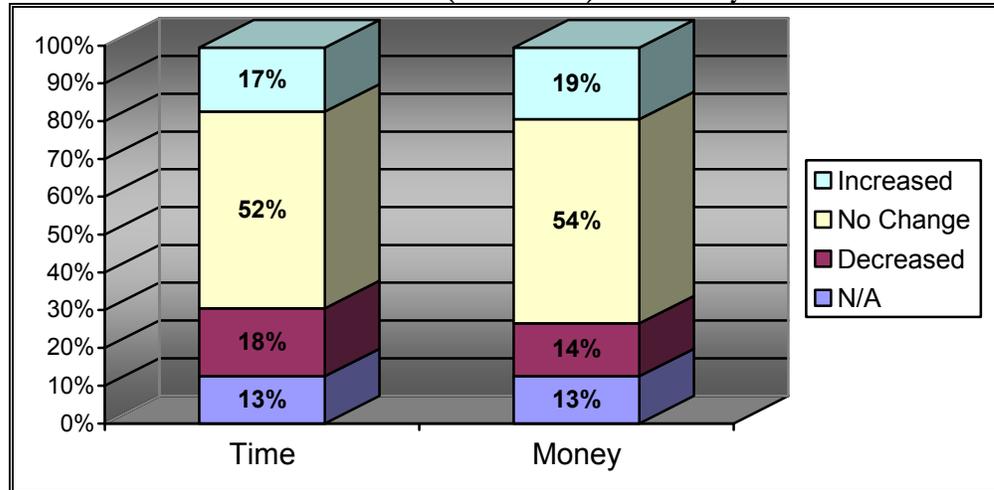
- The typical bet amount per spin or play ranges from \$0.15 to “max bet” or \$2.50. Players bet an average of \$0.74 per spin, with a median bet amount of \$0.50 per spin. The typical amount bet on each spin or play does not differ between players in the two markets.

### Amount of Time & Money Spent Each Time Played Last Month

- There are no significant differences in the amount of time and/or money spent playing VLTs in the past month for those in the Valley versus the South Shore markets.
- The amount of **time** spent by players each time they played VL games in the last month ranges from 3 minutes up to 4 hours. On average, players spent approximately 83 minutes for each VL play session, with a median length of 60 minutes per time played.
- The average amount of **money** spent by players on VL games during each play session was \$50.75, nearly identical for each market. The median amount spent per time is \$40.00.

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Figure 4 – Change In Amount of Time or Money Spent Since the Introduction of the “New” Machines (With RGFs) – Total Players



*The largest group of players (48%) report that the roll-out of the “new” VLTs in May 2001, with RGFs, new games/graphics and bill acceptors, had no impact on either the amount of time or money they are spending on VL play.*

Table 3 – Overlap For Changes In Amounts of Time and Money Spent Since Introduction of “New” Machines (With RGFs)

		AMOUNT OF TIME SPENT					N/A – Didn’t play new machines	TOTAL
		Decreased a lot	Decreased a little	Remained the same	Increased a little	Increased a lot		
AMOUNT OF MONEYSPENT	Decreased a lot	5.9%	---	1.2%	0.3%	---	---	7.4%
	Decreased a little	0.3%	6.2%	0.3%	---	0.3%	---	7.1%
	Remained the same	1.2%	2.8%	48.3%	0.6%	1.2%	---	54.2%
	Increased a little	0.3%	0.9%	0.9%	6.8%	0.6%	---	9.6%
	Increased a lot	0.3%	---	0.9%	0.3%	7.4%	---	9.0%
	N/A – Didn’t play new machines	---	---	---	---	---	12.7%	12.7%
	TOTAL	8.0%	9.9%	51.7%	8.0%	9.6%	12.7%	100%

- Players were asked to describe any changes in the amounts of time and money spent on VL play once the “new” machines were introduced (i.e., machines with original RGFs, introduced in May, 2001). Most players indicated that the amount of **time** they spent did not change (52%), while approximately 18% reported some increase in the time spent playing and a similar 18% said their time spent decreased. Results are similar in terms of the amounts of **money** spent after the new machines came out, with the majority reporting no change (54%), 19% indicating an increase in spending and 14% reporting a decline in play expenditures. There are no differences in reported changes for time and/or money spent between the test and Control Markets.

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- ♦ The roll-out of the RGF machines had no impact on either the amount of time or money spent on VL play for the largest group of players (48%). Overall, approximately 12% of players reported decreases in both time and money spent on the new machines, while the updated terminals (with new games/graphics, RGFs and bill acceptors) contributed to increased spending of time and money for approximately 15% of players.

*More than one-quarter of all players have felt that they have ever had problems with the amounts of time and/or money spent on VLTs, and most of these players (61%, or 18% of all players) are still experiencing problems. Self-declared current problem players in the South Shore feel that their VL play has been problematic for more than 5 years on average, a significantly longer time period than their counterparts in the Control Market (Valley) (3 years).*

## Current Problem Gambling

### Self-Declared Problem VL Play

- ♦ In total, 26% of players, regardless of market, have had someone express concern about the amount of time or money being spent on VL gaming. Two-thirds of these same players agreed that they were having a problem spending more time and/or money playing VLTs than they should.
- ♦ Overall, 29% of all players felt that they were having problems with their VLT spending, similar in both the control and Test Markets. Most of these self-declared problem players (61%, or 18% of all players) are *still currently experiencing* problems controlling the time and/or money they are spending on video lottery. Nearly one-quarter (23%, or 7% of all players) find they have *partially solved* their problems, and 5% of players (17% of self-declared problem VL players) report that they have *completely solved* their problems with their VL gambling, an average of 17 months ago. Again, there are no differences in self-declared problem VL play status between the two markets measured.
- ♦ Among those players who find they are still experiencing difficulties, VL play has been a problem for an average of just over 4 years (51 months). Self-declared problem players in the South Shore have been having trouble with the VL play for more than 5 years on average (62 months), a significantly longer period of time than reported by those in the Valley who are currently having problems (3 years, or ≈40 months).

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## Canadian Problem Gambling Index Categories

All participating players were classified into the following categories based on their responses to the 9 scored items of the Canadian Problem Gambling Index (CPGI):

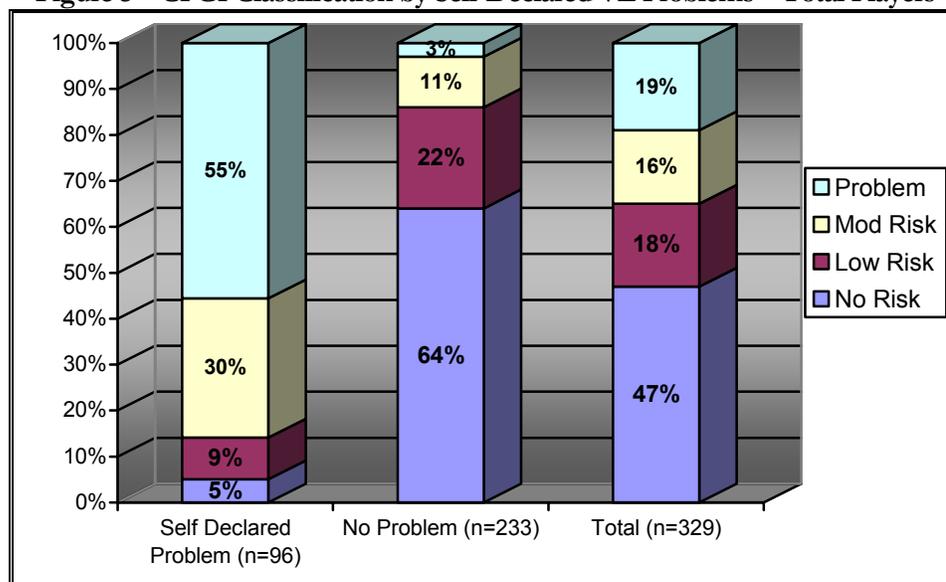
Table 4 – CPGI Categories By Area

	Valley (Control Market) (n=161)	South Shore (Test Market) (n=168)	TOTAL (n=329)
No Risk (CPGI Score = 0)	47.5%	46.7%	47.1%
Low Risk (CPGI Score = 1 or 2)	17.5%	18.3%	17.9%
Moderate Risk (CPGI Score = 3 to 7)	16.9%	16.0%	16.4%
Problem (CPGI Score = 8+)	18.1%	18.9%	18.5%

**CPGI**  
 classifications are nearly identical for players in each of the test and Control Markets, with nearly half scoring at No Risk (47%) and relatively even distribution among the three risk categories for the remaining players. The classifications are fairly consistent with self-declared problems among players. Over half (55%) of self-declared problem players are scoring at Problem levels on the CPGI and a further 30% score at Moderate Risk. Conversely, 64% of players who report having never experienced problems with their VL time/money expenditures are scoring at No Risk on the CPGI.

- Nearly half of participating VL players in each of the Test and Control Markets score at “No Risk” for problem VL gambling on the CPGI (47%). The remaining players are fairly evenly divided among the three risk categories. There are no differences between the two markets in the level of players at each level of risk on the CPGI scale.

Figure 5 – CPGI Classification by Self-Declared VL Problems – Total Players



- The overlap between self-declared VL problems and CPGI classification is fairly high. More than half (55%) of those players who believe they have had a problem with the amounts of time and/or money spent on VLTs score at Problem levels on the CPGI, and a further 30% score at Moderate Risk. Conversely, players who reported never having problems with their VLT expenditures are much less likely to

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score at Problem levels (3%) or at Moderate Risk (11%), with nearly two-thirds scoring at No Risk for problem VL gambling.

## Gambling Support Services

**Overall awareness of support services for problem gamblers in the province is high among players, particularly for the Gambling Helpline (1-888 # featured on all VLTs). Valley players are more than twice as likely as South Shore players to name Addictions Services or Community Counseling, without prompting, as an available source of assistance for problem gamblers.**

**Two-thirds (67%) of all players have seen pamphlets or brochures about problem gambling assistance services at a VL retail site.**

- Overall, 87% of players are aware of any provincial assistance or services currently in place to help problem gamblers (87%) and/or families of problem gamblers (68%).

**Table 5 – Awareness of Support Services for Problem Gambling**

	Valley (Control Market) (n=161)	South Shore (Test Market) (n=168)	TOTAL (n=329)
<b>Gambling Helpline (1-888 #)</b>	<b>94%</b>	<b>94%</b>	<b>94%</b>
Unaided awareness	69%	67%	68%
Aided awareness	25%	27%	26%
<b>Gamblers Anonymous</b>	<b>91%</b>	<b>88%</b>	<b>89%</b>
Unaided awareness	31%	30%	30%
Aided awareness	60%	58%	59%
<b>Addictions Services/Detox/Community Counseling</b>	<b>79%*</b>	<b>70%*</b>	<b>74%</b>
Unaided awareness	19%**	8%**	13%
Aided awareness	60%	62%	61%

\* - indicates difference between areas significant at the 90%+ Confidence Level (p<.10).

\*\* - indicates difference between areas significant at the 95%+ Confidence Level (p<.05).

- Awareness of support services among players is highest for the Gambling Helpline, with more than two-thirds citing this source without prompting. Once prompted, nearly 9 out of 10 players indicate awareness of Gamblers Anonymous (89%). Overall, almost three-quarters of players have heard of Addictions Services or Community Counseling to assist problem gamblers, with unaided awareness more than twice as high among Valley players than South Shore players (19% versus 8%).
- Only 12% of players have ever sought assistance from informal sources to help themselves and/or others with their VL play. Approximately 7% have ever gone to more formal services for help, including the Gambling Helpline (3%), Gamblers Anonymous (2%), their family doctor (2%), and/or Addictions Services (1%).
- More than three-quarters of players in both markets (≈78%) have seen pamphlets or brochures about problem gambling services or other related information about gambling, primarily at VL sites/locations (67%) and/or at a doctor's office (6%). Over half of those players who recall seeing any brochures (55%, or 43% of all players) do not know who sponsored or provided the information. Almost one-quarter of those exposed to any brochures (23%, or 18% of all players) name the

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Atlantic Lottery Corporation as a sponsor, followed by the Nova Scotia Gaming Corporation, named as an information provider by 14% of those aware of brochures (11% of all players).

- Approximately 44% of players report awareness of other advertising related to problem gambling information/services or responsible gaming information, mainly through television commercials (33%) and/or newspaper ads (10%). Again, most players cannot recall the sponsor of this other advertising (29%, or 66% of those who saw any other advertising), with no differences between the two markets.

## Response to Voluntary Self-Exclusion Concept

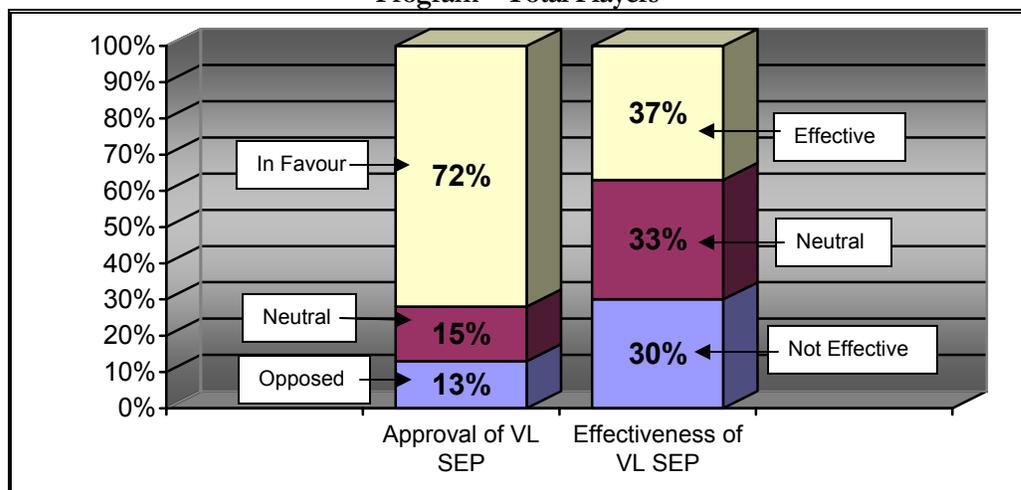
Players participating in the Pre Survey were read the following description of a Voluntary Self-Exclusion Program for Video Lottery:

**A Voluntary Self-Exclusion Program for Video Lottery** would be available to those people who want to stop playing the machines but are having problems stopping on their own. At the present time, the machines are located in over 500 sites throughout the province and it is not possible to confidentially identify and make sure players who don't want to play any more are not allowed to go in to locations that have the machines. However, a player who chooses to sign up on the VL self-exclusion program would be provided with assistance from treatment professionals and cooperation from their local video lottery retail locations in helping them keep their commitment to stop playing the machines.

*After hearing a description of a potential Voluntary Self-Exclusion Program for video lottery, 4% of players are aware of VL retailers offering a similar option to players informally.*

*Response to a VL Self-Exclusion program is positive, with 72% in favour. Players are not as enthusiastic about anticipated effectiveness, however, with equal groups believing it will effectively help and/or not help players who want to stop playing.*

**Figure 6 – Approval & Perceived Effectiveness of Voluntary VL Self-Exclusion Program – Total Players**



- Overall, 4% of players indicated awareness of at least one VL retail location taking part in any kind of (unregulated) self-exclusion program.

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- ♦ Response to the concept among players is favourable, with 72% indicating that they are in favour of such a program (4 or 5 on a 5-point scale). In fact, the majority of players in both markets describe their attitude toward a VL Self-Exclusion program as Strongly In Favour (5 out of 5, 58%). Players are not quite as enthusiastic about the anticipated effectiveness of a Voluntary Self-Exclusion Program, with only 37% believing that it would be effective (rating of 4 or 5 out of 5). One out of three players (33%) is reserving judgment, and a similar 30% do not believe such a program would be effective in helping people to stop playing the machines (1 or 2 out of 5).

## POST EVALUATION - CHANGES IN KEY MEASURES

*The following section discusses key changes in play levels and behaviours between the Pre and Post measures, as well as player evaluation of the new RGFs (South Shore Post only).*

*In total, 19% of those who completed a “Pre” Survey stopped playing VL games during the 3 months between the Pre and Post measures, with no difference between the test and Control Markets. These “Droppers” were less involved in VL gaming than those who continued to play, tending to spend less money each time and playing less frequently.*

### Play Levels Between Pre & Post Measures

- ♦ A total of 19% of all players who completed a “Pre” Survey did not play VLTs during the three months between the Pre and Post measures. The level of “Droppers” from Pre to Post is the same in both the Valley (18%) and South Shore (20%).
- ♦ Those who stopped playing between the Pre and Post measures do not differ strongly in terms of play behaviours. In general, when compared to those who continued to play, Droppers tended to have been less involved in the games at the time of the Pre Survey. On average, Droppers played less frequently (4.4 times per month versus 6.4 times per month) and spent less each time they did play (\$40.40 versus \$56.33).
- ♦ Due, in part, to these lower involvement levels, Droppers reported seeing pop-up reminder messages (60 minutes, 90 minutes and/or cash-out warning) less often during play than those who continued to play VLTs during the 3 months between measures. The only other specific play behaviour differences include Droppers being less likely than Players to:
  - lose track of time while playing (19% of VL play occasions versus 28% for Players)
  - spend more money playing than desired (23% of VL play occasions versus 33% for Players)
  - cash out and continue to play (41% of VL play occasions versus 56% for Players)
  - let the credits run down to zero before putting in more money (49% of VL play occasions versus 63% for Players).

**SECTION 3 - CHANGES IN KEY MEASURES  
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- ♦ The main reason given for stopping VL play over the past three months was related to money, with 37% of Droppers (or 7% of all Post respondents) saying they *can't afford it* or they *were spending too much on VL games*. Other reasons mentioned include:
  - too busy/found other ways to spend time (14% of Droppers)
  - trying to save up money/budget (14% of Droppers)
  - loss of interest in playing (13% of Droppers).
- ♦ More than two-thirds of all Droppers made a conscious decision to stop playing VL games (68%), rather than stopping play due to external constraints. Overall, 71% of Droppers had no problems giving up VL play, rating the difficulty of stopping play (and not going back) as "extremely easy" (1 on a 1 to 10 scale).
- ♦ Droppers were asked to describe anything particularly helpful, and/or not helpful for them in stopping their play of VLTs. Responses tended to vary, likely due to lower involvement levels in VL play and reported ease of stopping overall for these Droppers. The most helpful factor assisting Droppers in stopping was that players were too busy/working or found other things to do, mentioned by 28% of Droppers (5% of all players). Approximately 18% of Droppers found a lack of funds as helpful, indicating that they either didn't have the money to continue playing or were tired of losing their money. A total of 16% of Droppers found avoiding VL locations helpful, and 11% noted the assistance or influence of friends or family members. In terms of factors that were not helpful in stopping play, nearly three-quarters of Droppers (73%) reported that there was nothing in particular they found working against them in their efforts to stop.

*More than two-thirds of Droppers made a conscious decision to stop playing VLTs and stuck with it, and the majority (71%) had no difficulty. The primary reasons for stopping VL play were related to money concerns (couldn't afford it, trying to budget/save money), while others simply lost interest or were to busy with other things to play during the three month time period.*

## **Changes in General Playing Patterns (Pre Versus Post)**

Overall, 81% of participants in the Pre survey were still actively playing VL games three months later, at the time of the Post survey measure:

- ♦ Test Market (South Shore) = 80% (n=135/168)
- ♦ Control Market (Valley) = 82% (n=132/161)

### **Pre Survey Differences**

The profiles for those continuing to participate in the study (i.e., excluding the "Droppers" who did not play VL games during the three months between measures) were compared for both the Pre and Post surveys, in both markets. The only significant differences in the measures, among those who continued to participate, are described below.

**SECTION 3 - CHANGES IN KEY MEASURES  
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*The profiles of the test and Control Markets remained highly similar after excluding “Droppers” from the analysis. The only changes in key measures include South Shore players averaging longer play sessions and reporting greater likelihood of seeing the 60-minute pop-up reminders. Players in each of the test and Control Markets also play the VLTs more often when in a retail location rather than participating in other activities once the “Droppers” are excluded.*

*Changes between Pre and Post measures were noted only for session length (shorter for South Shore players), budgeting (South Shore players set a time and/or money budget less often) and exposure to the 60-minute pop-up message (South Shore players seeing it less frequently, but still reporting exposure more often than Valley players).*

### **South Shore (Test Market)**

Compared to all South Shore players who completed a Pre survey, participating players (i.e., not including any “Droppers”) in the South Shore Test Market:

- ♦ tend to have slightly longer play sessions (93 minutes versus 74 minutes;  $t=2.073$ ,  $p=.039$ )
- ♦ are more inclined to report seeing the 60 minute pop-up reminder during play (noticed during 37% of play sessions versus 28% of play sessions;  $t=2.479$ ,  $p=.014$ )
- ♦ spend more time playing the machines rather than participating in other activities while in VL retail locations (66% of their time in a VL location is spent playing video lottery versus 59%;  $t=1.786$ ,  $p=.075$ )

### **Valley (Control Market)**

Compared to all Valley players who completed a Pre survey, those who continued to play (i.e., not including any “Droppers”) in the Valley Control Market:

- ♦ play video lottery more often when in a location with the machines than participate in other activities at the location (play VL 78% of times they are in a location versus 71% of the times;  $t=1.724$ ,  $p=.086$ )

## **Post Survey Differences**

There were few notable changes in key measures for the Test and Control Markets at the Post survey measure.

### **Session Length**

- ♦ There are no longer any significant differences between the two markets in the amount of time spent playing for each VL play session. This is primarily due to a decline in the Test Market (South Shore – Pre: 93 minutes versus Post: 82 minutes;  $t=1.631$ ,  $p=.105$ ), although this change in average session length was significant only at the 89% confidence level.

### **Budgeting**

- ♦ Players at the Post measure in the Test Market (South Shore) were significantly less likely to be setting a time limit for VL play as compared to those in the Control Market (Valley) (10% of times played versus 16%;  $t=1.76$ ,  $p=.080$ ) or especially compared to their Pre measure responses (Pre: 25% of times played versus Post: 10%;  $t=3.96$ ,  $p=.000$ ).
- ♦ Only in the Test Market was there a drop in the frequency of setting a money budget for VL play (Pre: 81% of times played versus Post: 73%;  $t=2.096$ ,  $p=.038$ ).

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There was no change observed in the Control Market for how often players were setting a limit for their VL spending (Pre: 80% of times played and Post: 80%).

**Exposure To Pop-Up Messages**

- Players in the Test Market were also less inclined to report seeing the 60-minute pop-up reminder during the Post survey (Pre: saw the 60-minute message an average of 37% of times played versus Post: 22% of times played;  $t=4.758$ ,  $p=.000$ ) but were still more likely to see this message than those in the Valley (Post: 22% versus 13% in the Valley;  $t=3.636$ ,  $p=.000$ ).

## Response To RGFs (Post Only)

### Response To Standard RGFs

#### Pop-Up Messages

- At the Post measure, over two-thirds of all players (69%) report having ever seen any pop-up messages on VLTs telling them how long they have been playing. Those in the South Shore are significantly more likely to have seen any pop-up messages than those in the Valley (75% versus 63%), suggesting that the message at 30 minutes is successful in reaching more players.
- Considering only those players who have seen any pop-up messages, there are no differences between the two markets in the likelihood of players reading the message before choosing to continue or stop play. Nearly half of those exposed to the messages (45%) *never* read the text before making their selection. Over one-quarter of those who have seen a message (29%) either *frequently* (6%) or *always* (23%) read the message saying how long they've been playing. However, almost every player who has seen the pop-up message(s) (94%) report that they *always* select "Yes" and continue to play.
- The earlier exposure to a pop-up message (30 minutes versus 60+ minutes) is reflected in the average number of times players see pop-up reminders, with South Shore players (43%) exposed to one or more messages during a VL play session nearly three times as often as Valley players (16%). South Shore players are more than twice as likely to see one message during play (27% versus 13%), and 13% of South Shore players typically see two pop-up messages while playing VLTs compared to only 2% of Valley players noticing two messages.

#### On-Screen Clock

- Players are fairly divided between *never* (39%) and *always* (21%) referring to the on-screen clock during VL play over the past three months, regardless of whether they are in the Test or Control Market. On average, players referred to the on-screen

*Players in the South Shore (75%) are more likely to report having ever seen any pop-up messages than those in the Valley (63%), reflecting the impact of a 30-minute message versus 60+ minutes. The earlier exposure during play does not influence either the likelihood of reading the message or choosing to stop play instead of selecting "Yes" to continue.*

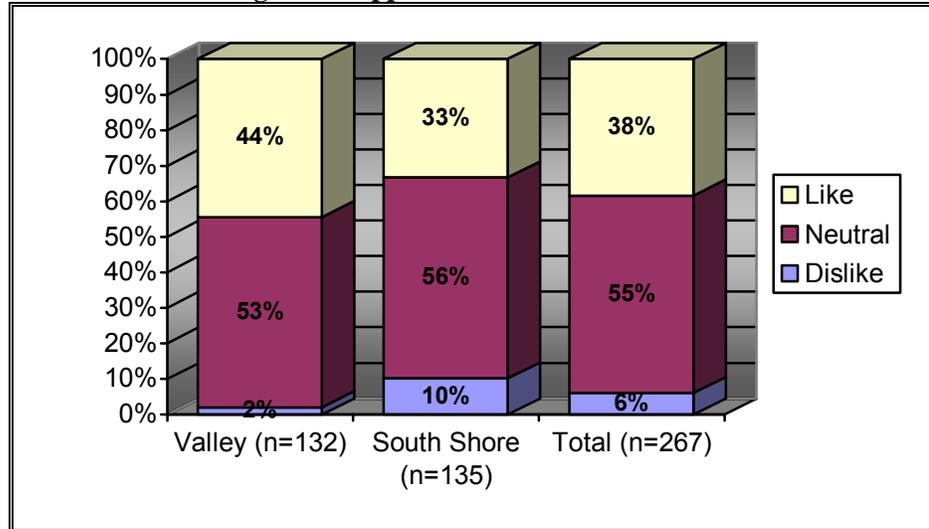
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clock at least once during approximately 38% of their VL play sessions between the Pre and Post measures.

*The majority of players in both markets (≈61%) refer to the on-screen clock while playing, and 71% believe it to have no effect in helping them to personally manage their VL play. While the changes to the on-screen clock (colour scheme, consistent screen placement) are not viewed as unfavourable, they have not served to increase appeal of this RGF as Valley players (Control Market) are more inclined to like the on-screen clock than South Shore players.*

- The strong majority of players in both markets (71%) believe that the on-screen clock has *no effect* in helping them to manage their VL play (rating of 1 out of 5).

**Figure 7 – Appeal of the On-Screen Clock**



- Although reference to and perceived effectiveness for managing VL play are similar between players in the two markets, Valley players are more inclined to find the on-screen clock appealing than those in the South Shore (44% versus 33%). Regardless, the majority of players in each market are neutral towards the on-screen clock function. These results indicate that the prominence of the clock (colour scheme, stationary location) has little impact on perceived effect in assisting players to manage their VL play and, although response is not unfavourable, the changes made to the on-screen clock are not serving to increase the appeal of this RGF.

**New Feature Evaluation (South Shore - Post Only)**

- Fewer than half of all South Shore players (44%) could describe any changes made to VLTs during the three months between Pre and Post measures without prompting:
  - Winning less often/worse odds (28%)
  - New games (14%)
  - **Option to set a time limit (11%)**
  - **30-minute pop-up reminder (3%)**
  - **Change in on-screen clock (2%)**
  - Winning more often/improved odds (2%)

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- When specifically asked, 72% of South Shore players recalled playing on a VLT that offered an option for them to set a time limit for play. On average, players used the “new” VLTs 11 times since their roll-out, with 38% playing on these terminals with the adjusted RGFs for at least half (13%) or all (25%) of their VL play occasions during the past three months. In fact, for those who have played on the new terminals, nearly three-quarters of their play sessions (74%, on average) were using the new machines.

**Set Time Option**

- Most South Shore players (46%, or 65% of those who used the new terminals) saw the “Set Time” option on their screen only once each time they played. A total of 13% of players in the South Shore used the Set Time option, with most (11 out of 18 individuals) choosing to set a time limit for their play during at least half of their play sessions during the test period.

*Although 72% of South Shore players have played on a VLT with the Set Time option, only 13% have ever used it (mainly for a 30-minute time limit), 10% have ever seen the notification screen when the selected time period has elapsed, and 2% have ever cashed out and stopped playing at that point.*

**Table 6 – Usage of Set Time Option**

	Ever Selected (n=135)	Selected Most Often (n=135)
<b>Ever Used Any Time Limit:</b>	<b>13%</b>	
15 minute time limit	3%	2%
30 minute time limit	9%	5%
45 minute time limit	5%	4%
60 minute time limit	5%	4%

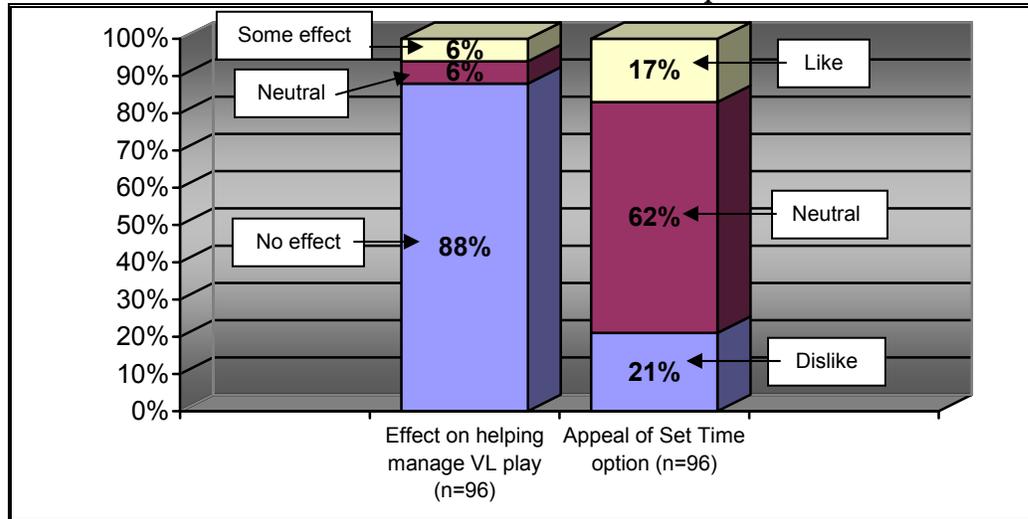
- The 30 minute time limit has the highest level of trial (9%), although the 30, 45 and 60 minute options are used most often by a similar percentage of players (4% to 5%).
- The tendency to select higher time limits for play among those who have used the Set Time option is evidenced by the fact that 7.5% of players (10 out of the 18 trial users) have *never* or *rarely* seen the notification message that their time limit has elapsed.
- During the test period, the novelty of the new Set Time option may have motivated some players to use the feature. Of 14 players who set a time limit and saw the subsequent notification message that their chosen time period had elapsed, only 3 have *ever* cashed out and stopped playing.
- The option to set a time limit for play appears to have had little impact on play patterns or habits for the games among those who have been exposed to the option. Between 88% and 99% of all South Shore players who have ever played on a “new” VLT with the time limit feature indicate that the option has *no effect* on their enjoyment of the games (88%), the amount of time they spend playing (96%), their

*Overall, 84% of players who have been exposed to the Set Time option indicate that it has no effect on any of their play habits or patterns.*

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frequency of cashing out during play (97%), their frequency of playing the machines (98%), their ability to set and keep a budget (98%) and/or the amount of money they spend (99%).

**Figure 8 – Perceived Effect and Appeal of Set Time Option – For South Shore Players Who Have Ever Seen the Set Time Option**



*The strong majority of players who have seen the Set Time option on a VLT (88%) believe this feature will have no effect in assisting them to manage their VL play. However, the feature does not engender a great deal of negativity, with only 21% indicating that they dislike the feature and 10% reporting decreased enjoyment of the games as a result of the new feature.*

- Nearly 9 out of 10 players exposed to the Set Time option believe it will have no effect in assisting them to personally manage their VL play (88%), and almost two-thirds (62%) are neutral towards the feature in terms of appeal. The option to set a time limit for play does not appear to engender a great deal of negative attitudes, however, with only 21% of those exposed indicating dislike for the feature.

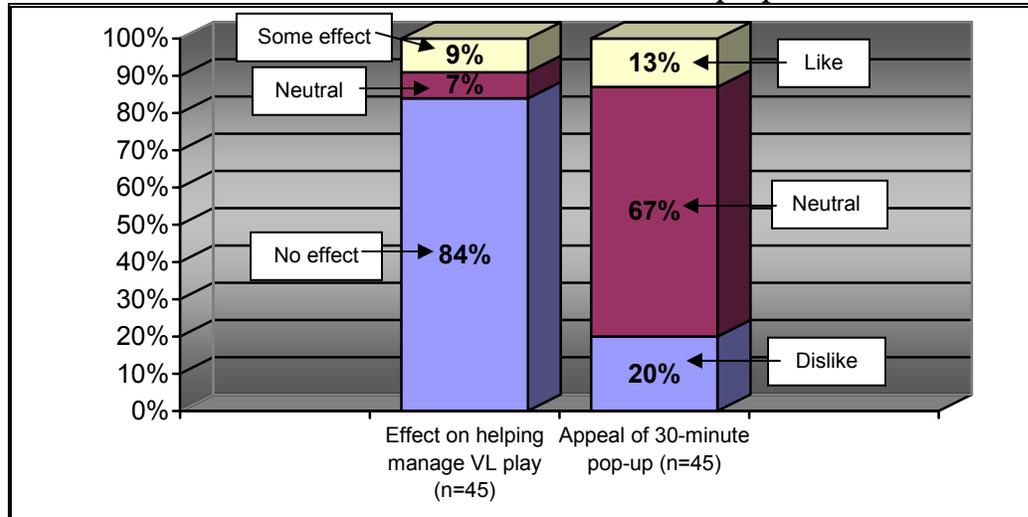
**30-Minute Pop-Up Message**

- Just over one-third of all South Shore players (34%, or 47% of those who have played on a “new” terminal) have seen the 30-minute pop-up reminder message between the Pre and Post measures. These players saw the pop-up message during half of all play sessions (48%, on average) during the past three months, and tended to see the message only once in a given play session.
- Only 13% of players who saw the 30-minute pop-up reminder have ever cashed out and stopped playing after seeing it (4.5% of all South Shore players). As noted for the Set Time option, the strong majority of those exposed to the message (84%) indicate that it has *no effect* on any of their play habits or behaviours. The only impacts noted for the 30-minute reminder message by players who have seen it include a decrease in game enjoyment (11%), increased frequency of cashing out (2%), and decreases in the amount of time and/or money spent (2% each).

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Figure 9 – Perceived Effect and Appeal of 30-Minute Pop-Up – For South Shore Players Who Have Ever Seen the 30-Minute Pop-Up

Almost half of South Shore players who played VL games on the terminals with adjusted RGFs have seen the 30-minute pop-up reminder, and 13% of these players were motivated to cash out and stop playing after seeing it. As noted for the Set Time feature, more than 8 out of 10 players exposed to the RGF believe it will have no impact on any of their play behaviours, and 84% indicate that it will not assist them in managing their VL play. However, only 20% report a dislike for the feature.



- Similar to results for South Shore players exposed to the Set Time option, approximately 84% of those who saw the 30-minute pop-up reminder believe it will have no effect in helping them to personally manage their VL play, although most are not negatively disposed towards the feature, with only 20% reporting a dislike of the 30-minute reminder message.

**Assistance/Support In Managing VL Gambling**

- Overall, 9% of players sought some kind of assistance for problem gambling, from either formal or informal sources, during the three months between the Pre and Post measures. Valley players (12%) are more than twice as likely to have accessed some kind of problem gambling service than South Shore players (5%), primarily informal sources (e.g., spouse, friends/family members) (9%).
- All players were asked to describe anything they tried, used or did that has been helpful in managing the amount of time or money they were spending on VLTs. The primary approach used by players was **setting a budget/limit and sticking to it**, noted by 42% of players, similar in both markets. This suggests that assistance with budgeting and maintaining a VL play budget is a worthwhile avenue for responsible gaming efforts, although the Set Time limit is not (yet) recognized by players specifically as useful in this regard.
- Other helpful strategies used by players to manage their VL play include limiting their funds by **taking only their budgeted amount of money** to the location to play (17%), **leaving the location once their budgeted amount of money has been spent** (14%), and/or **avoiding the VL locations** altogether (13%). A

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*Valley players were more inclined to have accessed some source of assistance for problem gambling during the past 3 months (12% versus 5% of South Shore players), primarily informal sources such as spouse or friends/family. Strategies described by players as helpful in managing their VL play primarily involve budgeting, similar in both markets.*

“distraction” strategy was helpful for some players, with 7% *seeking alternate activities* in order to replace VL play, and 5% making an effort to *keep busy* and reduce their spare time. There are no differences between the Test and Control Markets in the use of these efforts to control VL spending.

- ♦ The players were also asked to describe any specific things that were not helpful in managing the amount of time and/or money they were spending on VLTs. Nearly three-quarters (74%) reported that there were no specific factors or strategies that they have unsuccessfully tried in order to control their VL play. Approximately 11% noted that *having extra cash on hand, easy access to extra money or money beyond their VL budget* was not helpful, and 8% said that simple *exposure to the machines* was detrimental to efforts to manage their VL spending.

### **Player Comments About Managing VL Play**

At the close of the Post survey, players were asked for any final comments about anything they think would improve their ability to manage their video lottery play. Approximately 42% of players in each market offered no comments. Comments about improvements to personally managing VL play include the following topics:

- ♦ The machines should be banned/Removed from province (get rid of them) (12%)
- ♦ Have better odds (9%)
- ♦ Restrict access to machines (in casinos only) (8%)
- ♦ Set a budget/limit and stick to it (5%)
- ♦ Stay away from machines (4%)
- ♦ Modify the machines (e.g., turn off sound/spins too fast) (3%)
- ♦ Time limits on the machine (can only play XX amount of time) (2% - in each of the Valley and South Shore markets)
- ♦ Understanding you can't win/Find out about/learn how the games work (payouts, etc.) (2%)
- ♦ Get involved in other activities/things (2%)
- ♦ Ban smoking/alcohol in VLT area (2%)
- ♦ More/Better treatment options needed (2%)
- ♦ Keep a diary/Know what you're spending and winning (2%)
- ♦ Player cards/tokens/license – credit card style, where players set limits and can't play beyond (1%)
- ♦ Brochures/Pamphlets at VLT locations/Posters of dangers at locations and where to find help (1%)
- ♦ Government needs to get more involved/accountable (1%)
- ♦ Eliminate ATM's from bars (1%)

In order to determine the effects of the new and modified RGFs, results for those who played mainly on the new machines (Adopters) are first compared to results for those who did not (Non-Adopters). Repeated Measures Models were then created to isolate the effects of each RGF on key play behaviours for Adopters over the test period.

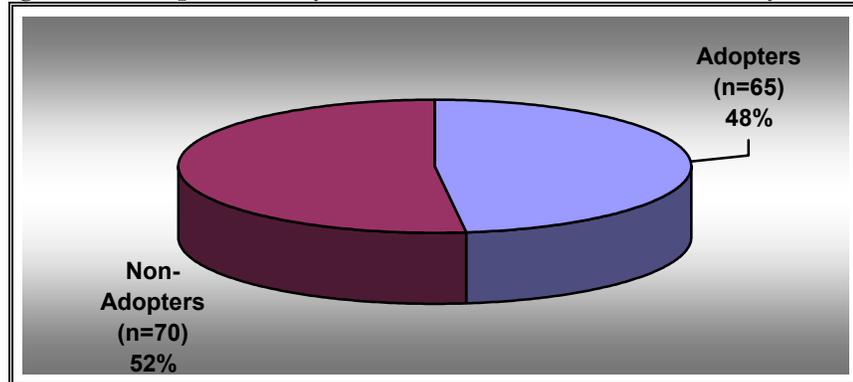
**ADOPTERS** (48% of South Shore players) are defined as those participating players in the South Shore who, between the Pre and Post measures, played 75%+ of their VL play sessions on the modified VLTs with the adjusted RGFs.

## IMPACT OF RGFs

The following section discusses the impact of the adjusted RGFs: the new option to set a time limit for play, the pop-up reminder at 30 minutes and the on-screen clock (consistent positioning, distinguishing colours). The analysis was undertaken for South Shore (Test Market) players only, and focuses on “Adopters” (those who played mainly on the new machines).

### Adopters Versus Non-Adopters

Figure 10 – Adoption of Play on Modified VLTs – Test Market Players Only



**Adopters** are defined as those participating players in the Test Market (South Shore) who, between the Pre and Post measures, played 75% or more of their VL play sessions on the modified VLTs with the adjusted Responsible Gaming Features. In order to determine the effects, if any, of the modified RGFs on play patterns or behaviours, Adopters were isolated and compared to Non-Adopters at the Pre measure and Post measure stages. Changes that occurred concurrently among both groups between the Pre and Post measures are attributed primarily to a regression effect<sup>1</sup> and/or other factors unrelated to exposure to the new RGFs and, therefore, are not included in the following discussion of differences in key measures. Only those

<sup>1</sup> Regression effect refers to the tendency for extreme responses to move towards the mean over repeated measures. This means that a certain sub-segment of players sampled at a particular point in time with higher than average play behaviour can be expected to regress toward the mean of all players over subsequent measurement periods.

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differences between the Adopters and Non-Adopters at the Pre measure (i.e., differentiating factors between the groups) and changes/differences at the Post measure are discussed.

## **Pre Survey Differences**

There are few distinctions between those who adopted play on the modified machines in the Test Market and those who continued to play primarily on the unmodified machines. At the time of the Pre measures, the only significant differences between the two groups included:

- ♦ The frequency of referring to the on-screen clock was higher among Adopters (using a 1 to 5 scale where 1 means never and 5 means continuously, average score for frequency of referring to the on-screen clock was 3.1 out of 5 for Adopters, versus 2.6 out of 5 for Non-Adopters;  $t=1.984$ ,  $p=.05$ ).
- ♦ Adopters spent a slightly lower amount per play session ( $\approx \$50$  versus  $\approx \$74$  for Non-Adopters;  $t=1.675$ ,  $p=.097$ ), however, Adopters also tended to play more often (7.8 times per month versus 6.0 times per month for Non-Adopters;  $t=1.605$ ,  $p=.111$ ). Therefore, average monthly expenditure on VLTs did not differ between the two groups ( $\approx \$385$  to  $\$440$  per month).

## **Post Survey Differences**

The only distinct differences between Adopters and Non-Adopters at the Post measures include:

- ♦ The amount of time spent by Adopters playing VLTs while in a retail location is now significantly higher than reported by Non-Adopters (Adopters spend approximately 62% of their time in a VL location playing the machines versus 45% for Non-Adopters;  $t=-2.953$ ,  $p=.004$ ).
- ♦ Adopters continue to refer to the on-screen clock more often during play (average rating for frequency of referring to the clock during play of 3.1 out of 5 versus 2.3 out of 5 for Non-Adopters;  $t=-3.12$ ,  $p=.002$ ).
- ♦ There are no longer any significant differences between the two groups in frequency of play or amount spent per play session as was the case at the Pre measures. Thus, the average monthly expenditure per month remains similar for both Adopters and Non-Adopters.

The results indicate that, at an aggregate level, adoption of play on the modified VLTs has not led to significant changes in play behaviours or patterns among regular VL players in the Test Market (South Shore).

*There were very few distinctions between Adopters and Non-Adopters at the Pre stage, and there continues to be little difference in play patterns or behaviours between the two groups at the Post measure. This indicates that, at an aggregate level, adoption of play on the modified VLTs has not led to significant changes in play behaviours or patterns among regular VL players in the Test Market (South Shore).*

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## **Effects Of Modified RGFs On Play Behaviours (Adopters Only) – Analysis Approach**

The new RGFs are intended to provide players with additional “tools” for time and budget management. The key indicators of success identified by NSGC consist of:

- **Expenditure**
  - Impact of modifications in supporting players in setting and maintaining personal budgets for play
- **Time Limits**
  - Impact of modifications in supporting players in setting and maintaining time limits for play and in keeping track of time spent on the activity.

There were 6 specific measures obtained in the Pre and Post surveys that were used to operationally define time and money management:

- Changes in frequency of losing track of time
- Changes in frequency of spending more time than wanted
- Changes in frequency of spending more money than wanted
- Changes in frequency of exceeding budget
- Changes in session length (minutes played)
- Changes in per session expenditure (amount spent)

There are three responsible gaming features tested in the analysis.<sup>2</sup> These features are designed primarily to gain gamblers’ attention by interrupting play and having them focus on the length of time they have been playing:

- 1) Time limit option (new feature)
- 2) 30-minute pop-up message (modified feature)
- 3) On-screen clock

The effects of the RGFs are also examined in association with risk for problem gambling (Low versus High Risk Players as identified by the Canadian Problem Gambling Index [CPGI]).

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<sup>2</sup> Changes to the mandatory cashout and cash display are not included in the impact analysis. There was no detectable awareness of the minor modifications to these features.

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The 3 individual RGFs examined include:

- ♦ *Use of time limit option*
- ♦ *Exposure to 30 minute pop-up message*
- ♦ *Use of On-screen clock*

All players of the new terminals are exposed to Time Limit Option and On-Screen Clock as soon as money is deposited into the machine. Therefore, in assessing the impact of the features, exposure to the RGF cannot be used as an independent measure. Instead, measures indicating players' use of the features were created.

Based on the distribution of responses for those adopting play on the modified terminals, two dichotomous measures (Yes:1 or No:0) were created to help identify the possible impact of these responsible gaming features:

- ♦ Frequency of using the new option to set a time limit for play (set a time limit 25%+ of times played during the past three months)
- ♦ Frequency of referring to the on-screen clock during each play session (referred to the on-screen clock at least once to check time of day 50%+ of times played in the past three months)

Unlike the time limit option and on-screen clock, not all players will see the 30 minute pop-up screen messages each time they play on the new terminals. Only those who played uninterrupted for periods of 30 minutes or longer, and did not select a time limit option for play, would be exposed to any one of the pop-up reminders. Allowing the cash level to drop down to zero or triggering the cash-out option will also reset the internal timing for the 30 minute pop-up reminder. To assess the impact of this feature on play behaviour, the distribution of responses for exposure to the 30 minute pop-up reminder was examined and a dichotomous measure created [Yes: 1 or No: 0]:

- ♦ Frequency of seeing the 30 minute pop-up reminder (reported seeing the 30 minute pop-up reminder at least once 50%+ of times played in past three months)

## **ANOVA Analysis**

Analysis of this data was conducted using the Repeated Measures ANOVA with covariates using the General Linear Model (GLM) module of SPSS v. 12.0. The dependent variables in the models are frequency of losing track of time, frequency of spending beyond desired time or money limits, frequency of exceeding budgets set for play, session length and session expenditure. The independent variables (factors) in each model were exposure to the RGF (one model for each of the three RGFs measured) and risk for problem play: Low Risk (CPGI Score < 3) versus High Risk (CPGI Score 3+).

Analysis began with correlations to identify relationships among the variables for input to the model. A broad range of variables were initially included in the model (described below) to identify possible influences on the dependent variables. At each iteration of the GLM analysis, the covariate with the least significant relationship (greatest p-value) was removed from the model, and the analysis repeated with the

*In order to isolate the effects of the RGFs on changes in key indicators associated with time and money management, analysis was conducted using Repeated Measures ANOVA with covariates (General Linear Modeling).*

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reduced set of covariates (backward elimination). All final models only contained variables that were significant as covariates at the  $p \leq .10$  level.

A separate analysis was conducted for each of the three RGFs modeled. In total, 18 separate models were developed – 3 RGFs with each of the six dependent variables.

VARIABLES ENTERED INTO ANALYSIS

*In all cases, Player Status was included in the analysis to assess the impact of results for those at lower versus higher risk for problem play.*

- **Dependent Variables:**
  - Frequency of losing track of time
  - Frequency of spending more time than wanted
  - Frequency of spending more money than wanted
  - Frequency of exceeding budget
  - Session length
  - Session expenditure
  
- **Independent Variables (Factors):**
  - Between subjects factors (dichotomous variables)
    - Use of time limit option (25%+ times played)
    - Exposure to 30 minute pop-up messages (50%+ times played)
    - Use of On-screen Clock (50%+ times played)
  - Problem Play Status (dichotomous variable based on CPGI classification)
    - Regular VL Players are classified as “Low Risk” (i.e., CPGI score < 3) or “High Risk” (i.e., CPGI Score=3+), included with each of the RGF models
  - **Covariates**
    - Average expenditure per session in the month prior to the Pre survey (in Expenditure models)
    - Average length of session in the month prior to the Pre survey
    - Number of times played on new machines
    - Number of times played VLTs in the month prior to Post 3 survey
    - Frequency of losing track of time while playing the machines
    - Frequency of losing track of how much money is being spent while playing the machines
    - Frequency of spending more time playing VLTs than they would like
    - Frequency of spending more money playing VLTs than they would like
    - Frequency of cashing out and continuing to play

*The inclusion of covariates in the models removes the “noise” in the data that may be masking the effects of key variables of interest and, at the same time, provides valuable insight as to the role of other behaviours/ characteristics that may be influencing differences in players’ responses.*

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- Frequency of letting the credits get down to zero before putting in more money
- Frequency of trying to win back money that they lost through gambling (chasing losses)
- Frequency of using the stop button
- Frequency of playing at max bet
- Age of respondent
- Highest level of education completed
- Gender
- Area of residence (urban/rural)

The variables included in the analysis were selected based on hypothesized influences on the dependent variables and/or to determine their possible influence on the dependent variables.

*Regression effect refers to the tendency for extreme responses to naturally move towards the mean over repeated measures, leading to changes in individual behaviours that are unrelated to any other factors or, in this case, machine characteristics.*

## **Role Of Covariates**

### **Regression Effect**

There are several possible explanations for the changes in Pre and Post measures over the course of the study, and one confounding factor may be regression effect. A decline due to regression effect was anticipated at the design stage of the study. Regression effect refers to the tendency for extreme responses to move towards the mean over repeated measures. This means that a certain sub-segment of players sampled at a particular point in time with higher than average measures can be expected to regress toward the mean of all players over subsequent measurement periods. To help control for potential influence of the regression effect at an individual level, the Pre survey measure for each dependent variable was used in the Repeated Measures ANOVA as a covariate to control differences for the results of dependent variables prior to the study.

### **The purpose of the covariates is:**

- ♦ to eliminate some systematic error, outside the control of the researcher, that can bias results (e.g., regression effect);
- ♦ to account for differences in the responses due to unique characteristics of the respondents (e.g., those who frequently chase losses may respond differently in association with exposure to the specific RGFS and related effects on changes in time or money spent).

Basically, the intention is to remove differences associated with other factors before effects of an “experiment” are calculated. Ideally, an effective covariate is one that is highly correlated with the dependent variable (i.e., frequency of losing track of time,

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spending beyond desired time or money limits, setting and keeping a budget, time and money spent), but not correlated with the independent variable(s) (e.g., exposure to or use of the RGF and risk for problem play).<sup>3</sup> It should be noted that this approach was adopted in the current study for modeling the impacts of the RGFs with one caveat. There were five specific behaviours included as potential covariates that are significantly correlated with risk for problem play.

**Table 7 - Covariates Significantly Related To Risk For Problem Play (Adopters Only)**

<b>Variable (from Post 3 Survey):</b>	<b>Pearson Correlation</b>	<b>Significance</b>
Frequency of losing track of time while playing	.593	.000
Frequency of losing track of money while playing	.731	.000
Frequency of spending more time than desired/ wanted during play	.645	.000
Frequency of spending more money than desired/ intended during play	.692	.000
Frequency of chasing losses during play	.679	.000

If differences in the responses on these measures were significant in explaining any relative variance for changes in any of the dependent variables, the variable was retained as a covariate in the model for the RGF being tested.

The rationale for this approach is two-fold:

- ♦ it assists in identifying what specific aspects of “risks for problem play” are contributing to differences in players’ responses to the RGFs and changes in management of time or money (e.g., losing track of time while playing versus chasing losses);
- ♦ it would identify the magnitude of the impact of this particular behaviour relative to effects explained by other variables or general risk for problem play (e.g., it could have emerged that chasing losses explained twice the variance in time or money spent, as compared to the variance explained by risk for problem play on its own).

It is believed that such an approach provides greater value in assessing the impact of the RGFs and in identifying opportunities for feature enhancements. However, it could be argued that inclusion of any of the covariates in the final model may reduce the residual effects that could be explained by the factor for risk of problem play in general. Therefore, it is important that the relationship between these covariates and

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<sup>3</sup> *Multivariate Data Analysis With Readings*, Third Edition, Joseph F. Hair, Ralph E. Anderson, Ronald L. Tatham, William C. Black, MacMillan Publishing Company, New York, 1992. pp 178-179.

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risks for problem play are recognized and considered when evaluating the results of the analysis. As a precaution, for models in which any of these covariates were found to be significant but did not yield significant main effects or interaction effects for play status, the analysis was repeated with the covariates removed.

*The tables provide estimates of the relative variance explained (Eta Squared) and the level of significance for the effects of each covariate and factor on changes in the dependent variables:*

- *Frequency of losing track of time*
- *Frequency of spending more time playing than wanted*
- *Frequency of spending more time than wanted*
- *Frequency of exceeding budgets for play*
- *Session length*
- *Session expenditure*

*The charts illustrate the relationship between the factors, RGFs, and risk for problem play, for significant main effects or interactions related to changes in behaviours between the Pre and Post measures.*

## **Presentation Of Results**

### **Repeated Measures Model**

The results for the Repeated Measures Model analysis are presented using both a table format for the overall effects and charts for illustrating any significant relationships between the factors and the effects. A table is produced for each one of the dependent variables being tested for changes associated with use of the new and modified RGFs.

#### **Interpretation Of Tables (Tables 8 - 13)**

The results of the Repeated Measures Model analysis for the three RGFs are presented in table format. Two numbers are presented for each variable in the respective models, indicating the effect of each covariate or factor. The first is the significance level for the variable in the analysis (for purposes of this analysis, levels of  $p \leq .10$  are considered significant). The second statistic reported is the variance explained ( $\text{Eta}^2$ ), which indicates the relative contribution of the variable in explaining the variance in the dependent variable (change in measures between the Pre and Post Surveys).

#### **Interpretation Of Charts (Figures 11 - 14)**

The charts provide the estimated mean for each dependent measure (e. g, Frequency of losing track of time) after taking into account the effect of the covariates. Therefore, the figures in the graphs do not represent the actual frequency of the behaviour but instead reflect estimates derived after the effects of the covariates have been parceled out of the measures. Thus, they represent the best profile of the estimated effect of the factors (e.g., use of the RGFs) on change in frequency of the behaviour being examined

For example, those who set a time limit for play are estimated to have the same frequency of losing track of time for the Pre survey measure as those who did not use the option due to the use of the pre-introduction survey session length as a covariate to control for the regression effect. The analysis essentially starts all players at the same level and measures how their session length changed with exposure to or use of a particular RGF.

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## Results of Repeated Measures Models

### Effects of RGFs on Frequency of Losing Track of Time

Table 8 - Frequency of Losing Track of Time (Results of Repeated Measures Model)

	Time Limit Option		30 Minute Pop-Up		On-Screen Clock	
	Sig	Eta <sup>2</sup>	Sig	Eta <sup>2</sup>	Sig	Eta <sup>2</sup>
<b>COVARIATES</b>						
Pre – Frequency of Losing Track of Time (Regression Effect Control)	0.000	0.648	0.000	0.660	0.000	0.643
Frequency of Spending More Money	0.000	0.439	0.000	0.211	0.000	0.434
Frequency of Playing Modified Machines	0.027	0.081	---	---	0.028	0.081
Frequency of Spending More Time	---	---	0.060	0.060	---	---
<b>FACTORS</b>						
Exposure to RGF	0.149	0.036	0.519	0.007	0.328	0.017
Player Status (CPGI – Low Risk versus High Risk)	0.144	0.036	0.314	0.017	0.489	0.008
RGF * Player Status (CPGI)	0.054	0.062	0.405	0.012	0.533	0.007
- shading indicates significant effects at the 90%+ Confidence Level (p≤.10)						

Frequency of spending beyond desired money limits is most strongly related to changes in losing track of time while playing in all three models.

It is also noteworthy that frequency of playing the modified terminals also contributed significantly to increases in losing track of time between the Pre and Post measures, despite the provision of new time management tools on the machines.

However, in terms of the new RGFs, there was a small yet significant interaction effect observed for use of the Time Limit Option and changes in frequency of losing track of time during play (Eta<sup>2</sup> = 6.2%, p=.054).

Therefore, while frequency of play in general on the modified terminals was related to increases in losing track of time, it appears that use of the Set Time Limit mitigates this response.

- In all models for exposure to and use of the RGFs, **frequency of spending more money than wanted** is most strongly related to changes in players' tendency to lose track of time, explaining 21.1% to 43.9% of the variance (p=.000) in responses.
- **Frequency of playing the modified terminals** also contributes significantly to changes in losing track of time but to a much lesser extent than playing beyond desired money limits (Eta<sup>2</sup> = 8.1%, p=.027). In this case, the more often players played on the new terminals the more likely they were to experience an increase in how often they lose track of time while playing the machines (r<sup>2</sup> = .16, p=001).
- **Frequency of spending more time playing than desired** was also weakly related to frequency of losing track of time in the model for exposure to the 30 minute pop-up (Eta<sup>2</sup> = 6.0%, p=.06).
- There was a small yet significant interaction effect identified for **use of the time limit option and risk for problem gambling**, explaining 6.2% (p=.054) of the variance associated with changes in losing track of time while playing.

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Figure 11 – Effect of Using Time Limit Option on Frequency Of Losing Track of Time (Low Risk Players)

Once the effects of frequency of play on the modified terminals was removed, use of at least one of the new RGFs, Time Limit Option, had a positive impact in reducing some players' tendency to lose track of time during play.

For players scoring at High Risk for gambling problems (CPGI 3+), use of the Time Limit Option was associated with a decline in the frequency of losing track of time while playing.

There was no effect observed for Low Risk Players.

Therefore, for High Risk Players only, using the option to set a time limit for play (25%+ of all play sessions) did explain about 6% of the variance in improvements for keeping track of time. Although the effect is small, it is significant and occurs in the expected direction.

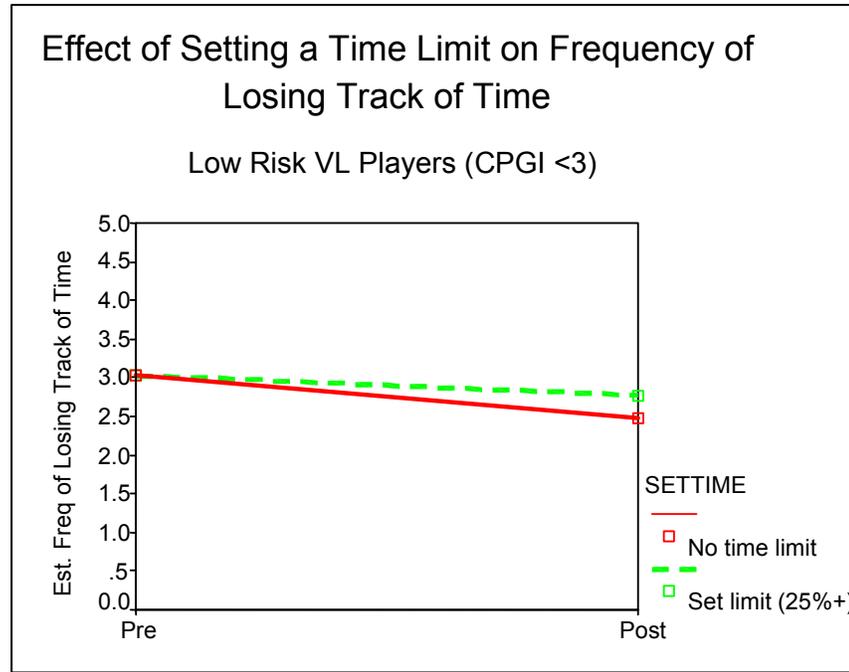
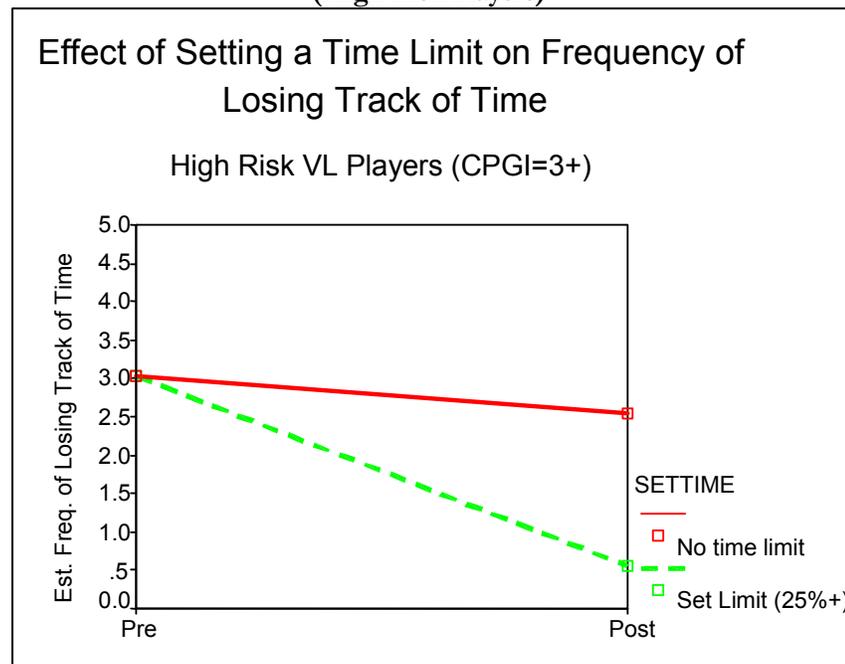


Figure 12 – Effect of Using Time Limit Option on Frequency Of Losing Track of Time (High Risk Players)



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**Effects of RGFS on Frequency of Spending Beyond Budgeted Amount**

Table 9 - Frequency of Spending Beyond Budgeted Amount  
 (Results of Repeated Measures Model)

	Time Limit Option		30 Minute Pop-Up		On-Screen Clock	
	Sig	Eta <sup>2</sup>	Sig	Eta <sup>2</sup>	Sig	Eta <sup>2</sup>
<b>COVARIATES</b>						
Pre – Frequency of Spending Beyond Budgeted Amount (Regression Effect Control)	0.000	0.469	0.000	0.441	0.000	0.408
Frequency of Chasing Losses	0.000	0.444	0.000	0.449	0.000	0.442
Frequency of Cashing Out & Continuing to Play	0.025	0.129	---	---	0.027	0.125
<b>FACTORS</b>						
Exposure to RGF	0.236	0.038	0.738	0.003	0.664	0.005
Player Status (CPGI – Low Risk versus High Risk)	0.176	0.049	0.007	0.177	0.030	0.120
RGF * Player Status (CPGI)	0.282	0.031	0.047	0.100	0.265	0.033

- shading indicates significant effects at the 90%+ Confidence Level (p≤.10).

*Epecially chasing losses and, to a much lesser extent, cashing out and continuing to play are both behaviours strongly associated with exceeding pre-set money budgets for play. Frequency of trying to win back losses on its own explains about half of the variance in changes observed between the Pre and Post measures. The more you chase losses the more you are likely to exceed pre-set money budgets.*

*However, high exposure to the 30 minute pop-up reminder (50%+ times played) was significantly related to changes in budget management among those players scoring at different levels of risk for problem gambling. In fact, exposure to the 30 minute pop-up reminder explains about 10% of the variance in changes between the Pre and Post measures*

- ♦ **Chasing losses** is most strongly related to the frequency of players exceeding pre-set money budgets during play, explaining about 44% of the variance (p=000) in differences between the two measures.
- ♦ The only other significant covariate in two of the three models was found for **frequency of cashing out and continuing to play** (Eta<sup>2</sup> ≈ 12.9%, p=.025).
- ♦ The only RGF related to significant changes in budget management was observed for the **30 minute pop-up**. There was both a significant main effect for Player Status (Eta<sup>2</sup> ≈ 12.9%, p=.025) and an interactional effect observed for exposure to the feature and risk for problem gambling (Eta<sup>2</sup> ≈ 10.0%, p=.047).

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Figure 13 – Effect of Seeing 30-Minute Pop-Up on Frequency Of Exceeding Budget  
 (Low Risk Players)

For Low Risk Players, high rates of exposure to the 30 minute pop-up reminder was associated with increased frequency of exceeding their money budgets for play. This is not necessarily a consequence of seeing the message but rather suggests that other factors (e.g. wins, play with others) may be influencing length of play thus increasing the likelihood of seeing the pop-up reminder.

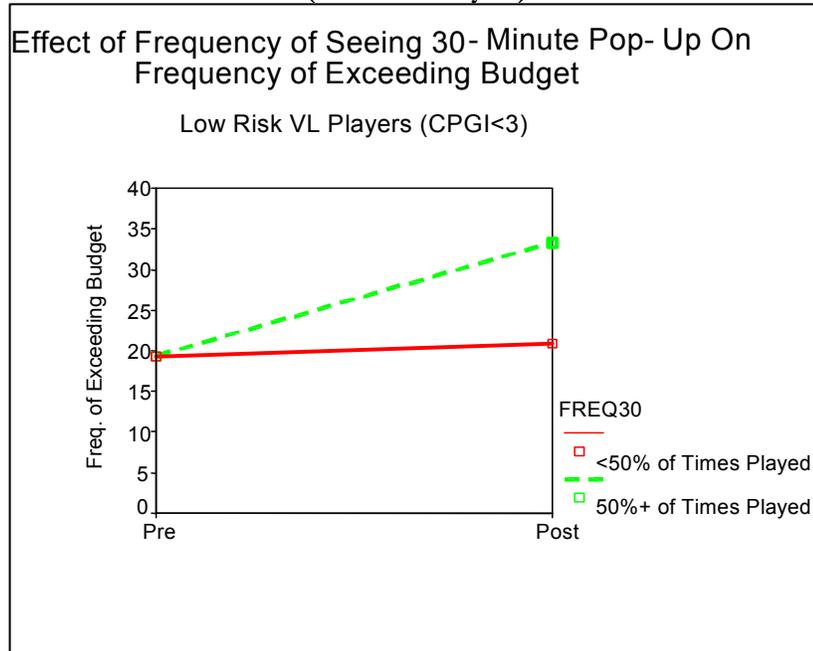
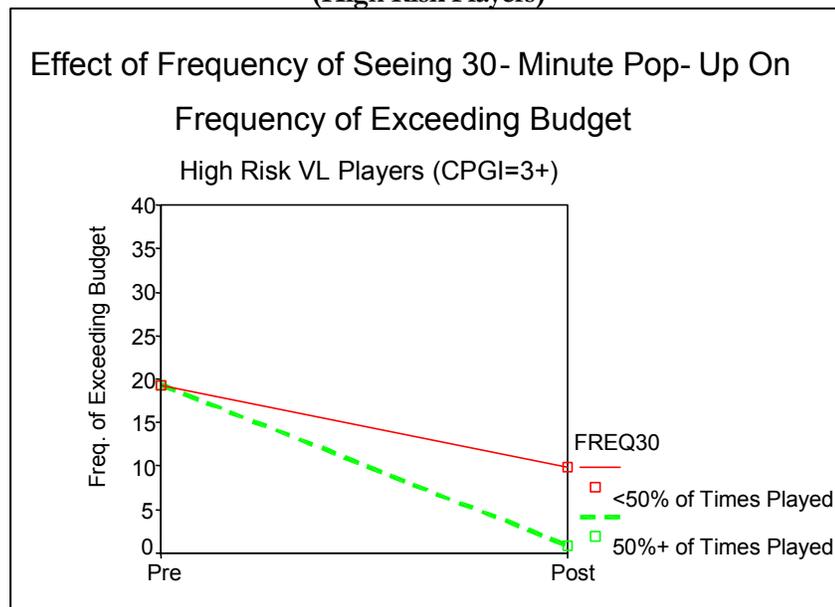


Figure 14 – Effect of Seeing 30-Minute Pop-Up on Frequency of Exceeding Budget  
 (High Risk Players)

For those Players scoring at High Risk, exposure to the 30 minute pop-up reminder was related to declines in the frequency of exceeding pre-set budgets. Again, the effect is small but occurs in the desired direction.



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**Effects of RGFs on Frequency of Spending Beyond Desired Time Limits**

None of the three RGFs had any detectable impact on reducing the frequency of players' spending more time than desired playing the machines.

Losing track of time, chasing losses and cashing out and continuing to play are all significant factors contributing to playing beyond desired time limits.

It is noteworthy that while the Time Limit Option had a small but significant effect in helping players keep track of time, there is no appreciable impact of this feature as yet in assisting players to play within desired time limits. Given that losing track of time explains about 25% of the variance in the frequency of exceeding time budgets for play, there may be further potential for the Time Limit Option to exert a positive influence for player's time management.

Table 10 - Frequency of Spending Beyond Desired Time Limits (Results of Repeated Measures Model)

	Time Limit Option		30 Minute Pop-Up		On-Screen Clock	
	Sig	Eta <sup>2</sup>	Sig	Eta <sup>2</sup>	Sig	Eta <sup>2</sup>
<b>COVARIATES</b>						
Pre – Frequency of Spending Beyond Desired Time Limits (Regression Effect Control)	0.000	0.596	0.000	0.568	0.000	0.531
Frequency of Losing Track of Time	0.000	0.270	0.000	0.258	0.000	0.228
Frequency of Chasing Losses	0.001	0.169	0.002	0.154	0.001	0.184
Frequency of Cashing Out & Continuing to Play	0.024	0.086	0.030	0.080	---	---
<b>FACTORS</b>						
Exposure to RGF	0.143	0.037	0.436	0.011	0.359	0.150
Player Status (CPGI – Low Risk versus High Risk)	0.775	0.001	0.766	0.002	0.909	0.000
RGF * Player Status (CPGI)	0.528	0.007	0.354	0.015	0.355	0.150

- ♦ **Frequency of losing track of time** is most strongly related to playing beyond desired time limits (Eta<sup>2</sup> ≈ 22.8% to 27%, p=.000), followed by **chasing losses** (Eta<sup>2</sup> ≈ 15.4% to 19.9%, p<.003).
- ♦ **Cashing out and continuing to play** (Eta<sup>2</sup> ≈ 8.0%, p<.04) was only significant in the models for the Time Limit Option and 30 Minute Pop-up.
- ♦ There were no significant main or interaction effects for any of the RGFs or by risk for problem gambling. This indicates that exposure to or use of the features is not found to be related to improvements in playing within desired time limits.

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**Effects of RGFS on Frequency of Spending Beyond Desired Money Limits**

Table 11 - Frequency of Spending Beyond Desired Money Limits (Results of Repeated Measures Model)

	Time Limit Option		30 Minute Pop-Up		On-Screen Clock	
	Sig	Eta <sup>2</sup>	Sig	Eta <sup>2</sup>	Sig	Eta <sup>2</sup>
<b>COVARIATES</b>						
Pre – Frequency of Spending Beyond Desired Money Limits (Regression Effect Control)	0.000	0.737	0.000	0.735	0.000	0.660
Frequency of Losing Track of Time	0.000	0.232	0.000	0.223	0.000	0.205
Frequency of Chasing Losses	0.000	0.296	0.000	0.295	0.000	0.274
Frequency of Losing Track of Money Spent	0.012	0.105	0.010	0.110	0.011	0.109
<b>FACTORS</b>						
Exposure to RGF	0.843	0.001	0.785	0.001	0.418	0.012
Player Status (CPGI – Low Risk versus High Risk)	0.300	0.019	0.440	0.010	0.545	0.006
RGF * Player Status (CPGI)	0.449	0.010	0.909	0.000	0.949	0.000

None of the three new/modified features had any detectable impact on reducing the frequency of players' spending more money than wanted while playing the machines.

Again, losing track of time and chasing losses are significantly related to overspending while playing the machines.

Frequency of losing track of money is also significantly related to spending beyond desired money limits, at a rate of about half that observed for the former two behaviours.

- ♦ **Frequency of chasing losses** explains the largest proportion of variance in all three models for spending beyond desired money limits (Eta<sup>2</sup> ≈ 27.4% to 29.6%, p=.000), followed closely by **frequency of losing track of time** (Eta<sup>2</sup> ≈ 20.5% to 23.2%, p=.000).
- ♦ **Losing track of money** is also a significant factor impacting overspending but explains only about half the variance of the other two play behaviours (Eta<sup>2</sup> ≈ 11%, p< .02).
- ♦ Exposure to or use of any of the three RGFS were not found to be significantly related to any changes in frequency of spending beyond desired money limits.

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**Effects of RGFs on Average Per Session VL Expenditure**

*Frequency of playing on the modified terminals had the most significant influence on changes in per session expenditure. As frequency of playing on the modified terminals increases, so too does per session expenditure. This relationship between frequency of play and expenditure was not observed for those playing on the unmodified terminals.*

Table 12 - Average Per Session VL Expenditure (Results of Repeated Measures Model)

	Time Limit Option		30 Minute Pop-Up		On-Screen Clock	
	Sig	Eta <sup>2</sup>	Sig	Eta <sup>2</sup>	Sig	Eta <sup>2</sup>
<b>COVARIATES</b>						
Pre – Average Per Session VL Expenditure (Regression Effect Control)	0.001	0.168	0.002	0.159	0.002	0.151
Frequency of Chasing Losses	0.006	0.124	0.005	0.127	0.005	0.130
Frequency of Playing Modified Machines	0.000	0.238	0.000	0.219	0.000	0.199
<b>FACTORS</b>						
Exposure to RGF	0.235	0.024	0.522	0.007	0.788	0.001
Player Status (CPGI – Low Risk versus High Risk)	0.284	0.020	0.310	0.018	0.238	0.024
RGF * Player Status (CPGI)	0.755	0.002	0.713	0.002	0.725	0.002

*The effect of chasing losses was only half that observed for the influence of the modified terminals.*

*None of the three RGFs had any significant effect on changes in the amount of money players spend each time they play the machines. Given that the amount spent per time increased with frequency of play on the modified terminals, it appears that the introduction of machine changes can be associated with increased spending by players.*

- Changes in the amount of money spent playing were primarily due to **frequency of playing the modified machines** (Eta<sup>2</sup> ≈19.9% to 23.8%, p=.000). There is a strong positive correlation between the two measures (r<sup>2</sup> = .52, p=000), indicating that as frequency of play on the new terminals increased, so too did the amount of money spent playing each time. Essentially, frequency of play on the modified terminals explains about 20% of the variance in changes in the amount of money spent each session of play.
- It is possible that frequency of play in general is associated with increased expenditure. Therefore, the data was examined for Non-Adopters (i.e., those who did not switch over to the modified terminals) for comparative purposes. There was no significant relationship observed for general frequency of play among non-adopters and expenditure (r<sup>2</sup> = .02, p=.312).
- **Chasing losses** (Eta<sup>2</sup> ≈13%, p<.007) also plays a significant role in influencing changes in the amount of money spent playing the machines.
- There is no significant effect observed for any of the RGFs in influencing the amount of money spent each time playing the machines.

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**Effects of RGFs on Average VL Session Length**

Table 13 - Average VL Session Length (Results of Repeated Measures Model)

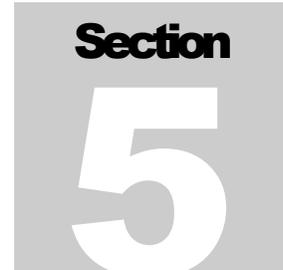
	Time Limit Option		30 Minute Pop-Up		On-Screen Clock	
	Sig	Eta <sup>2</sup>	Sig	Eta <sup>2</sup>	Sig	Eta <sup>2</sup>
<b>COVARIATES</b>						
Pre – Average VL Session Length (Regression Effect Control)	0.000	0.520	0.000	0.522	0.000	0.727
Frequency of Chasing Losses	0.008	0.121	0.009	0.117	0.001	0.192
Frequency of Playing Modified Machines	0.032	0.081	0.037	0.077	---	---
<b>FACTORS</b>						
Exposure to RGF	0.996	0.000	0.234	0.026	0.139	0.039
Player Status (CPGI – Low Risk versus High Risk)	0.199	0.030	0.249	0.024	0.329	0.017
RGF * Player Status (CPGI)	0.340	0.017	0.242	0.025	0.148	0.037

*Chasing losses again had the greatest effect in explaining changes in the amount of time spent playing the machines. However, frequency of playing on the modified terminals was also significantly related. The more often players used the modified terminals, the more likely that there was an increase in the amount of time spent playing. This is consistent with findings for expenditure.*

*In part, extended session length may be affected by the introduction of more “interruptions” to playing time by having the Time Limit Option and 30 minute pop-ups now included on the terminals. **But** there was no significant main effect or interaction effects associated with high exposure to or use of the features.*

*Therefore, despite the fact that the machines are now equipped with features specifically intended to assist players with time management, frequency of play on the modified machines was related to increases in session length.*

- There was a significant decline in average session length among both Adopters and Non-Adopters between the Pre and Post measures (Pre: ≈92 minutes versus Post: ≈84 minutes, p=.000). While most of this change was attributed to regression effect, the impact of the RGFs were still modeled for Session Length to determine if exposure to or use of the features contributed to any changes in the amount of time spent playing the machines (once regression effect had been controlled for).
- It is noteworthy that the only significant covariates in any of the models for session length consisted of **frequency of chasing losses** (Eta<sup>2</sup> ≈11.7% to 19.2%, p<.01) and, again, **frequency of playing the modified terminals** (Eta<sup>2</sup> ≈8%, p<.04).
- There was a positive correlation between how often the modified terminals were played and increases in session length (r<sup>2</sup> = .26, p=000). However, frequency of play on the modified terminals only explains about 8% of the variance in changes in the amount of time spent playing between the Pre and Post measures. It should be noted that the correlation is only significant among those adopting play on the new terminals. General frequency of playing VLTs among Non-Adopters was not associated with any changes in session length between the Pre and Post measures (r<sup>2</sup> = .02, p=.286).
- There were no significant main or interaction effects observed for exposure to or use of the new RGFs on the amounts of time spent playing the machines.



## Conclusions & Recommendations

### Conclusions

*The modified RGFs tested in the current study are found to have marginal impact in providing players with tools to manage time and money spent playing VLTs. However, the findings continue to support the validity and potential of machine based features in influencing player behaviour, as well as identifying opportunities for improving the value of such features in supporting responsible gaming by VL players.*

#### **Time Limit Option**

The **Time Limit option** was associated with minor improvements in *keeping track of time during play* only among High Risk VL Players who used this feature at least one out of every four times they play. However, use of the feature had no detectable effect in assisting players *to play within desired time or money budgets*, nor did use of the Time Limit Option have any discernable impact on the *amount of time or money spent*.

Despite even the limited value of the feature in reducing High Risk Players' *frequency of losing track of time*, the **primary factor pre-empting any benefits to players will be lack of use**. Although 72% of players in the Test Market (South Shore) have played on one of the modified terminals, only 13% have ever used the option to set a limit, and only 2% have ever cashed out in response to the feature. Most of this activity was motivated by curiosity (i.e., novelty effect).

**For the most part, the current feature has little impact or perceived value to players as a management tool**, with 98% feeling it will have no effect on their ability to set and keep a budget, and only 6% thinking that they may derive any benefit of the feature being available. **The results of the impact analysis support this perception**. While the feature generates little enthusiasm, it also does not engender much negativity. Its presence on the machines neither adds nor detracts from enjoyment of the games.

**The optional nature of the feature means it is easy for players to bypass or ignore**. In fact, even among those who choose to set any time limits, almost half have never even seen the elapsed time message come up due to their play behaviours (e.g. cash-outs, running credits down to zero resetting the timing mechanism), and the vast

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majority of those who did see the message simply elected to continue playing, without setting another time limit. Therefore, **making the feature mandatory (e.g., must set a time limit for play) is unlikely to provide any additional benefits. Having the play session terminated when the desired time limit is reached would be preferable but again, nothing impedes the player's ability to simply reinsert money and continue.**

Part of the difficulty is due to the fact that optional or passive machine features require the player to voluntarily act in order to derive any benefit from the feature. The only players likely to be able to do this are those who are already setting and maintaining budgets for their play and, thus, are able to exert control over time and money expenditures during their interaction with the machine. Therefore, these individuals do not need to use the feature and don't. If their play behaviour should change (e.g., diminished control), they would have to start actively setting a time limit. **Since the feature relies solely on personal enforcement at the point of intervention, those who want or need to reduce time or money spent cannot exert the necessary control to derive any benefit from the feature.**

**Therefore, the Time Limit Option as it is currently configured offers little value to players as a tool for time or money management.** First, few players are bothering to use the optional feature. Second, when they do set a limit, the lapsed time message is seen less than half the time, even if the player extends their playing time well beyond the desired limit. **This is due to the fact that the feature is tied to "continuous" uninterrupted play rather than the total time spent playing by the individual.** Normal play behaviours such as cashing out or running credits down to zero reset the timing mechanism for the option. A player must then set another time limit ideally taking into account the amount of time elapsed since they initially started playing. Therefore, the feature isn't even particularly useful as "an alarm clock" for reminding the player of any "time-of-day" obligations. Should the message come up during the session the player is able to simply choose to set another arbitrary time limit or continue playing. It becomes a complicated process that is easily avoided altogether or ignored by those engaged in more exciting aspects of the games.

While some players feel that an enforced time limit option would be helpful until such time as the central control system is able to recognize individual players and provide interactive play management the time limit option will have little impact on play management.

For those looking to such a feature to assist them in their time management the current Time Limit Option is likely to fall short of expectations by failing to deliver the message when expected and desired. Without detailed information

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provided to players about how the feature actually works there could be concerns that this current Time Limit Option may be misleading.

**30-Minute Pop-Up Message**

The pop-up messages are behavioural-triggered RGFs and, therefore, are only seen when a player's behaviour reaches a certain threshold.

The vast majority of players (67% to 75%) have seen the pop-up messages, with only about one quarter indicating that they usually read them, and almost everyone (94%) "always" selecting "Yes" to continue play.

The introduction of the **30 minute pop-up message** has led to increased exposure to the messaging feature. Almost half of players in the Test Market (South Shore: 43%) are exposed to one or more messages during a VL play session. This is a rate of exposure nearly three times that observed in the Control Market (Valley: 16%).

For those playing on the modified terminals in the South Shore, on average, the 30 minute pop-up is seen in about 48% of all play sessions. Again, the vast majority (84%) of players believe this option has no effect on their play management, although the increased frequency of seeing the messages had a negative impact on enjoyment for about 11% of players.

Regardless of player perceptions, frequency of exposure to the **30 minute pop-up message** was found to be associated with changes in player's *frequency of staying on budget* during their play sessions.

In the case of **Low Risk Players**, *frequency of seeing the 30 minute pop-up message* was associated with *increased frequency of exceeding play budgets*. This does not mean that seeing the message led to players overspending but rather that, due to overspending, they were more likely to be seeing the messages. **It may be that, in the case of the pop-up messages, activation of the message will alert players to changes in their play behaviour. Therefore, the 30 minute pop-up serves as an early warning sign for Low Risk players who are spending beyond desired limits.**

For **High Risk Players**, exposure to the 30 minute pop-up was associated with a decline in the *frequency of exceeding budgets set for play*.

While exposure to this message after a shorter elapsed time period (activated after 30 minutes of uninterrupted play versus 60+ minutes for the original RGFs) **does not have any appreciable effect in reducing time or money spent**, there are some benefits being derived in assisting **High Risk Players** in staying on budget and

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evidence that the messages may play a preventative role in alerting **Low Risk Players** to changes in their play associated with overspending.

**On-Screen Clock**

There were no significant effects associated with use of the **on-screen clock**. It appears that the changes implemented to make the feature more prominent and easily referenced are not sufficient to lead to any appreciable differences in players' use of the feature to mediate their play.

Awareness of the feature is high but the clock is a passive feature that exerts little influence on players who are involved in more engaging aspects of the machine such as the games and the game outcomes. Again, those reporting any benefit from referencing "time-of-day" information are already among those most able to exert control over their time and money spent or are using the feature under specific circumstances, such as when they need to be somewhere else at a particular time. The **on-screen clock** is the most preferred RGF but the majority of players (71%) indicate it has no effect in assisting them to manage their play.

**Opportunities For Improvements**

It is apparent from the research that, if the RGFs are to have any significant value as a play management tool, they must be designed to address the critical factors impacting overspending on the machines.

In the current study, the primary behaviours associated most strongly with spending beyond desired limits are *chasing losses, frequency of play, losing track of time, cashing out and continuing to play, inability to set and keep to a budget, spending more time playing than wanted, spending more money playing than wanted*. All of these factors are directly or indirectly related to a player's ability or inability to "stop" playing.

Voluntary options that are dependent upon the individual to activate and enforce are therefore unlikely to be of any benefit to players in managing play. However, features which will allow players to enforce pre-set playing decisions will ensure that the inability of players to exert control during the playing process does not lead to acute or chronic overspending. This will effectively allow players to set and then manage affordable play levels with the assurance that these personal pre-set goals will be enforced.

While length of time spent playing is a contributing factor to over-expenditure, the primary defining feature of length of play is typically related to the amount of money available for play and the speed at which these funds are spent. Almost all strategies used by players to manage their play are centered on money budgeting and efforts to restrict access to cash and or the VL machines.

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The only way that enforceable responsible gaming features can be offered on the terminals is through a **central operating system** that will allow *individual players to be recognized and interact with the system* (e.g., a player card system). Such features must center on allowing (or requiring):

- Recognition of the individual player at the machine level (i.e. point of sale),
- Secure access to individual play information (e.g., play history) for the **player**, in order to make informed decisions about their play management as well as at a **machine** level in order to enable the triggering of behaviour-appropriate messages or other behaviour triggered RGFs for individual players,
- Provision of options to set and enforce personally relevant play limits or other related decisions that are relevant to the individual player (**time or money**).

For those players who are already spending at desired levels (within pre-set budgets), the provision of such safeguards should have no impact on play of the terminals, with the exception that adherence to their “budget decisions” is assured. However, for those who are chronically overspending, the feature will allow them to engage in the activity at an affordable level or choose to effectively eliminate or restrict opportunities to overspend.

## **Recommendations For Piloted Features**

### **Time Limit Option**

Without significant modification to ensure enforcement of players’ pre-play decisions the **Time Limit Option** is unlikely to be an effective tool for players’ in managing their VL play and may fail to meet player needs and expectations when using the feature. A small minority of those exposed to the modified terminals did try out the option to set a time limit for their play suggesting that there is potential for the feature. However, failure of the piloted option to function as expected (indicate expiration of the selected time limit) can be misleading and should be adequately explained if this RGF is to be included on VLTs.

Enforced time limits or even offering “real time” tracking of “time spent playing” will not be possible until changes to the central control system allow for interactive player identification. Until such a system is in place, a time limit option may be a difficult feature for players to understand and use effectively.

### **30 Minute Pop-up Message**

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The advantage of all the pop-up messages is the ability for player behaviour to trigger exposure thereby targeting the message to a relevant audience at a relevant point in time. The primary limitation of the previous message schedule at 60 90 and 120 minutes of continuous play was that many players were not seeing the messages because of normal play behaviours interrupting continuous play and resetting the timing of the messages (e.g. cashing-out, letting the “bank” go down to zero before putting in more money, switching machines). The introduction of the **30 Minute Pop-Up Reminders** did broaden the reach of the messages so more people are seeing it but it may end up losing its effectiveness by over-exposure in circumstances when players are not necessarily playing for “high risk” periods of time. However, until such time as the machines are able to track “total time played” on an individual basis and the messages can be specifically targeted to high risk behaviours, this new 30 minute reminder is a reasonable compromise that is achieving some marginal success in alerting players to time (& money) spent playing.

In the absence of a new central monitoring system for VLTs the new 30 minute pop-up message should be retained and offered on all terminals with the recognition that such messages play a minor role in assisting players, but may have a positive impact for some players as a warning sign or reminder.

### On-screen Clock Modifications

In the current study the on-screen clock had no significant impact on any of the measures evaluated. There were no positive associations for use of the clock and improvements in time or money management. Conversely, there were also no harmful affects observed either. The face value of ensuring the clock is in a permanent and easily referenced screen position continues to have merit despite the lack of measurable impact on players’ management of money and time expenditures during play.

### Other RGFs Measured

#### - Mandatory Message Response

All pop-up messages were modified to require a mandatory response whereby the player must respond to each message by selecting either “Yes” or “No” to continued play before the message disappears and the game mode resumes. Almost exclusively players report hitting the “continue play” “button” as quickly as possible whether or not the response is mandatory. This tends to reflect normal response to seeing the messages. The feature modification also had no measurable effect on player’s likelihood of reading

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the message or stopping play. In certain circumstances the feature will discourage those who attempt to “jam” the machine to play automatically while they are doing something else but for the most part the feature reflects how players are already interacting with the machines. It may be more effective as an interruption if it was reconfigured to “freeze” on the screen for a set time period (e.g. minimum 30 seconds). Regardless, the current modification has no positive or negative impact on play. There is some face validity and logic to having players “forced” to respond rather than the unmodified feature which, without a player response, disappeared after 60 seconds. This feature could be retained if there are no compelling reasons to reject.

- **Extension Between Warning Message and Mandatory Cash-out**

Very few players see the cash-out warning during play or experience the mandatory cash-out ( $\approx 6\%$  of times played), consequently few players were able to comment on the extension of the time between the two features from 5 minutes to 10 minutes. Overall it seemed like a reasonable adjustment to players and addresses the concerns expressed by players participating in previous research undertaken on the topic (2002 NS VL responsible Gaming Features Research, 2003 NS VL RGF- Exploratory Concept Testing). At this time there are no reasons to reject the modification.

- **Replacement of references to credits to cash amounts and improved prominence of cash displays**

Replacement of “credit” references with cash amounts and modifications to enhance the prominence of cash displays are difficult to assess in terms of impact in assisting players to manage their VL play. However, regardless of this challenge it is clear from other research in the area of gambling that “cash” is considered more appropriate terminology than “credits”. Players also tend to prefer the reference to cash as it clarifies bet levels, wins and losses. In the absence of any negative or harmful associations this modification should be retained.

## **Opportunities for RGFs**

- **Development of an interactive player tracking system (e.g. player card)**

The results of the current study continue to reinforce the difficulties inherent in offering responsible gaming features that are not interactive. All of the critical factors influencing player success in engaging in responsible gaming are related to his or her personal ability to exercise control over the amount of

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time and money spent on the activity when engaged in play. The evidence consistently indicates that “impaired control” is a normal characteristic of play and, therefore, for many individuals, has a negative impact on the decision making process during the play session. Effective RGFs are those that allow the individual to enact and enforce personally relevant play decisions before they are involved in the games. The only way that effective, enforceable responsible gaming features can be offered on the terminals is through a **central operating system** that will allow *individual players to be recognized and interact with the system* (e.g., a player card system). The ability of the player to monitor their VL activity, set limits or restrict access at the machine level is the ultimate empowerment model for responsible gaming and appears to be the ideal “tool” to assist players in managing their play.

- Focus on assistance with money budgeting rather than time budgeting may have greater utility to players.

Strategies described by players as helpful in managing their VL play primarily involve *money budgeting*. This suggests that assistance with budgeting and maintaining a VL play budget may be most relevant to players and is a worthwhile avenue for responsible gaming efforts.

## Overall Recommendations

Based on the study findings the following recommendations are submitted for consideration:

### 1. Develop an interactive player tracking system for the video lottery network.

- ♦ This would allow for players to be recognized individually and to interact with the system through the use of a player card. The ability of the player to monitor their own activity, set limits or restrict access at the machine level is the ultimate empowerment model for responsible gaming and appears to be the ideal “tool” for effective play management.

### 2. Focus on assisting players to manage money rather than time.

- ♦ Strategies described by players as helpful in managing their video lottery play primarily involve money budgeting. This would be relevant to players and an effective responsible gaming measure.

Implementation of recommendations 1 & 2 pre-empt the need for the following recommendations 3 & 4. However, in the absence of a central operating

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system for VLTs that allows for player interactivity recommendations 3 & 4 are included for consideration.

**3. Consider maintaining the Optional Time Limit and 30 Minute Pop-Up if there are no compelling reasons to reject.**

- ♦ Although the features had a marginal impact on supporting responsible play behaviours, they weren't harmful to players and did provide some benefit.

**4. Consider maintaining the other feature modifications if there is no compelling reason to reject them.**

- ♦ These modifications were not harmful to players and seem to be reasonable adjustments. However, there is no compelling evidence that these modifications have served to satisfy the objectives of the features.