

# GAMBLING COMMISSION

## **A medium to long-term programme of research for investigating gaming machines in Great Britain: Recommendations from international and British expert panels**

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Prepared by:

**Dr Jonathan Parke**

Centre for the Study of Gambling, University of Salford

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## Executive summary

### Aims and scope of report

- i The aims of this consultation were to assess, in relation to gaming machines, the level of consensus regarding factors which determine gambling-related harm; identify preventative measures which may be appropriate to the British context; and, to the extent that evidence was lacking or needed, recommend medium and long-term priorities for a programme of research to examine gaming machine players' behaviour and identify potential challenges associated with such research.
- ii This panel exercise contributes to a wider programme of work, the findings of which were used as the basis for advice [to the Minister] outlining recommendations for research in the area of gaming machines, associated harms, and appropriate harm prevention and minimisation measures. The findings will also inform the Gambling Commission's contribution to future reviews of stakes and prizes for gaming machines in Great Britain.

### Methodology

- iii Given that this enquiry was broad in scope, sought empirical evidence where available, and required flexibility to explore emerging issues, a general consultation process was selected as the most appropriate methodological approach for collecting and considering experts' views. Two panels were constructed (one international and one British) comprising academic experts who could speak with authority on the area of gaming machines. The international panel was brought in to ensure the latest research and regulatory experience from other jurisdictions were included. The British panel, in addition to providing their own individual expertise, were also required to confirm the relevance and potential challenges that any information may have in relation to the British context.
- iv Panel views were collected in four stages via an asynchronous online data collection tool<sup>1</sup> in questionnaire format (three stages for the international panel and one stage for the British panel). Stage one views were collected on the association between gambling-related harm and certain structural and situational characteristics; stage two assessed consensus within the panel on such associations and also how they relate to harm mitigation approaches. Drawing on information from stages one and two, in stage three the experts' opinions were sought on priorities for a medium to long-term programme of research in the area of gaming machines. In the final stage the British panel considered the relevance, importance and potential challenges of such research priorities while also being invited to make their own suggestions.

### International panel stage one: perspectives on risk factors and harm mitigation

- There was broad consensus among panellists that high-stake machines are associated with problem gambling. However, explanations for this view lacked consistency and were limited in detail.
- In terms of prizes, there were suggestions from the panel that both small and large wins would be associated with harm in that smaller wins were reinforcing and provided entertainment, whereas larger prizes were considered to be more important for generating excitement and encouraging 'chasing' behaviour.
- In terms of game speed, distribution of wins, and percentage return to player (RTP), the overall view from the panel was that there was limited empirical evidence clarifying these issues, and that a reduction in speed could have an unavoidable negative impact on the

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<sup>1</sup> An asynchronous online data collection tool allows participants to give their input in their own time unlike 'live' focus groups or 'think tanks', and this is important when participants come from different jurisdictions and time zones. Asynchronous online data collection also ensures that participants are not influenced by the views of other participants at the time of responding.

experience of all types of players. The panel was in general agreement, however, that restricting access to funds may be effective in reducing and preventing harm.

- Convenient and proximate locations, sites located within economically deprived areas, and having 'many small venues as opposed to few large venues' were also suggested to be related to harm. The panel members who responded to the potential impact of the availability of both compensated and random gaming machines were in agreement that this may cause confusion among players and may facilitate the development of cognitive biases during play.

### International panel stage two: consensus on risk factors and harm mitigation

- There was a general lack of consensus among the panel regarding the role of structural factors in generating harm and the effectiveness of harm minimisation approaches. A high level of consensus was apparent only for a few propositions for certain structural characteristics under consideration.
- Regarding size of stake, a high level of consensus was noted relative to other characteristics. It was suggested that the main risk for players experiencing harm was that higher stakes normally imply a higher financial cost to play a gaming machine in any given timeframe. Panellists were also in agreement that potentially the best options to mitigate gambling-related harm regarding this factor would be to apply an upper limit on stake size, or to help extend control for the player over their expenditure through the use of responsible gambling features enabled by card-based or other tracking technologies.
- Overall, there was a low level of consensus regarding the importance of the size of prizes in relation to creating and facilitating harm. However, there was a high level of agreement regarding the most effective approaches for harm mitigation in relation to size of prize, including putting an upper limit on the size of prizes and paying out large wins using cash alternatives so that they could not be immediately reinvested.
- There was some consensus that the most significant risks posed by faster games are that they allow less time for reflection, and that they lead to a higher level of spending per hour. Restrictions on 'autoplay' and reducing reel spin speed were considered priorities for harm mitigation, although the panel also suggested that reducing speed of play may make a game less appealing.
- Restricting access to ATMs in gambling venues and other similar facilities was considered as potentially one of the most effective harm minimisation approaches. Imposing withdrawal limits and restrictions on location for ATMs also received some support; however, this received less support than for a complete ban. Support for using 'cooling-off' periods was mixed, as were suggestions by the panel for the appropriate length of time for such periods.
- There was significant uncertainty and disagreement among the panel regarding volatility<sup>2</sup> and RTP and their respective impacts on harm. This seemed to be a result of a lack of empirical evidence in this area, and/or a general lack of understanding of the concepts being considered.

### International panel stage three: identifying and prioritising research on gaming machines in Great Britain

- Experts from the international panel suggested five key research topics to be prioritised for further research exploring harm related to gaming machines, which included (in order of how the panel prioritised the topics): the promotion of player control through the use of card-based technologies and pre-commitment; the impact access to funds and other situational features; the impact of structural features; the role of socio-spatial and cultural environment; and development of gaming machine related harm.
- Player tracking technologies and access to additional funds were the specific topics rated as the top research priorities. Within this topic a scoping and feasibility study was considered to

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<sup>2</sup> Volatility of a gaming machine refers to how a gaming machine's pay-table is set up to meet its expected percentage return to player, for example whether it is designed to pay more large prizes, with correspondingly fewer smaller prizes (more volatile), or a greater spread of prizes with correspondingly fewer large prizes (less volatile).

be an important starting point. The other study that was recommended was an evaluation of the potential for pre-commitment features to minimise gambling-related harm. Panel members suggested that such research could use both comparative (ie comparing different groups of players based on different criteria) and longitudinal (ie following the same group of players over specific period of time) designs.

- The panel identified a need to investigate the impact on gambling behaviour from having access to additional funds (ATMs in particular) in the gambling venue. The suggested research focus here was multifaceted. Suggested research aims included assessing to what extent we can determine if access to additional funds generates or facilitates harm; evaluating the effectiveness of various harm mitigation options (banning, relocating or limiting withdrawals); and exploring any potential adverse consequences of the different harm minimisation approaches on player experience and industry revenue. A wide range of methodological approaches were identified as relevant here including comparative experimental designs, surveys and in-depth qualitative interviews.
- There was also support for examining the impact of gaming machine structure on gambling-related harm, with panellists either identifying at least one structural factor which should be prioritised for research (eg volatility; note acceptors) or suggesting that a general exploration of structural factors is required.
- Research from a cultural and socio-spatial perspective was given priority, with panellists suggesting that the impact of the availability and density of machines and the impact of different venues and sites should be investigated in relation to problem gambling. It was also suggested that it would be useful to explore the cultural and ethnic variation in how problem gambling is conceptualised and experienced.
- The panel also supported longitudinal research investigating temporal dimensions of problem gambling, most notably the impact of early exposure to gaming machines on gambling behaviour in later life and the transition or flow in and out of experiencing gambling-related harm.

## British panel: priorities and challenges for research on gaming machines in Great Britain

- The research priorities, as identified by the international panel, were generally endorsed with the highest priority being given to research involving player tracking technology and tracking-enabled responsible gambling features. It was highlighted that a broad view of 'harm' should be adopted that also incorporates environmental and demographic features of machines in order to improve the external validity of findings. Research investigating the impact of having access to additional funds was also strongly supported by the British panel.
- Challenges identified by the British panel related to the distinctiveness of the British gaming machine industry and regulatory framework. The panel expressed some apprehension that the industry would not be co-operative on issues such as sharing access to data or to venues to conduct research. It was suggested that the various categories of machines, various types of venues and various operators would make it difficult to implement and follow any research.

## Conclusions and recommendations

- The key recommendations are as follows:
  - The following five areas should be considered as research priorities for a long-term research programme investigating gaming machines in Great Britain:
    - The Promotion of Player Control – Player Tracking Technologies.
    - Impact of Access to Funds and other Situational Characteristics.
    - Impact of Structural Characteristics.
    - The Role of the Socio-spatial and Cultural Environment.
    - Understanding the Development of Gaming Machine Related Harm.
  - Research using player tracking technologies to investigate the behaviour of gaming machine players and tracking-enabled responsible gambling features should be given the highest priority. In doing so the following issues should also be considered:

- A scoping study should be carried out assessing the feasibility and willingness of operators to implement and operate such technologies in Great Britain.
- This research should go together with other concurrent research which focuses on wider issues at the individual, situational and cultural levels. It was argued by the panel that by adopting this broad approach the validity and reliability of research findings would be increased.
- The lack of consensus and apparent need for research in all areas under consideration suggests that the Gambling Commission continue with a cautious approach to regulatory change at this time. Based on information from stage two, uncertainty regarding future regulatory changes in relation to gaming machines in Great Britain is understandable, and significant regulatory change should be dependent on a stronger evidence-base which should be forthcoming from a longer-term research programme.
- However, based on information provided by the international (stage three) and British (stage four) panels of experts, there are some clear recommendations which should be considered for a medium to long-term research programme investigating gaming machines in Great Britain.
  - A partnership should be facilitated between the gambling industry and other stakeholders. It is clear that co-operation is required from the industry in order to obtain access to various forms of data that could be analysed and to venues, and customers therein, for conducting research on site, particularly live ecologically valid experiments. It may also be important to use the gambling industry's knowledge and experience to help identify the most appropriate lines of empirical enquiry which will save significant resources.
  - While the applications of findings from online gaming machines to land-based gaming machines should remain tentative, research using online gambling data may prove to be a fruitful line of enquiry until the sufficient data is available for analysis from land-based gaming machines. Such research may give some indicative answers to key questions regarding structural factors in gaming machines (eg the potential impact of stake, prizes and game speed on the creation and facilitation of gambling-related harm).
  - Finally, a mixed method approach is recommended to help clarify the impact of gaining access to additional funds in the gambling venue. This research should empirically examine a) if this factor makes a significant contribution to the creation or facilitation of harm and b) what restrictions (eg banning, relocating or limiting withdrawals) would be the most effective in minimising harm together with exploring the potential for unintended negative consequences or adverse impact on the customer experience.

# 1 Introduction

## Terms of reference

- 1.1 The broad aims of the expert panel were to help inform the Gambling Commission of the relevant issues and evidence regarding the association between risk, harm and gaming machines and the respective approaches to harm reduction; and to propose recommendations for a medium to long-term research programme for gaming machines in Great Britain. It was the product of the Gambling Commission's commitment to the:

“establishment of an international panel of experts to help the Commission develop a research programme focused on gaming machine regulation and minimising harm in the Great Britain context” (*Letter to Gerry Sutcliffe, Minister for Sport, from the Gambling Commission, 31 July 2008*).
- 1.2 This consultation was part of a wider programme of work<sup>3</sup> from which findings fed into advice that was submitted to the Minister in June 2009 setting out recommendations for a comprehensive, long-term programme of research to explore the association between gaming machines and gambling related harm. In addition, findings in relation to stakes and prizes will also inform the Commission's input into forthcoming reviews of stakes and prizes for gaming machines.
- 1.3 Two panels (an international panel and a British panel) which comprised key academic experts in the field of gaming machine players' behaviour were used to help achieve aims outlined below. The international panel was set up to ensure that the most up-to-date research and regulatory experience from other jurisdictions were considered. The British panel were expected not only to share their expertise in these areas but also to certify that information was pertinent to the British context.

## Aims and scope of the report

- 1.4 The aim of commissioning both an international and British expert panel was to help the Commission to:
  - a) understand the degree of consensus on the risk factors and harm from gaming machines
  - b) establish which of these are relevant to the British context and what preventive measures are appropriate and then ultimately
  - c) identify medium and long-term research priorities, considering the potential challenges associated with such priorities and how the various proposed research themes interrelate.
- 1.5 Panel members were encouraged to explain which risk factors were particular to machine gambling, or shared with other types of gambling, and also to identify which factors would be particular to the specific types of machine available in Britain
- 1.6 The process for collecting views from the international expert panel was through a series of three questionnaires, the aim of which was to seek consensus where possible in relation to a range of areas. The British panel were asked to confirm the relevance that any information may have in relation to the British context and identify any potential challenges through one questionnaire. This process was co-ordinated and facilitated by Dr. Jonathan Parke, Centre for the Study of Gambling, at the University of Salford.
- 1.7 This report is intended to present the views of the panels. It does not present a response from the Gambling Commission on such views, nor does it provide any analysis on the current approaches being mandated and encouraged in Great Britain.

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<sup>3</sup> Full details of the Gambling Commission's gaming machines research programme can be found at: [http://www.gamblingcommission.gov.uk/research\\_consultations/research/research/research\\_programme/gaming\\_machines\\_research\\_prog.aspx](http://www.gamblingcommission.gov.uk/research_consultations/research/research/research_programme/gaming_machines_research_prog.aspx)

## 2 Methodology

### The consultation process

- 2.1 A general consultation process was selected as the most appropriate approach for this exercise for a variety of reasons. Firstly, the nature of this enquiry was relatively broad-based. Secondly, while this initiative was primarily concerned with seeking expert opinion, the Commission was also interested in collecting empirical evidence where available to help support some of the secondary aims of the panels, such as getting input into the upcoming review on gaming machine stakes and prizes. Finally, while a consultation approach was less structured than other options, it offered the flexibility required to follow relevant issues as they emerged either from within the consultation process itself, or from the other gaming machine research projects being run concurrently.

### Expert panels

- 2.2 Two panels were constructed, which both comprised key academic experts in the field of gambling behaviour generally and those with an in-depth knowledge of gaming machines. Both panels made recommendations for the development of a research programme focused on gaming machine regulation and minimising harm in the British context.

### The international panel

- 2.3 The international panel was set up to ensure that the most current thinking, up-to-date research and regulatory experience from other jurisdictions were considered. The international panel members were:

**Table 1. International panel members and their affiliation**

Professor Max Abbott	Professor & Dean, Faculty of Health and Environmental Sciences	Auckland University of Technology
Professor Alex Blaszczynski	Professor of Clinical Psychology	University of Sydney
Professor Paul Delfabbro	Associate Professor of Psychology	University of Adelaide
Dr Charles Livingstone	Senior Lecturer, Health Science	Monash University
Professor Jan McMillen	Independent researcher and former Professor of School of Social Sciences	Australian National University
Ms Sharen Nisbet	Associate Lecturer in the School of Tourism and Hospitality Management	Centre for Gambling Education & Research, Southern Cross University
Dr Tony Schellinck	CEO of Focal Research	Focal Research and Dalhousie University
Arve Sjolstad	Communications Manager	Norsk Tipping
Dr Nigel Turner	Research Scientist	Centre for Addiction and Mental Health, Ontario
Dr Rachel Volberg	President of Gemini Research	Gemini Research
Dr Richard Wood	Chartered Psychologist & Director of Gamres	Gamres

### The British panel

- 2.4 The British panel was set up not only to share their expertise in these areas, but also to ensure that all information and ideas were always considered in the context of gaming machines in Great Britain, and to give this exercise firm grounding regarding the potential utility and challenges of implementing such a programme of research. The British panel members were:

**Table 2. British Panel members and their affiliation**

Professor Peter Collins	Professor of Public Policy	Centre for the Study of Gambling, University of Salford
Professor Mark Griffiths	Professor of Gambling Studies	International Gaming Research Unit, Nottingham Trent University
Professor Corinne May-Chahal	Professor of Applied Social Science	University of Lancaster
Dr Crawford Moodie	Researcher	Institute of Social Marketing, University of Stirling
Dr Adrian Parke	Senior Lecturer in Psychology	University of Lincoln
Professor Gerda Reith	Professor of Social Sciences	University of Glasgow

## Data collection

- 2.5 International panel views were collected at three stages via an asynchronous, online data collection tool in questionnaire format:
- Stage one focused primarily on collecting views on the relationship between certain structural and allied situational factors of gaming machines and their association with harm.
  - Stage two was primarily concerned with assessing the level of consensus among panellists regarding the associations of structural factors and harm, and how they relate to harm mitigation approaches.
  - Stage three was used to pull together themes from stages one and two, while seeking to refine and prioritise ideas for future research.
- 2.6 The British panel views were collated in one stage using the same online data collection tool. The questionnaires comprised both open-ended and closed questions and the full questionnaires have been included in Annexes B-E of this report.
- 2.7 In stages one and two, some panellists raised the issue that the impact of many structural characteristics depends on how they interact with other structural characteristics, since it was the overall configuration of design factors that ultimately contributes to behavioural outcomes. However, due to the preliminary nature of this consultation, structural interactions could not be considered, and therefore each factor was considered independently with the assumption that all other design factors were held constant.
- 2.8 This document does not purport to provide coverage of all aspects of the views provided by the two panels but seeks to provide an accurate representation through a summary of the key themes. Views were considered according to the depth of explanation and relevance to the topic under investigation. Although members of both expert panels have been identified, views and comments are not directly attributed to individual panel members to preserve anonymity.

### 3 International panel stage one: perspectives on risk factors and harm mitigation

#### Aims and approach

- 3.1 The aim of stage one was to gather the experts' views on the relationship between certain structural characteristics of gaming machines and their association with harm. The Commission chose to include a number of important factors which, through their initial assessment of the evidence<sup>4</sup>, appear to be where risks might be mitigated through the regulatory framework, social responsibility measures or public education. In addition to responding directly to these factors, the Commission encouraged panellists to include other factors if they deemed these to be important. The full questionnaire for stage one is included in Annex B.
- 3.2 It is important to note that this information is about item generation and not achieving a level of consensus. Hence, this section details only views which were originated by a panellist. A panellist may have supported a particular view put forward by other panellists had they had the opportunity to consider this at the time of responding. Levels of consensus among the panel were considered in more detail in stage two.

#### Panel views

- 3.3 Eight factors were considered: stake size; size of prize; game speed; continuity of game and access to additional funds; percentage return to player (RTP); distribution of wins; location and geographical proximity; and whether outcome determination is random or compensated. There were a wide range of views expressed by panellists regarding how each structural and situational characteristic may be related to gambling related harm. Each is discussed in turn below. Panel views are summarised in Table 3.

#### Stake size

- 3.4 Stake refers to the cost of each game, and can be either fixed or variable. There was broad support among the panel that high-stake machines would be more appealing to problem gamblers, or that higher stake machines would be more likely to be associated with harm. However, explanations for why this may be so were brief and to some extent inconsistent. Furthermore, some panellists suggested that lower stakes could widen participation or prolong gambling sessions as a result of the lower costs involved.

#### Size of prize

- 3.5 In the context of gaming machines, a 'prize' is a win that may result from each game and vary in size up to the highest win which is also referred to as the 'jackpot'. In considering the size of prizes, the panel suggested that both small and large wins were important in determining or facilitating harm. Lower prizes were argued to offer frequent and consistent rewards that keep players entertained, but larger prizes were suggested to have a more significant impact through facilitating chasing, offering a 'walk-away win', or delivering an early-career 'big win' which has been linked to experiencing problems later in their gambling career.

#### Game speed

- 3.6 Game speed refers to the duration of the cycle of the game. This is essentially the time taken from the start of the game (usually by hitting the start/spin button), until the result of the game is revealed (eg the reels stopping spinning, the bonus game is complete or the virtual roulette wheel has come to a stop). The panel generally suggested that there is limited empirical evidence clarifying the role of game speed, and that more research is required. It was also suggested that enjoyment for all players would be reduced if the speed of the games were significantly decreased in an attempt to mitigate harm.

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<sup>4</sup> The source was the 'Impact of high-stake, high-prize gaming machines on problem gambling', a desk exercise by the Gambling Commission available at: [www.gamblingcommission.gov.uk](http://www.gamblingcommission.gov.uk)

### **Continuity and access to additional funds**

- 3.7 Continuity of a game is the extent to which players may gamble continuously without having a break. For example, a weekly lottery has a low level of continuity as there is a significant time period between each draw. In contrast, when playing a gaming machine with a game speed of around 3-4 seconds, money can be re-staked immediately and repeatedly. Venue restrictions will also impact this characteristic (eg opening hours). Access to funds within a venue was also considered in this category. The most common suggestion from the panel was that restricting access to additional funds would be an effective harm mitigation technique. There was a variety of other subtly different views (see Table 3) but again some of the panel cautioned that there was a limited evidence base from which to consider these issues.

### **Return to player**

- 3.8 Return to player (RTP) refers to the percentage of total money staked which is redistributed to players as prizes over the long term. Fewer ideas were generated for this characteristic, however some of the panellists emphasised that this needed to be considered in relation to volatility<sup>5</sup> (ie the predictability of prizes given in the game) while others pointed to the lack of empirical evidence.

### **Distribution of wins**

- 3.9 The distribution of wins refers to the manner in which the RTP is delivered to players. For example, the prize money could be distributed through awarding a large number of low value prizes or smaller number of high value prizes or any combination of the two. Obviously a trade-off will exist between the size of prizes and the frequency with which they can be awarded. It is the distribution of the wins that ultimately determines the volatility of a machine, with fewer large prizes conferring a high level of volatility. There were conflicting and multifaceted views regarding which distribution would be most likely to be associated with experiencing harm (see Table 3). As with other characteristics the panel again identified a lack of empirical evidence regarding the potential link with problem gambling.

### **Location and proximity**

- 3.10 Location and proximity were also considered by the panel, and this topic generated the most extensive range of opinions expressed by the panel members. Convenient and nearby locations, being situated in economically deprived areas, and having 'many small venues as opposed to a few large venues' were regularly suggested to be strongly associated with gambling-related harm. There were several other propositions made by the panel (see Table 3) touching on issues related to site (eg availability of alcohol and of gaming machines) and the broader environment and regulatory framework (eg 'community resilience'<sup>6</sup>, caps on gaming machine numbers).

### **Availability of random and compensated machines**

- 3.11 Finally, the panel considered the potential implications of having both random and compensated machines in one venue. The outcome of any game offered by a 'compensated' machine may, to some extent, be influenced by the outcomes of previous plays. A compensated gaming machine monitors the %RTP and may alter the chance of a winning outcome in order to maintain the ratio within pre-determined limits set by the game designer. Outcomes of purely random gaming machines must not be affected by previous outcomes. The operation of compensated gaming machine technology is limited in other jurisdictions and this was reflected in the brevity and uncertainty of the panel responses. However, most panel members who responded did suggest that the availability of both types of technology may lead to confusion among players which may facilitate the development of cognitive biases during play.

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<sup>5</sup> Volatility of a gaming machine refers to how a gaming machine's pay-table is set up to meet its expected return to player percentage, for example whether it is designed to pay more large prizes, with correspondingly fewer smaller prizes (more volatile), or a greater spread of prizes with correspondingly fewer large prizes (less volatile).

<sup>6</sup> Although the originating author did not provide an explanation for this term it is taken to mean the extent to which a local area manages the potential risks and problems from the presence and availability of gambling (eg a community demonstrating a high level of resilience would experience a low level of problems).

3.12 Other additional factors were suggested to be associated with the facilitation or reduction of harm by the panel:

- volatility
- minimum entry price
- number of betting lines
- availability of scatter features and bonuses
- note acceptors
- autoplay
- near wins
- illusion of control elements
- marketing and player reward systems
- patterns of ownership (eg using player data for marketing and increased understanding)
- Responsible Gaming Features (RGFs)
- regulatory environment (impartial; well-resourced)
- availability of alcohol and tobacco.

**Table 3. Summary of panel member views on structural factors and association with harm**

Structural Factor	Panel Views	Originating Panellists	Relevant References (Suggested by Panel)
<b>Stake Size</b>	Higher stakes more likely to appeal to problem gamblers	✓ ✓ ✓ ✓ ✓	Productivity Commission (1999);
	Higher stakes increase cost per hour (increasing potential for financial damage)	✓ ✓ ✓ ✓	Blaszczynski et al., (2001);
	The evidence on the relationship between stake size and harm is inconsistent/limited	✓ ✓ ✓	Weatherly & Brandt (2004);
	Higher stakes can facilitate chasing	✓ ✓ ✓	Delfabbro, Falzon & Ingram (2005);
	Low stakes increase participation rate and render gaming machines more accessible	✓ ✓	Weatherly McDougall & Gillis (2006);
	Number of betting lines can indirectly increase stake (eg maximin strategy) so players avoid near misses	✓ ✓	Lesieur, (1977); Dickerson, Hinchy,
	Higher stakes may increase risk since players may not get 'enough time' and may have to spend more to get the desired effect	✓ ✓	Fabre, (1987); Breen & Zuckerman,
	Low stakes potentially frustrating for tourists and higher income groups	✓	(1999) IPART (2004); Creigh-Tyte &
	There is limited empirical evidence - more research is needed	✓	Lepper (2004); Sharpe et al, (2005);
	Option to vary stake size may facilitate chasing	✓	Tse, Brown & Adams (2004);
Maximum stake size may not be reached very often	✓	McMillen et al, (2004); McMillen &	
<b>Size of Prize</b>	Lower prizes give consistent and frequent reinforcement	✓ ✓ ✓ ✓	Dickerson et al, (1992); Dickerson,
	There is limited empirical evidence - more research is needed	✓ ✓ ✓	(1993); Delfabbro and Winefield,
	Higher prizes are more rewarding	✓ ✓	(1999); McDonnell-Phillips Pty
	Variation in size of prizes important in attracting play	✓ ✓	(2006); Kearney, (2002); Productivity
	Higher prizes justify chasing	✓ ✓	Commission (1999); Blaszczynski et
	Higher prizes may be important for acquisition or initiating risk	✓ ✓	al., (2001); McMillen & Pitt (2005);
	Higher prizes more likely to have negative impact early in a playing career	✓ ✓	Tse, Brown & Adams (2004);
	Australian respondents in a survey stated that participation increases as jackpot reaches its upper limit	✓	McMillen et al., (2004).
	Little evidence linking choice of venue with linked jackpots (ie larger prizes)	✓	
	Expenditure increases in venues when larger jackpot machines are introduced	✓	
	The perceived value of low-stake/high-prize machines may be what attracts players	✓	
	Higher prizes may increase session length	✓	
	Depends on game (eg may be more important for lottery than gaming machines)	✓	
	Depends on frequency and distribution of wins	✓	
	Lower prizes are more easily re-staked (easier to continue spending)	✓	
	Impact of higher prizes will be less problematic if paid by cheque rather than cash	✓	

Structural Factor	Panel Views	Originating Panellists	Relevant References (Suggested by Panel)
	Small wins more important than larger wins for prolonged play	✓	
	Transparency and education may help reduce risk and harm alongside high prizes	✓	
	There is limited empirical evidence - more research is needed	✓ ✓ ✓ ✓	Blaszczynski et al., (2001);
	Player enjoyment is reduced by slower play speed	✓ ✓ ✓	Delfabbro, Falzon and Ingram (2005); Ladouceur and Sevigny (2006); Jacobs, (1988); Walker, (1992); Shaffer, (1996); Diskin & Hodgins, (1999) Wood & Griffiths, (2007); McMillen and Pitt (2005).
	No perceived harm minimisation effect has been recorded as result of reduced game speed	✓ ✓ ✓	
	Slowing reel spin speed may have the unintended consequence of player spending more time rather than spending less money	✓ ✓	
	Faster play is more exciting	✓ ✓	
<b>Game Speed</b>	Player can lose money faster	✓ ✓	
	Problem gamblers will play faster in some ways (eg override musical jingle during a win to increase play speed)	✓	
	Problem gamblers do not play faster but play longer, stake more and lose more	✓	
	Positive correlation between speed of play and association with harm	✓	
	Does contribute to harm but alteration not effective as a harm minimisation measure (eg slower games are unattractive)	✓	
	Reducing speed of play will have a negative impact of industry revenue	✓	
<b>Continuity of play and Access to Additional Funds</b>	Restricting access to additional funds likely to be effective as a harm reduction technique	✓ ✓ ✓ ✓	Jacobs, (1988); Walker, (1992); Shaffer, (1996); Diskin & Hodgins, (1999); Wood & Griffiths, (2007); Livingstone & Woolley (2008), Livingstone & Woolley (2007), Livingstone Woolley & Borrell (2006); Brodie, Honeyfield and Whitehead, (2003); Svetieva & Walker (2006).
	There is limited empirical evidence - more research is needed	✓ ✓ ✓	
	Offers little or no time for reflection on best course of action or consequences of play	✓ ✓	
	Problem gamblers are more likely to use ATMs	✓ ✓	
	Minimum distances for ATMs within a venue unlikely to be effective as a harm minimisation technique	✓ ✓	
	For breaks to be effective they must be enforced rather than optional or coincidental	✓	
	Positive correlation between continuous games and harm (eg slots and table games versus lottery)	✓	
	Found insufficient evidence to warrant removal of ATMs but suggested lower withdrawal limits and minimum distances from machines	✓	
	Features and bonus rounds should also be considered as these may cause natural breaks	✓	
	Continuity facilitates escape/dissociation	✓	
	Opening hours and restricted access may be effective way to restrict the continuous nature of games (eg shutdowns and 'cooling off' periods)	✓	
	Autoplay and 'same stake'/'bet again' buttons will increase continuous nature of game	✓	

Structural Factor	Panel Views	Originating Panellists	Relevant References (Suggested by Panel)
	Forced breaks may create unintended consequences (eg erratic play and desensitisation)	✓	
<b>Return to Player (RTP)</b>	There is limited empirical evidence - more research is needed	✓ ✓ ✓ ✓	Weatherly & Brandt, (2004); Livingstone & Woolley, (2008).
	Volatility and prize distribution complicates this factor	✓ ✓ ✓	
	Higher RTP allows longer playing time per pound spent	✓	
	Low RTP means lower, less frequent prizes and therefore a less entertaining game	✓	
	Positive correlation between RTP and harm (eg slots and casino games versus some lottery products)	✓	
	Getting customers to understand chances of winning is more important issue	✓	
<b>Distribution of Wins</b>	Higher volatility may increase problems (eg through arousal or chasing)	✓ ✓ ✓ ✓	Weatherly & Brandt, (2004); Lewis & Duncan (1956, 1957, 1958); Livingstone & Woolley (2008), Dickerson et al., (1992); Griffiths, (1999); Ladouceur & Sevigny, (2005, 2006);
	Lower volatility may increase problems through steady frequent rewards	✓ ✓ ✓	
	There is limited empirical evidence - more research is needed	✓ ✓ ✓	
	Depends on the market - casual player preferring more frequent small wins and heavy gamblers preferring less frequent, larger wins	✓ ✓	
	Frequent smaller wins more important for acquisition and infrequent larger wins more important for maintenance	✓ ✓	
	In the absence of evidence should adopt principle of informed choice to educate players	✓	
	A trade-off between size of prize and win frequency tends to exist	✓	
	Harm associated with two very different games in terms of distribution of wins suggests that there is not one definitive answer (casino and slots)	✓	
<b>Location and Proximity</b>	Near wins and 'win events' (where outcome is actually a net loss) may lead player to overestimate wins and underestimate losses	✓	
	Positive correlation exists between proximity/convenience of location and harm	✓ ✓ ✓ ✓ ✓	Productivity Commission (1999); Kwan, Murray, O' Kelly and Tiefelsdorf, (2003); Abbott (2007), Abbott and Volberg (2006); Delfabbro and LeCouteur, (2003); Marshall, (2005); Livingstone, (2001), South Australian Centre for Economic Studies, (2005), Marshall & Baker (2002), Marshall (2004); Productivity Commission, (1999); KPMG, (2000); McMillen et al. (2000); Livingstone, Woolley & Borrell (2006); Queensland Office of
	Socio-economic make-up is a key consideration for location with deprived areas experiencing the most harm	✓ ✓ ✓ ✓	
	Fewer large venues would be less harmful than more smaller venues	✓ ✓ ✓ ✓	
	Proximity is only one aspect of its accessibility (other examples include configuration of a gaming venue; social context, atmosphere, broader environment; opening hours; conditions of entry etc)	✓ ✓ ✓ ✓	
	Positive correlation exists between machine density and harm	✓ ✓ ✓	
	Locating machines in secluded or private areas within the venue may increase risk of harm	✓ ✓ ✓	
	A wide range of situational factors must be researched to gain better understanding of the role of the environment	✓ ✓ ✓	

Structural Factor	Panel Views	Originating Panellists	Relevant References (Suggested by Panel)
<p>Based on current evidence, introducing caps or reducing machine numbers has not been met with a significant reduction in problem gambling</p> <p>There is limited empirical evidence - more research is needed</p> <p>Permit more machines in larger destinations and remove machines from smaller venues located within communities</p> <p>A diffuse spread of gambling venues across a particular area is a cause for concern</p> <p>Machines located in traditionally 'non-gambling' venues (eg convenience stores and petrol stations) is a cause for concern</p> <p>Locations offering alcohol may facilitate further harm</p> <p>Some communities are more resilient than others despite similar numbers of gaming machines and/or venues</p> <p>The greater the rate of participation, the greater the rate of problem gambling</p> <p>The location of gaming machines in family entertainment venues normalises gambling as a socially acceptable behaviour</p> <p>Exposed gaming areas may help staff spot problems</p>	<p>✓ ✓ ✓</p> <p>✓ ✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>	<p>Gaming (2005); McMillen &amp; Doran (2006); Delfabbro (2008); Doran, Marshall &amp; McMillen (2007); NZ Ministry of Health (2008)</p>	
<p><b>Mixed Availability of Random and Compensated Machines</b></p>	<p>Mix may cause confusion and potentially lead to increased chasing on random games</p> <p>Compensation may lead to chasing</p> <p>Has no relevance to player behaviour</p> <p>Antisocial behaviour linked to compensating machines when payouts are considered to be overdue</p>	<p>✓ ✓ ✓ ✓ ✓</p> <p>✓</p> <p>✓</p> <p>✓</p>	<p>Parke &amp; Griffiths (2006)</p>

## 4 International panel stage two: consensus on risk factors and harm mitigation

### Aims and approach

- 4.1 The aim of stage two was to build on the findings of the previous stage by assessing the level of consensus among panellists regarding the associations of structural factors and harm and how they relate to harm mitigation approaches. The panel were also asked to present views on whether the harm mitigation approaches under consideration would pose any disproportionate adverse consequences to all individuals, the playing experience or the gambling industry more generally. For each ranking task<sup>7</sup>, panellists were asked to give further explanation or commentary where appropriate. The full questionnaire for stage two is included in Annex C.
- 4.2 For the ranking tasks, the panel were presented with propositions which were informed by stage one of the panel exercise. Areas from the first questionnaire where there was either a high degree of consensus, and/or where the impact and appropriate regulatory approach was already clear, were excluded from this second stage of enquiry.
- 4.3 Despite the structured nature of stage two, experts were given two options for shaping the tasks:
- i) Not to assign a rank to any proposition that they felt was irrelevant<sup>8</sup>.
  - ii) To add a new proposition that they felt should be ranked in place of a less relevant pre-identified proposition.
- 4.4 The low rate at which panellists added new propositions tended to suggest that stage one had been successful in generating propositions which were reasonably comprehensive, relevant and accurate.

### Panel views

#### Size of stake

#### Association with harm

- 4.5 There was only moderate consensus on the importance of various factors relating to stake size in creating or facilitating harm – see Table 4 for breakdown of the ranked responses. In particular, there was general agreement that the impact of higher stakes on increasing the financial costs per hour of playing a gaming machine was an important determinant of harm. However, there was less agreement regarding the importance of other factors. For example, although the link between higher stakes and chasing was considered the least important in determining harm, five of the eleven panellists rated this factor in the top three.

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<sup>7</sup> Panel members were asked to rank propositions according to which were most likely to apply to the statement under consideration, with those being ranked first as most likely to apply and those being ranked last as least likely to apply. Panel members were asked not to give a rank to any proposition which they considered irrelevant. The tables that follow provide the following information: a) the number of panel members and frequency count of ranks assigned to each proposition; b) the rating average which was calculated as follows: reverse scoring ranks (eg rank 1 = 6 points; rank 6 = 1 point), then adding together the total score for all panel members ranking that proposition, and then dividing the total score by the number of those responding. Hence, the higher the rating average, the greater the level of endorsement for a proposition.

<sup>8</sup> However, it was clear that some of panel did in fact assign a rank to propositions that they disagreed with and therefore, lower ranked propositions should be interpreted with particular caution, since for some lower ranked propositions it is difficult to determine if these are considered relevant but less important, or if panellists completely disagreed with the notion but assigned a low rank anyway.

**Table 4: Size of stake and association with harm<sup>9</sup>**

Participant Instructions - Please rank the following propositions according to which are more likely to create or facilitate harm for 'At-risk and Vulnerable Gamblers'. These propositions have been informed by experts' submissions in Round One of this consultation.								
Answer Options	1st	2nd	3rd	4th	5th	6th	Rating Average	Response Count
Lower stakes are likely to encourage a greater number of players to participate.	2	2	2	0	3	1	3.70	10
Lower stakes on gaming machines are likely to encourage players to play for longer periods of time.	0	2	2	4	2	0	3.40	10
Higher stakes are likely to increase the financial cost per hour to play a gaming machine.	4	2	3	1	0	0	4.90	10
Higher stakes are likely to increase chasing.	1	1	3	0	2	3	3.00	10
Having numerous betting lines per spin are likely to encourage players to play all lines to avoid perceiving 'near misses.'	2	2	0	4	1	1	3.70	10

4.6 While some panellists thought that chasing occurs among some players regardless of stake size, others disagreed stating that chasing is facilitated by a larger spread of stake sizes. In other words, the larger the range of bets, the more options there are to increase stakes in order to recoup past losses. This may be especially important when time constraints are placed on gambling. It was also made clear by panellists that the role of stake is complex. For example, even though higher stake machines were considered among some panellists as having greater potential to generate risk and harm, lower stakes were considered by some to pose a different risk, in that some players may spend more time as opposed to more money.

**Prevention and minimisation of harm**

4.7 Panellists were more in agreement on how to mitigate harm specific to stake size as indicated in Table 5. An upper limit on stake size and pre-commitment on expenditure using tracking technology were considered to be most effective, with ten out of the eleven panellists ranking both in the top three.

**Table 5: Size of stake and harm mitigation**

Please rank the following options for preventing and minimising harm (specific to stake size) according to perceived effectiveness in harm reduction among 'At-risk and Vulnerable Gamblers' in Great Britain:								
Answer Options	1st	2nd	3rd	4th	5th	6th	Rating Average	Response Count
An upper limit on stake size	4	3	3	0	1	0	4.82	11
A lower limit on stake size	0	0	1	1	5	3	2.00	10
Ban on variation in stake size	0	0	1	4	3	1	2.56	9
Limit on the number of betting lines	1	2	4	3	1	0	3.91	11
Limit expenditure using smart card technology	6	3	1	0	0	1	5.09	11
Other (please include in your ranking, other propositions which have not been included)	0	2	0	1	0	0	4.33	3

4.8 There was also significant support for the view that limiting the number of betting lines will indirectly minimise harm associated with stake size, since, consistent with views expressed above, some players may feel compelled to play all lines to ensure they avoid missing out on winning combinations on play lines which were not selected. Some panellists suggest that limiting the number of play lines will restrict entrapment<sup>10</sup> for some players who feel that they should play all lines to avoid losing out. 'Other' factors suggested by panellists included

<sup>9</sup> The format of the tables was designed to demonstrate the number of panel members for each rank assigned for each of the answer options. For example, in *Table 4: Size of Stake and Association with Harm*, in specifically for answer option *Higher stakes are likely to increase the financial cost per hour to play a gaming machine* there were four panel members ranking it first, two ranking it second and three ranking it third, according to which are more likely to create or facilitate harm. A rating average and response count is also given for each answer option. Respondents were asked not to assign any rank to options which they consider unimportant and hence, response count may be less than 11.

<sup>10</sup> Entrapment refers to when a player gambles more than planned because of a fear of missed opportunities. More specifically, on a gaming machine with multiple play lines, a player may feel obliged to play all play lines in order to avoid missing a win that may be presented during their play session. For example, on a 20-line gaming machine, if players only select win lines 1-5, but winning combinations are presented on lines 6-20, they may feel frustration and regret for not selecting all lines and missing winning opportunities. This is analogous to continuing to play the lottery out of fear that one's regular lottery numbers eventually may 'come up'.

introducing ‘cooling-off’ periods to restrict the continuity of the game and using tracking technology to enforce self-exclusion. However, these do not directly relate to stake size.

### Disproportionate adverse effects

- 4.9 Panellists shared some concern that there are significant challenges in persuading players to initiate card-use and other new forms of technology. Therefore, while the impact on player experience is thus far inconclusive, there will be initial challenges that may require significant investments of time and money. It was also suggested that the exact impact will depend on the specificity and the level of the restriction. For example, reducing betting lines from 45 to 20 per spin may not reduce player enjoyment, but perhaps reducing these down to only 1 line per spin may impinge on the player experience.

### Size of prize

#### Association with harm

- 4.10 Opinions were divided regarding the importance of the ways in which size of prize may play a role in creating and facilitating harm – see Table 6. There was a dominant view that high rates of reinforcement afforded by awarding smaller prizes were unlikely to play a significant role in creating or facilitating harm. This was explained by suggesting that problem gamblers do not necessarily see small prizes as either reinforcing, or indeed, do not actually see them as a win at all. In fact, it was argued that time taken for notification of small prizes could actually be frustrating for the player.

**Table 6. Size of prize and association with harm**

Please rank the following propositions according to which are more likely to have a negative impact on levels of gambling related harm for ‘At-risk and Vulnerable Gamblers’. These propositions have been informed by experts’ submissions in Round One of this consultation									
Answer Options	1st	2nd	3rd	4th	5th	6th	7th	Rating Average	Response Count
Higher prizes are likely to encourage chasing.	0	3	2	4	1	0	0	4.70	10
Lower prizes are likely to increase harm because such gaming machines offer higher rates of positive reinforcement.	0	1	0	0	1	7	1	2.40	10
Problem gamblers will prefer to play gaming machines with higher, more infrequent prizes rather than gaming machines with lower more frequent prizes.	2	0	3	1	3	1	0	4.40	10
Gaming machines with higher prizes are likely to attract individuals to start playing compared to gaming machines with lower prizes.	2	2	2	5	0	0	0	5.09	11
Gaming machines with higher prizes are likely to encourage gamblers to play for longer compared to gaming machines with lower prizes.	3	3	2	0	2	0	1	5.09	11
A big win afforded by gaming machines offering higher prizes are likely to lead a non-problem gambler to play more heavily and more frequently.	3	2	1	0	2	1	1	4.70	10

- 4.11 Panellists also pointed out further complexity in understanding the role of win size by suggesting that the exact impact will depend to some extent on the stage of their ‘gambling career’, given that there has been significant evidence which suggests that a big win early in one’s ‘career’ will initiate some levels of risk and/or harm.

#### Prevention and minimisation of harm

- 4.12 Views tended to converge on the most effective methods to mitigate harm in relation to prizes – see Table 7. Panellists suggested that having an upper limit on size of wins, having large wins paid out by cheque rather than cash and communicating the odds of winning prizes were the most effective ways to intervene. Use of pop-up messages also received some support, however not all panellists agreed. One suggested that most gamblers will not understand the exact implications of pop-up messages and gamblers will interpret such messages differently in line with their own biases and conceptualisations of how gaming machines actually work. In the ‘other’ category, it was argued that tokens should not be used as they will only encourage continued play.

**Table 7: Size of prize and harm mitigation**

Please rank the following options for preventing and minimising harm (specific to size of prizes) according to perceived effectiveness in harm reduction among 'At-risk and Vulnerable Gamblers' in Great Britain:								
Answer Options	1st	2nd	3rd	4th	5th	6th	Rating Average	Response Count
An upper limit on size of prizes	7	0	2	1	0	1	4.91	11
A lower limit on size of prizes (which may reduce frequency of wins)	0	0	0	1	7	1	2.00	9
Large wins not paid out in cash to encourage time to consider reinvestment	2	7	1	0	1	0	4.82	11
Pop-up message checking if player wishes to cash out	0	2	4	3	1	0	3.70	10
Education strategies and signage regarding the chances of winning prizes of various sizes	1	2	3	4	0	0	4.00	10
Other (please include in your ranking, other propositions which have not been included)	1	0	0	0	0	0	6.00	1

**Disproportionate adverse effects**

- 4.13 There was some suggestion that players will find a way to circumvent such restrictions. For example, if large cash-outs are paid by cheque, the players may continue to play until the credits fall below the threshold in order to secure a cash payout instead. This implies that such an approach might have the unintended consequence of encouraging additional play. There was continued support from panellists that pop-up messages may be frustrating to players which may have a negative impact on the commercial appeal of the product.

**Speed of play****Association with harm**

- 4.14 As demonstrated in Table 8, panellists broadly agreed that fast games are potentially problematic because they permit players to lose money at a faster pace and permit players less time to consider the implications of their gambling. One panellist challenged the view that slower games offer more time for reflection. It was suggested that 'moments of truth' were the real opportunities for reflection – such moments included for example, having to decide whether or not to leave with friends, whether to get more cash out of the ATM, and whether to walk away after a big win. Faster games were argued to appeal to at-risk or problem players because they are more likely to be interested in the result of the gamble rather than the experience. Faster games give such players more immediate information regarding whether their chasing has been successful. Overall, there was only limited support for the claim that slower play would have the unintended consequence of playing for longer periods of time rather than losing less money.

**Table 8: Speed of play and association with harm**

Please rank the following propositions according to which are more likely to have a negative impact on levels of gambling related harm for 'At-risk and Vulnerable Gamblers'. These propositions have been informed by experts' submissions in Round One of this consultation.								
Answer Options	1st	2nd	3rd	4th	5th	Rating Average	Response Count	
Faster gaming machine play is likely to permit players to lose money at a faster pace.	7	3	1	0	0	4.55	11	
Faster gaming machine play is likely to allow the gambler less time to consider the implications of their actions.	2	5	2	2	0	3.64	11	
Faster gaming machine play is likely to be more exciting than slower gaming machine play.	1	2	6	1	1	3.09	11	
Slowing reel spin speed may have the unintended consequence of spending more time playing rather than spending less money.	1	1	1	5	1	2.56	9	

**Prevention and minimisation of harm**

- 4.15 Panellist views consistently supported all mechanisms for reducing game speed, with the vast majority ranking a restriction on 'autoplay' as the most important protective measure – see Table 9. Such support stemmed from experts claiming that there was no real experiential benefit from using autoplay but that it only serves to encourage players to engage in risky or

harmful play, such as playing more than one machine at a time, and distances players from their spending.

**Table 9: Speed of play and harm mitigation**

Please rank the following options for preventing and minimising harm (specific to speed of play) according to perceived effectiveness in harm reduction among 'At-risk and Vulnerable Gaming Machine Gamblers' in Great Britain (please note that continuity and breaks in play is considered in the next section):						
Answer Options	1st	2nd	3rd	4th	Rating Average	Response Count
Reduce reel spin speed	1	7	0	2	2.70	10
Banning 'Autoplay'	8	0	0	1	3.67	9
Banning other options for players to speed up play (eg override time consuming sound effects; stop buttons)	2	1	7	0	2.50	10

### Disproportionate adverse effects

- 4.16 There was general support for the notion that reducing speed of play would make a game less appealing to all players. It was also suggested that restricting stop buttons and override options for sound effects may also have a negative impact on player experience.

### Continuity of play and access to additional funds

#### Association with harm

- 4.17 While there was generally limited consensus among panellists on this issue, it may in part be a consequence of the fact that some panellists were inclined to rate propositions one to four as equally important - see Table 10. Nevertheless, there was significant agreement that access to additional funds plays an important role in determining harm as result of facilitating unplanned spending. There was also considerable support for the proposition that the facilitation of dissociative states<sup>11</sup> through continuous play would also elicit harm. However, as with speed of play, there was limited support for the notion that there would be harmful unintended consequences (as a result of initiating breaks in play).

**Table 10: Continuity of play, access to additional funds and association with harm**

Please rank the following propositions according to which are more likely to have a negative impact on levels of gambling related harm for 'At-risk and Vulnerable Gamblers'. These propositions have been informed by experts' submissions in Round One of this consultation.								
Answer Options	1st	2nd	3rd	4th	5th	6th	Rating Average	Response Count
Continuous gaming machine play is likely to offer less time for reflection on consequences of play.	2	3	1	4	1	0	4.09	11
Continuous gaming machine play is likely to facilitate dissociative states.	2	3	3	1	0	0	4.67	9
Onsite access to additional funds is likely to increase unplanned spending.	4	2	3	0	1	0	4.80	10
Extended opening hours are likely to increase gambling related harm	2	1	2	5	1	0	3.82	11
'Cooling off' periods may have the unintended consequence of people playing faster in anticipation of the break	1	1	2	0	4	2	2.90	10

### Prevention and minimisation of harm

- 4.18 Bans on ATMs and note acceptors were the most widely supported protective measure among panellists on this issue – see Table 11. However, some were less convinced that removing note acceptors would be effective and reported that they had evidence that, for some players, it can speed up the gambling process and put the player at greater risk (although a supporting explanation was not given). Most panellists supported the majority of options specified below although stipulated that many options (ie including mandatory cash-out features or placing limits on note acceptors) would only have a minimal protective effect.

<sup>11</sup> A dissociative state denotes a reduced level of awareness where cognitive functioning (ie thinking feeling, remembering, planning) is temporarily disrupted and as a consequence, a player may give less consideration to current behaviour and the consequences of that behaviour.

'Other' factors suggested by panellists included an automatic cash-out upon winning the jackpot and pop-up messages warning of time spent playing.

**Table 11: Continuity of play, access to additional funds and harm mitigation**

Please rank the following options for preventing and minimising harm (specific to continuous play and/or access to additional funds) according to perceived effectiveness in harm reduction among 'At-risk and Vulnerable Gamblers' in Great Britain:											
Answer Options	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	Rating Average	Response Count
Enforced 'cooling off' periods.	2	2	1	1	0	1	1	1	0	6.22	9
Banning onsite access to additional funds (eg ATMs; electronic funds transfer).	2	5	1	3	0	0	0	0	0	7.55	11
Imposing limits on the amount of additional funds players can access onsite.	1	0	2	1	3	2	1	0	0	5.50	10
Locating sources of additional funds (ATMs or electronic fund transfers) away from the gaming machine area	0	0	1	1	4	0	1	3	0	4.20	10
Restricting opening hours.	2	2	1	0	1	2	2	1	0	5.64	11
Include mandatory cash-out features	0	0	1	1	1	5	1	1	0	4.30	10
Banning note acceptors	4	1	1	1	1	0	2	1	0	6.36	11
Impose limits on size of notes accepted	0	0	3	2	0	0	2	2	1	4.40	10
Other (please include in your ranking, other propositions which have not been included)	0	1	0	0	0	0	0	0	2	3.33	3

### 'Cooling-off' periods

4.19 Panellists were asked about the appropriate duration of a cooling-off period and those supporting such an implementation had different views on the proposed length of the break. Suggestions included 30 seconds; 1-3 minutes; 5 minutes; 15 minutes or 30 minutes. A minority of the respondents thought that a cooling-off period may not work based on either a lack of evidence, the fact that gamblers may simply find another gambling activity to participate in during the break or the possibility of unintended consequences such as cramming their gambling into a shorter period of time. It was also argued that cooling-off periods will probably need to be linked to a central server and player tracking system in order to prevent players just moving to another machine or venue when a cooling-off period becomes enforced.

### Disproportionate adverse effects

4.20 Panellists generally agreed that players would be inconvenienced by limited access to additional funds, shutdowns, reduced opening hours and 'cooling-off' periods. The more difficult question seems to be whether such impacts would be disproportionate to the potential benefits in terms of harm minimisation. These are clear areas for further empirical investigation. As previously discussed, some experts wondered if faster play may be an unintended consequence from cooling-off periods and mandatory cash-outs or whether players would simply bring more cash with them to circumvent the need to withdraw additional funds.

### Percentage return to player (RTP)

#### Association with harm

4.21 Many of the panellists reported a high degree of uncertainty when responding to this item. This was as a consequence of either a limited evidence base or just limited understanding of the actual concept and how it applied to gaming machines. Furthermore, while some agreed with all statements, others reported that all statements had little role in determining gambling-related harm. Additionally, while some believed that regular gamblers could accurately get a sense of RTP, other panellists argued that players would not be able to assess this information. Therefore, despite the summary information presented in Table 12, the highest degree of uncertainty and disagreement existed on this item relative to the other factors under consideration. However, one panellist suggested that there was evidence

demonstrating that when RTP is reduced, players will still spend the same amount of money, but just play for shorter periods of time.

**Table 12: Percentage return to player and association with harm**

Please rank the following propositions according to which are more likely to have a negative impact on levels of gambling related harm for 'At-risk and Vulnerable Gamblers'. These propositions have been informed by experts' submissions in Round One of this consultation.							
Answer Options	1st	2nd	3rd	4th	5th	Rating Average	Response Count
Gaming machine players are unable to accurately determine percentage return to player based on game play.	6	0	1	3	0	3.90	10
A gaming machine with a higher percentage return to player is likely to offer a higher rate of reinforcement in the form of wins.	2	4	2	0	0	4.00	8
A gaming machine with a higher percentage of return to player is likely to be more attractive to those players trying to chase losses.	1	4	2	2	0	3.44	9
A gaming machine offering a lower percentage return to player is likely to require players to spend more money per hour of play.	1	2	2	3	1	2.89	9

### Prevention and minimisation of harm

4.22 Again there was limited consensus on this issue as indicated in Table 13. However, some of the panellists did suggest that imposing a minimum limit on RTP was a basic principle of consumer protection and should be encouraged.

**Table 13: Percentage return to player and harm mitigation**

Please rank the following options for preventing and minimising harm (specific to percentage return to player) according to perceived effectiveness in harm reduction among 'At-risk and Vulnerable Gamblers' in Great Britain:							
Answer Options	1st	2nd	3rd	4th	5th	Rating Average	Response Count
Impose a maximum limit on percentage return to player	2	1	2	3	1	3.00	9
Impose a minimum limit on percentage return to player	4	1	2	2	1	3.50	10
Require that the percentage return to player is clearly presented on each gaming machine	2	4	3	1	0	3.70	10
Require that a pop-up option clearly and comprehensively explains percentage return to player and challenges common misconceptions	3	4	3	1	0	3.82	11

### Distribution of prizes and volatility

#### Association with harm

4.23 Despite general support for the role of arousal from higher volatility being important, the level of certainty and consensus among panellists for most other items was low (see Table 14). However, it was suggested by one panellist that the impact of volatility and the distribution of prizes is a complex one and that preferences and impacts depend on market segment. They argued that industry sources had suggested for example, that younger players preferred more volatile machines and the older players preferred less volatile configurations sometimes referred to as 'drip-feeders'. The 'other' factor raised was that a higher volatility means it is harder for the player to see the 'bigger picture', ie that they are losing.

**Table 14: Distribution of prizes, volatility and association with harm**

Please rank the propositions according to which are more likely to have a negative impact on levels of gambling related harm for 'At-risk and Vulnerable Gamblers'. These propositions have been informed by experts' submissions in Round One of this consultation.									
Answer Options	1st	2nd	3rd	4th	5th	6th	7th	Rating Average	Response Count
Higher volatility (a payout distribution involving random, more infrequent but higher wins) is likely to increase arousal;	6	1	0	1	0	1	1	5.50	10
Higher volatility (a payout distribution involving random, more infrequent but higher wins) is likely to increase chasing	1	3	2	2	1	1	0	4.80	10
Higher volatility (a payout distribution involving random, more infrequent but higher wins) is likely to increase perseverance during a losing sequence	0	3	3	1	2	1	0	4.50	10
Near wins and 'win events' (including very small wins such those of lesser value than the original stake) are likely to give the illusion of a higher frequency of prizes	1	1	2	3	0	1	0	4.63	8
Lower volatility (a payout distribution involving random [or compensated], more frequent but lower wins) is likely to increase the level of enjoyment experienced by players	1	2	1	0	3	1	1	4.00	9
Lower volatility (a payout distribution involving random [or compensated], more frequent but lower wins) is likely increase the ratio of wins to spins (ie increase the 'hit frequency').	1	0	2	1	1	3	0	3.75	8
Other (please include in your ranking, other propositions which have not been included)	0	0	0	0	1	0	0	3.00	1

### Prevention and minimisation of harm

- 4.24 There was strong support for restricting near misses as a protective measure in relation to how players interpret the reward aspects of the game. However, the panellists were quick to point out that there are essentially two types, naturally occurring near misses, and deliberate/contrived near misses. While it is conceded that there is little that can be done regarding the former, there was some agreement among the panel that deliberate near misses are misleading and should be restricted<sup>12</sup>. Furthermore, while consensus was limited, there was some support from the panel for imposing restrictions on highly volatile machine configurations with seven out of ten panellists assigning it a top three rank.

**Table 15: Distribution of prizes, volatility and harm mitigation**

Please rank the following options for preventing and minimising harm (specific to distribution of prizes and volatility) according to perceived effectiveness in harm reduction among 'At-risk and Vulnerable Gamblers' in Great Britain:									
Answer Options	1st	2nd	3rd	4th	5th	6th	7th	Rating Average	Response Count
Impose specifications to ensure gaming machines perform with lower volatility (a payout distribution involving random [or compensated], more frequent but lower wins).	3	2	2	0	0	1	2	4.70	10
Impose specifications to ensure gaming machines perform with higher volatility (a payout distribution involving random, more infrequent but higher wins).	1	0	1	1	1	3	2	3.00	9
Ban near misses	6	2	0	0	1	0	0	6.33	9
Limit near misses	0	5	3	2	0	0	0	5.30	10
Ban wins lower than original credit value	0	0	1	3	3	1	0	3.50	8
Limit wins lower than original credit value	1	0	2	0	2	3	1	3.33	9

### Disproportionate adverse effects

- 4.25 It was suggested that restrictions on volatility and near misses would reduce the level of excitement and anticipation generated by a gaming machine.

<sup>12</sup> Deliberate near-misses are subject to regulatory control, and would be non-compliant with s5.2 of the Gaming Machine Technical Standards, June 2007. ([www.gamblingcommission.gov.uk/shared\\_content\\_areas/gaming\\_machines\\_technical\\_stan.asp](http://www.gamblingcommission.gov.uk/shared_content_areas/gaming_machines_technical_stan.asp))

## 5 International panel stage three: identifying and prioritising research on gaming machines in Great Britain

### Aims and approach

- 5.1 In the previous stages, panellists were asked to identify the factors associated with gambling-related harm and machines, and their respective harm minimisation approaches. The specific aim of stage three was to recommend priorities for a medium to long-term gaming machine research programme in Great Britain. This programme is to be considered by the Responsible Gambling Strategy Board within its assessment of priorities for Research, Education and Treatment and the funds that will be available from the British gambling industry.
- 5.2 The panel were instructed to outline at least three research initiatives that they considered a priority (with a maximum of five) ranked in order of importance. Panellists were also reminded that these should be specific to gaming machines and should be prioritised in order to advance the understanding of the association between gaming machine play, gambling-related harm and harm mitigation. In addition to identifying broad aims of potential research initiatives, the experts were invited to speculate on how such research priorities would be actualised, including recommendations for methodological approach. The full questionnaire for stage 3 is included in Annex D.
- 5.3 A list of suggestions made by panel experts during rounds one and two and also some supplementary suggestions made by the Gambling Commission were included as an annex to questionnaire 3 (see Annex D) for the panel's consideration. These were intended to provide additional information to inform the panel's views.

### Panel views

- 5.4 Overall, experts in the international panel suggested five key themes for further research investigating gambling related harm among gaming machine players, in the following order of priority:
  1. The Promotion of Player Control – Player Tracking Technologies.
  2. Access to Funds and Other Situational Features.
  3. Impact of Machine Structure.
  4. The Role of the Socio-spatial and Cultural Environment.
  5. Understanding the Development of Gaming Machine Related Harm.
- 5.5 Each of these are examined below, detailing the proposed research aims, potential methodological approaches and expected benefits in relation to each proposed research initiative.

### **Initiatives promoting player control – player tracking technologies**

#### **Overview**

- 5.6 The research priority receiving the greatest level of support among the panellists was any initiative which provided or developed levels of education, information and player control. In particular, card-based and other tracking technologies (eg radio frequency identification or biometrics such as fingerprint reading) were considered to offer the greatest potential for meeting such aims. The use of customer communication through educational and warning messages also received support. Essentially, panellists recommend exploring whether tracking and message technology can assist the gambler in making gambling decisions that are pre-determined, accurate and made outside of contextualised and potentially negative emotional responses to gambling outcomes within the session. Card-based and tracking technology can be personally programmed to enable gamblers to operate within their selected parameters. Some felt, based on preliminary research exploring card-based technology, that offering assistance in making rational behavioural decisions is more effective in reducing harm-related gambling than changing the structural design of the gaming machine (eg stakes, prizes, game speed, theme etc).

## **Research aims**

- 5.7 **Scoping the cost and feasibility of card-based and tracking technologies** – Before working on demonstrating the potential value of having access to player data, and the provision of personalised responsible gambling features (such as pre-commitment, activity statements and self-exclusion), we must explore viability, short-term and long-term costs and practical challenges of their implementation and operation in Great Britain. Some of the experts suggest that by identifying a geographical location that is relatively self-contained and isolated, and converting gaming machines to be operated solely through card-based or other tracking technology, several core research questions could be answered. Primarily, does the required customer registration reduce patronage of gaming machines within this community? Can patrons operate the functions of the technology?
- 5.8 **Are pre-commitment features effective in reducing harm** – The determination of whether the optional facility of being able to pre-determine time and financial expenditure is used, and whether it reduces the negative consequences experienced by gaming machine players. The specific rates of usage and the specific impact on harm needs to be determined for pathological, at-risk and non-problem gambler populations.
- 5.9 **The faculty of card-based and tracking technology to collect player data** – Essentially, the implementation of card-based and tracking technology provides an opportunity to observe and analyse reliable and valid data of players. It represents an opportunity to generate information and improve understanding regarding gaming machine players' behaviour – problematic or non-problematic. If the implementation of such technology is feasible then scope exists to use anonymised player data to conduct basic exploratory analysis, ecologically valid experiments and prospective studies to examine structural features implicated in harm (eg payout percentage and volatility) with more confidence.

## **Methodological approaches**

- 5.10 The Panel's views consisted of three broad methodological approaches to researching tracking technologies and they are:
- 5.11 **Longitudinal studies** which draw from a high magnitude of data points that can be analysed to identify relationships between responsible gambling features (eg pre-commitment), structural features (eg stakes and prizes) and harm. This is achieved through establishing a baseline of player data prior to effecting any experimental changes in order to determine cause and effect. Because the same players are followed and measured at different stages, differences in observed variables are less likely to be a result of extraneous variables.
- 5.12 **Comparative designs** which assess the impact on harm between 1) cohorts that are provided tracking technology and those that do not have such provisions; 2) cohorts with access to responsible gambling features and those without and 3) cohorts existing at different levels of gambling related harm including non-gamblers.
- 5.13 **In-depth qualitative analysis** of player experience using tracking technology in order to provide insight into positive and negative experiences, and therefore inform future attempts to increase 'user-friendliness' of systems.

## **Potential outcomes**

- 5.14 The proposed research aims will directly provide essential information regarding the feasibility and cost of implementing tracking technology, the effect on gambling behaviour more generally, and the impact on gambling-related harm. This information may have the potential to develop our understanding of the real impact of the structural features of gaming machines, provide a mechanism for identifying at-risk and problem players and generally inform the Commission's objective to protect vulnerable people from being harmed or exploited by gambling.

## **Access to funds and other situational characteristics**

### **Overview**

- 5.15 The situational factor receiving the most support as a research priority among the panellists was the impact of removing, or limiting withdrawals from, ATMs on general gambling behaviour and gambling-related harm. There was also support for exploring general aspects of the gambling environment such as alcohol service and opening hours.

### **Research aims**

- 5.16 **Gambling-related harm and access to cash in the gaming environment** – The research aim is to determine the relationship, if any, between gambling-related harm and usage of ATMs to withdraw cash. Essentially, the usage of ATMs to withdraw cash within the gambling environment would be assessed in relation to machine gambler sub-groups (ie measurement of variation between problem and non-problem gamblers) and in relation to specific gambling experiences (for eg in the face of persistent loss).
- 5.17 **Gambling-related harm and location of ATMs in the gaming environment** – The research aim is to determine whether the proximity of the ATM in relation to gaming machines has an impact on gambling-related harm. Put simply, is there an impact on gambling-related harm if an ATM is on the gaming floor in contrast to being located near the exits?
- 5.18 **Provision of ATMs in the gaming environment and gaming machine revenue** - The research aim is to determine the potential impact of banning or limiting ATMs on revenue.
- 5.19 **Other situational variables** – Although not receiving consistent support as a research priority, some panellists suggested that situational characteristics should also form part of a gaming machine research agenda in addition to structural features which has been the primary focus of this panel exercise.

### **Methodological approaches**

- 5.20 **Comparative experimental designs**, which measure the impact of ATM removal, proximity variation within gambling environment or withdrawal limits on weekly/monthly gaming machine revenue.
- 5.21 **Self-report techniques**, to measure the relationship between ATM usage and gambling-related harm (potentially by using a problem gambling screen). The three proposed methods of collecting such self-report data include: 1) gaming floor surveys 2) exit surveys or 3) adapting national gambling surveys to include such variables.
- 5.22 **In-depth qualitative interviews** of problem gamblers on the relationship between provision of ATMs in gambling environments and gambling related harm, using purposive sampling within treatment centres.

### **Potential outcomes**

- 5.23 The ultimate benefit of the above proposals would be the generation of empirical data to support or reject the role of access to additional funds in the development and facilitation of chasing and other gambling-related harms. This is particularly important since panellists suggest that there is currently very limited evidence to support the removal of ATMs from gambling venues, despite widespread speculation that they play a significant role in problem gambling.

## **Impact of structural characteristics**

### **Overview**

- 5.24 The majority of panellists avoided identifying one structural feature in particular as a research priority, but rather suggested a general approach to include a wide variety of factors, in combination with impact being compared across various gambling situations and at-risk

groups. Responses confirm that little is known about the impact of most features on problematic play.

### **Research aims**

- 5.25 **The impact of event frequency and continuity on gambling related harm** – The research aim would be to evaluate the impact of adjusting the speed to which individuals can stake money on a particular gaming machine. The specific factors proposed that may influence the event frequency include the speed of reel spin, the provision of note acceptors, an ‘autoplay’ feature where no player interaction is required, and the potential provision of short enforced ‘breaks’ during gambling sessions. Each variable would be assessed independently, and in combination with each other, regarding the impact on length of gambling sessions, expenditure per session and gambling-related harm.
- 5.26 **The impact of design features on player expectations of success** – The research aim would be to assess the impact that design features such as the ‘near miss’ has on the gambler’s ability to understand the probability of success. Put simply, are player expectations of success in machine gambling influenced erroneously by neutral events (eg a perceived near miss)?
- 5.27 **The impact of volatility on gambling-related harm** – The research aim would be to determine whether if payout percentage is returned in small regular wins or through large infrequent wins, which is more likely to induce excessive time and monetary expenditure?
- 5.28 **Differences in machine selection preferences between problem and non-problem gamblers** – The research aim would be to determine on which structural feature matrix problem gamblers spend most of their time and monetary expenditure. Essentially, the objective is to identify a particular combination of structural features (eg volatility, speed) that problem gamblers show specific preference for when gambling on gaming machines.

### **Methodological approaches**

- 5.29 **Comparative experimental designs**, which measure the impact of each manipulated structural feature independently on gambling-related harm, with subsequent assessment of specific combinations of structural features. It is preferable to use real player tracking data to measure impact, although other observed data may also be useful provided the experiments are run under ecologically valid conditions (eg live venues, win real money, using gamblers as participants etc).
- 5.30 **Longitudinal studies** using tracking data to identify relationships between structural features (eg stakes and prizes) and harm. Through establishing a baseline of player data prior to effecting any experimental changes it may be possible to make causal inferences which design aspects of gaming machines are most likely to impact problem gambling.
- 5.31 **In-depth qualitative investigations** of player preferences for, and experiences of playing gaming machines in order to provide insight into which structural features of gaming machines are most effective in impairing and enhancing behavioural control when gambling.

### **Potential outcomes**

- 5.32 The proposed outcome of such research studies would be to increase understanding and awareness of which structural design features are related to harm. Some panellists suggest that through identifying a specific configuration of structural features, it may be possible through future experimentation to design gaming machines that strike an acceptable balance between reducing harm while maintaining revenue.

### **The Role of the socio-spatial and cultural environment**

#### **Overview**

- 5.33 The panellists’ recommendations focus on assessing how various geographical, socio-economic and cultural factors impact on gambling behaviour and related harm in general

adult populations and also in differing cultural groups.

### **Research aims**

- 5.34 **The impact of gaming machine provision on gambling prevalence and gambling related harm** – Essentially, the aim is to assess whether the statutory limits on the provision of gaming machines have any impact on the nature of gambling behaviour (including other forms of gambling) and prevalence of gambling-related harm. Put simply, the aim is to compare prevalence rates of problem gambling across cohorts in locations where gaming machines are either prohibited, limited in number or are available in high density. Furthermore, by extension, determine what impact, if any, gaming machine density has on socio-economic factors.
- 5.35 **The variation in gaming machine players' behaviour across different types of venue** – Fundamentally, the research aim would be to compare machine gambling behaviour, in terms of related harm, across various locations where individuals can access gaming machines. For example, to determine whether machine gambling in large or small casinos, community clubs or public houses has an effect on gambling-related harm and probability of developing a gambling disorder.
- 5.36 **The variation in gaming machine players' behaviour and related harm across ethnicity** – The research aim would be to determine whether different socio-cultural groups experience different levels of problem gambling prevalence. More importantly, the aim is to explore whether diverse socio-cultural groups conceptualise machine-related harm differently. This will assist in identifying specific priorities in tackling experienced harm within each ethnic community.

### **Methodological approaches**

- 5.37 **Comparative designs** which assess harm between 1) cohorts in locations with machine provision and locations where machines are prohibited, 2) cohorts in locations with high machine density and low machine density, and 3) cohorts who gamble in different social environments.
- 5.38 **Case study designs** where problem gambling prevalence is assessed over a baseline period, and the impact of changes in gaming machine provision on problem gambling prevalence is assessed across the short term and long term.
- 5.39 **Sociological ethnographic designs** where experienced social anthropologists explore different conceptualisations of machine-related harm across differing socio-cultural groups.

### **Potential outcomes**

- 5.40 The proposed studies will provide a better indication of whether machine density and availability has an effect of gambling-related harms, and therefore regulatory policy can be adjusted in response.

## **Developmental dimensions of gaming machine related harm.**

### **Overview**

- 5.41 The recommendation is to explore developmental patterns of gaming machine players' behaviour and related harm across various British subgroups to identify and understand causal and inhibiting factors in development of gambling disorders.

### **Research aims**

- 5.42 **The impact of early exposure to gaming machines on early adulthood gambling patterns** – Adolescents in Great Britain can access gaming machines. This is unlike most other jurisdictions where adolescents are often introduced to 'softer' forms of gambling such as lotteries and other non-continuous forms of gambling. The research aim is to outline and understand how patterns of gambling behaviour develop into early adulthood after early exposure to gaming machines. Essentially, for gamblers in Great Britain, does early

exposure to such machines impact the probability of developing a gambling disorder in adulthood? Is the transition for adolescent gambler to adult gambler in Great Britain different from other jurisdictions where adolescent exposure to gaming machines is prohibited?

- 5.43 **Outlining the transition from recreational machine gambling to problematic machine gambling** – The research aim is to explore the transition from recreational to problematic machine gambling, attempting to identify causal or inhibiting factors for the development or facilitation of harm.

#### **Methodological approaches**

- 5.44 **Longitudinal studies, employing random sampling** 15-17 year olds in the education system and observing gambling patterns (including screening for gambling disorders) and taking multiple measurements of indicators of social adjustment, co-morbidities and demographics. The cohort will be followed until 20 years old and developmental patterns will be analysed.
- 5.45 **Longitudinal studies, employing purposive sampling** to identify cohorts of current non-problem and problem gaming machine gamblers and observe changing patterns of gaming machine use from adolescence to adulthood.
- 5.46 **Prospective epidemiological studies** that observe a cohort of regular non-problem machine gamblers, taking multiple measurements of indicators of social adjustment, co-morbidities and demographics and assessing them in relation to future development of problem gaming machine use.

#### **Potential outcomes**

- 5.47 The primary benefit of the proposed research studies is that it provides developmental data regarding the relationship between gaming machine use and related harm. Current understandings of this relationship are limited as they are based on static cross-sectional studies that produce correlates rather than identifying specific causal relationships.

## 6 British panel: priorities and challenges for research on gaming machines in Great Britain

### Aims and approach

- 6.1 The aim of the British Panel was to consider recommended priorities for a medium and long-term research programme for gaming machines in Great Britain as suggested by the international panel. Members of the British panel were asked to consider the relevance, importance and potential challenges of such research priorities while also being invited to make their own suggestions if they thought the priorities for research were incomplete or unsuitable. Finally, members of the British panel were given the opportunity to make any additional comment deemed relevant to such a programme of research including issues relating to timescales, links to other research priorities, cost and potential for collaboration. See Annex E for full questionnaire.

### Panel views

- 6.2 The British panel broadly endorsed the priorities identified by the international panel (see Table 16). In particular, research using player tracking technologies and tracking enabled responsible gambling features were given the highest priority, directly reflecting those sentiments from the international panel. Investigating the impact of having access to additional funds within the venue was also considered to be important. Consensus was more limited across the British panel regarding the prioritisation of other research areas but most were considered to be relevant and applicable to the British context. Each is considered below in more detail.

**Table 16: British expert panel on gaming machines – views on research priorities**

Please rank the five priority research areas, as identified by the International Panel, according to how you think they should be prioritised for a Gaming Machine Research Programme for Great Britain. Please ignore any proposed research topic that you deem irrelevant by not assigning it a rank. You are also permitted to add other research topics to the ranking task that you feel have been ignored.								
Answer Options	1st	2nd	3rd	4th	5th	6th	Rating Average	Response Count
The Promotion of Player Control – Player Tracking Technologies	3	1	0	0	0	0	5.75	4
Impact of Site and Access to Additional Funds	0	0	3	1	0	0	3.75	4
Impact of Machine Structure	0	1	1	1	0	0	4.00	3
The Role of the Socio-spatial and Cultural Environment	1	0	0	0	2	0	3.33	3
Developmental Aspects of Gaming Machine Related Harm	0	2	0	1	1	0	3.75	4

### The promotion of player control – player tracking technologies

#### Relevance and appropriateness of research topic

- 6.3 All of the five British panellists endorsed this research topic as being important and as having the potential to contribute something new to the study of gaming machines and gambling behaviour more generally. It was argued that, given that responsible gambling should be epitomised by individuals making their own decisions based on accurate and relevant information, these kinds of technologies offer significant promise. One of the panellists suggested making the provision of these kinds of data a licensing condition. Another suggested that we must be aware of the opportunities for player tracking that already exist online as these may have implications for the study of gaming machines offline. A cautious approach was suggested by one panel member, urging stakeholders not to lose sight of the wider context in which gaming machines are studied (eg culture, location and site). It was recommended that this research topic forms only part of a research agenda which should also consider cultural, individual and situational factors. More importantly, research using tracking technologies may be particularly useful when using a comparative approach so that different demographical, geographical and clinical variables can be compared.

### **Potential challenges**

- 6.4 There were a few problems acknowledged by the British panel and these included:
- players may share cards and therefore tracking profile may actually be a conglomeration of more than one person
  - it may prove difficult to get the British gaming industry on board unless it is made a condition of licence
  - the costs of developing and manufacturing technology, and convincing operators to engage in research that may lead to a reduction in revenue
  - the vast range of different categories of machine, the variety of operators, and the different sectors involved in the provision gaming machines make this a potentially difficult research project to implement and monitor.

### **Access to funds and other situational characteristics**

#### **Relevance and appropriateness of research topic**

- 6.5 Although not viewed as a top priority for research, there was general consensus among the panel that exploring the relationship between access to additional funds and problem gambling would be useful. It was argued that chasing is an emotional state and is temporal, and therefore the speed at which one can access cash and chase losses is pivotal in determining behaviour in this regard. By reducing the ability to acquire additional funds immediately the gambler is forced to consider their behaviour from a more rational perspective as time passes. Understanding the dynamics of the relationship between considered gambling, chasing and accessing supplementary funds would improve understanding of site design in terms of making it more conducive to responsible gambling. One of the panellists remained unconvinced however, stating that the absence of ATMs in Adult Gaming Centres (AGCs), did not prevent problem gamblers from accessing additional funds from other sources. Nevertheless, they conclude that assessing recreational, at-risk and problem gamblers' behaviour before and after removal of ATMs would be of value.

### **Potential challenges**

- 6.6 The panel suggested that as the gambling industry in Britain is not state owned, it may be difficult to convince the industry to permit experimental manipulations within their sites. This is problematic since ecological validity is essential for experimental analysis to be of value.

### **Impact of structural characteristics**

#### **Relevance and appropriateness of research topic**

- 6.7 It was argued that investigating structural factors is particularly important in the context of gaming machines since there are a large number of characteristics that exist for gaming machine that can be manipulated. One panellist agreed that this could be a potentially fruitful area for future research but that some areas (eg reel spin speed and note acceptors) would be more useful than others (eg volatility). However, one panel member questioned the value in studying this area, suggesting that the scope for altering machines to reduce gambling-related harm was negligible. It was also advised that any research in this area should explore how different types of gamblers and different demographics may be attracted and/or vulnerable to different characteristics. This was considered to be important given that some gaming machines in Great Britain are different from machines in other jurisdictions, and therefore we can be less confident when drawing from research findings from other jurisdictions.

### **Potential challenges**

- 6.8 To have confidence in research findings in this area, research must be done in natural, ecologically valid settings (ie in real gambling environments examining real gambling behaviour) rather than in the laboratory. Some panel members feel that this may be met with resistance from the gambling industry.

### **The role of the socio-spatial and cultural environment**

#### **Relevance and Appropriateness of Research Topic**

- 6.9 There was a mixed response to this topic with some panel members viewing it as difficult and cost ineffective, whereas some viewed this as vital in developing a broader understanding of

the determinants of gaming machine related harms. One panellist stated that such data could be routinely collected alongside tracked player data in order to get a comprehensive view of the key risk factors. Other views were that by understanding the socio-cultural variation we would be in a better position to understand how individuals come to access machines in daily life and how best to tackle the specific negative social consequences that are most disruptive for various groups. One panel member suggested there is much to learn from the research in other jurisdictions which demonstrate that location and machine density are associated with problem gambling. However, they argue, even though it may not be worth the time and money to replicate this research in Great Britain, it may be worthwhile exploring these factors in relation to more specific kinds of gambling data such as frequency of play (eg which locations attract frequent players) and which locations attract more problem gamblers and why. It was also suggested that a more 'sensitive mapping exercise' could consider more subtle social and environment factors such as sites located near a populous route or setting (eg a bus station).

### **Potential challenges**

- 6.10 One of the panel expressed concern that such research would be extremely difficult given the fragmented and heterogeneous nature of the gaming machine industry in Great Britain (ie a wide variety of categories of machine, permitted venues types and operators). Another panellist suggested that this kind of research could be used to absolve operators of their responsibility to prevent and minimise gambling-related harms if risk factors were identified at the individual or cultural levels rather than the situational or structural levels. Finally, given the specificity of machine gambling in Great Britain (eg access by children; compensated machine outcomes; distribution of machines etc) it was recommended that any research designs must take this into consideration.

## **Understanding the development of gaming machine related harm**

### **Relevance and appropriateness of research topic**

- 6.11 There was limited consensus among panellists regarding the priority level of this topic with the main proponent suggesting longitudinal research would play a valuable role in exploring the impact of permitting children access to gaming machines. Other panellists suggested that it does not represent value for money relative to other research topics and that it may be more useful to explore gambling behaviour at a micro level or 'within-session' than to pursue player tracking research and ecologically valid experiments examining structural and/or situational characteristics. One of the panellists raised the issue that early exposure may also be important in reducing problem gambling, given the comparatively low prevalence rate in Great Britain, and that this should be considered if designing such research. It was also recommended that the cohort should be followed at least until the age of 24 rather than 20 to allow for higher education and relationship transitions. It was also emphasised that any longitudinal study should link in with other research topics, and as such, should simultaneously collect information on structural and situational factors where possible.

### **Potential challenges**

- 6.12 The dominant concern among the British panel on this issue relates to the prohibitive costs of a longitudinal study with only one of the panellists suggesting that potential benefits would justify such expenditure. Other concerns related to the rate of attrition (ie the drop-out rate over time) which may compromise the study and the difficulties of tracking adolescents, particularly in terms of getting parental consent.

### **Other comments**

- 6.13 One panellist summarised their position by emphasising the importance of adopting a broad view of 'harm' that also incorporates environmental and demographic features of machines and players since player tracking but may not provide all the answers to all our questions. Hence, if we explore player tracking it should not be in isolation.
- 6.14 Other views from the British Panel included, among other things, practical suggestions regarding distribution of research funding and 'good practice' considerations for future research projects to be undertaken in Great Britain.

## 7 Conclusions and recommendations

### Conclusions

- 7.1 The aim of this exercise was to assess the level of consensus regarding factors which determine gaming machine related harm; identify preventative measures which may be appropriate to the British context; and to recommend medium and long-term priorities for a programme of research. Two panels were constructed (one international and one British) comprising academic experts who could speak with authority on the area of gaming machines. Panel views were collected in four stages:
1. international panel views were collected on the associations between structural and allied situational factors of gaming machines and harm
  2. the level of consensus was assessed within the international panel on how such associations related to harm mitigation approaches
  3. opinions were sought from the international panel on priorities for a medium to long-term programme of research into the area of gaming machines
  4. the British panel considered the relevance, importance and potential challenges of such research priorities while also being invited to make their own suggestions.
- 7.2 The aim of stage one was to collect opinions of panel members regarding the potential association between gambling-related harm and certain structural and situational characteristics such as stake size, size of prizes, game speed, continuity of play, access to additional funds, return to player, location, proximity and random versus compensated determination of outcomes. Panellists returned a wide range of ideas for each of the structural characteristics under consideration. While the extent of consensus on these issues was the focus of stage two, initial indications were that the views from the panel were extensive and varied, and that each panel member made a unique and valuable contribution to this exercise.
- 7.3 Although Table 3 gives a useful summary of the views of the panel it is limited in the extent to which we can infer consensus among the panel experts, and also to what extent these issues should be prioritised. For example, this summary only indicates the number of panellists who originated a proposition and does not necessarily indicate consensus among the panel. A panel member may not have originated an idea for reasons other than simply not considering it to be a priority (eg they may not have considered the proposition before it had been suggested by another panel member).
- 7.4 The aim of stage two was to present the panel with relevant propositions identified by other panel members, and assess the extent to which these propositions were prioritised in relation to creating, facilitating and mitigating gambling-related harm. Stage two also gave panellists the opportunity to give further explanation where appropriate. Overall there was a general lack of consensus among the panel on these issues. A high level of consensus was apparent only for a few propositions for certain structural characteristics under consideration.
- 7.5 Regarding the role of size of stake, there was a high level of consensus among the panel relative to other characteristics. It was suggested that the main risk for players experiencing harm was that higher stakes normally imply a higher financial cost to play a gaming machine in any given timeframe. Panellists were also in agreement that potentially the best options to mitigate gambling-related harm would be to apply an upper limit on stake size, or to help extend control for the player over their expenditure through the use of responsible gambling features enabled by card-based or other tracking technologies. The panel were also in general agreement that having a lower limit on a stake (ie restricting minimum stake levels so they are not 'too low') would probably be among the least effective options for promoting responsible and safe play.
- 7.6 Overall, there was a low level of consensus regarding the importance of the size of prizes in relation to creating and facilitating harm, but there was a high level of agreement regarding the most effective approaches for mitigation in relation to size of prize. Although receiving

some support in stage one, there was little priority attached to the role of small prizes in the creation and facilitation of gambling-related harm. It was suggested that players may not actually perceive small prizes as rewarding, and even in some cases may see these as frustrating. The highest level of agreement among the panel related to two approaches of harm mitigation in relation to size of prize:

- a) putting an upper limit on the size of prizes
- b) paying out large wins using cash alternatives so that they could not be immediately reinvested.

7.7 In terms of game speed, there was some consensus that the greatest risks posed by faster games are that they allow less time for reflection on the implications of the gambling, and that they lead to a higher level of spending per hour since players can lose money at a faster pace. Banning 'autoplay' and reducing reel spin speed were considered priorities for harm mitigation, although the panel also suggested that reducing speed of play may make a game less appealing, reducing the quality of the player experience.

7.8 Restricting access to funds through ATMs and other similar facilities was considered as potentially the most effective harm mitigation measure relating to continuity of play. Imposing withdrawal limits and restrictions on location for ATMs also received some support; however, this was not as strong as support for a complete ban. Support for using 'cooling-off' periods, however, was mixed, as were suggestions by the panel for the appropriate length of time for such periods. Suggested durations for effective 'cooling-off' periods ranged from 30 seconds to 30 minutes. Furthermore, there was concern from the panel that 'cooling-off' periods might have a significant impact on player experience and that such an approach would not work unless there was significant investment in the appropriate infrastructure (eg centrally linked machines in order for the 'cooling-off' period to apply to all machines in one location).

7.9 The highest degree of uncertainty and disagreement among the panel applied to the role of volatility and RTP. This seemed to be a result of a lack of empirical evidence in this area, and/or a general lack of understanding of the concepts being considered. The only item where there seemed to be consensus was the banning of near misses as a protective measure, and here, agreement was strong<sup>13</sup>. However, there was also acknowledgement that such an approach would be both difficult to implement (since many near misses are naturally occurring) and would be likely to impact negatively on the player experience.

7.10 There are two limitations that apply to considering the findings from stage two. Firstly, by asking panellists to engage in a ranking task there may be a risk of panellists arbitrarily assigning ranks to different propositions even though they may consider them all to be equally important. Secondly, there seems to be an absence of depth of explanation even where there seems to be consensus. For example, even though there is significant agreement that an upper limit on prizes may be effective in protecting players from experiencing harm, it is not made precisely clear why this may be the case. It seems that, if high prizes do contribute to the determination of harm, we currently do not have answers to important questions such as:

- At what point does a prize become too high?
- To what extent does it depend on type and category of gaming machine?
- In exactly what way do higher prizes and higher jackpots create, facilitate and maintain harm?

7.11 Indeed, similar questions could be asked in relation to all of the structural characteristics under consideration. Unavoidably, it seems that precise and reliable information on these issues will need to be gathered through further research. Certainly the general lack of consensus across most areas suggests that there is a need for future research, and that the research agenda should be at this stage wide open.

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<sup>13</sup> Deliberate near-misses are subject to regulatory control, and would be non-compliant with s5.2 of the Gaming Machine Technical Standards, June 2007. ([www.gamblingcommission.gov.uk/shared\\_content\\_areas/gaming\\_machines\\_technical\\_stan.asp](http://www.gamblingcommission.gov.uk/shared_content_areas/gaming_machines_technical_stan.asp))

- 7.12 The lack of consensus and apparent need for research in all areas under consideration suggests that a cautious approach to regulatory change is needed at this time, including being careful not to be overly restrictive or overly permissive until more empirical evidence is made available. Based on information from stage two, uncertainty regarding future regulatory changes in relation to gaming machines in Great Britain is understandable, and significant regulatory change (either more or less restrictive) should be dependent upon findings from a longer-term research programme.
- 7.13 Although, stages one and two were limited in helping to shape a research agenda for examining gaming machines, there was some consensus among the international panel in stage three regarding research priorities and appropriate methodologies for a medium to long-term research programme for gaming machines in Great Britain. Player tracking technologies with their responsible gambling features and access to additional funds were the specific topics which received the most support. In terms of player tracking technologies, the following research aims were identified as priorities:
- scoping cost and feasibility of implementation and operation of player tracking technologies in Great Britain
  - evaluating the potential for pre-commitment features to minimise gambling related harm
  - initial exploration of the data collected through such technologies and exploring the potential regulatory, academic and clinical benefits of its analysis.
- 7.14 Panel members suggested that such research could use both comparative (ie comparing different groups of players based on different criteria) and longitudinal (ie following the same group of players of specific period of time) designs. It was argued that this information will be important in developing an understanding of how harm develops in relation to gaming machines; may provide a means of identifying risky and harmful play; and could shed new light on the effectiveness of harm minimisation initiatives and their overall impact on player behaviour and experience.
- 7.15 The panel identified a need to investigate the impact on gambling behaviour from having access to additional funds (ATMs in particular) in the gambling venue. The suggested research focus here was multifaceted:
- to what extent can we determine if access to additional funds generates or facilitates harm
  - in terms of the different harm mitigation options (banning, relocating or limiting) which are the most effective
  - what are the potential adverse consequences of the different mitigation approaches on player experience and industry revenue.
- 7.16 A wide range of methodological approaches were identified as relevant here including comparative experimental designs, surveys and in-depth qualitative interviews. It was suggested that such research will help clarify the current speculation regarding the access to additional gambling funds in the venue and provide a more solid evidence base to help develop regulatory policy.
- 7.17 The panel supported the need to examine the impact of gaming machine structure on gambling-related harm, with panellists either identifying at least one structural factor which should be prioritised for research (eg volatility; note acceptors) or suggesting that a general exploration of structural factors is required. Research from a cultural and socio-spatial perspective was also prioritised, with panellists suggesting that the impact of the availability and density of machines and the impact of different venues and sites should be investigated in relation to problem gambling. It was suggested that it would be useful to explore the cultural and ethnic variation in how problem gambling is conceptualised and experienced. Finally, the panel supported longitudinal research investigating temporal dimensions of problem gambling, most notably, the impact of early exposure to gaming machines on gambling behaviour in later life and the transition or flow in and out of gambling-related harm.

- 7.18 The British panel generally endorsed the research priorities as identified by the international panel with the highest priority being given to research involving player tracking technology and tracking-enabled responsible gambling features. It was highlighted that a broad view of 'harm' should be adopted that also incorporates environmental and demographic features of machines so that player tracking, important as it may be, is not explored in isolation. Research investigating the impact of having access to additional funds was also strongly supported by the British Panel.
- 7.19 Challenges identified by the British panel related the distinctiveness of the British gaming machine industry and regulatory framework. Firstly, there was concern that the industry would not be co-operative on issues such as sharing access to data or to venues to conduct research (experiments in particular). Secondly, it was expressed that the complex structure of the gaming machine sector in Great Britain (eg various categories of machine, various types of venues and various operators) would make it difficult to implement and follow any research using tracking technologies or any research examining cultural or situational variations in gaming machine play. For example, if a player reaches a self-set spending limit on a certain type of machine, in one venue for one operator, would they be able to use a different type of gaming machine, in a different venue, supplied by a different operator?
- 7.20 The British panel also suggested that British researchers should be the main beneficiaries of British research funding and that research funding should be allocated on a more collaborative rather than competitive basis given the scarcity of expertise within Great Britain. It was also suggested that operators should be required (via licensing conditions) to share data and permit responsible research using their premises or customers. Finally, it was recommended that research should receive levels of funding equivalent to both treatment (which currently receives significantly more) and education and prevention (which currently receives less).

## Recommendations

- 7.21 Based on information provided by the international and British panels of experts, there are some clear recommendations which should be considered for a medium to long-term research programme investigating gaming machines in Great Britain. These issues relate to both research topics and to strategic actions which should facilitate such research.
- 7.22 The key recommendations are as follows:
1. The following five areas as identified by the international panel (as discussed in stage three), and supported by the British panel (as discussed in stage four), should be considered as research priorities for a long-term research programme investigating gaming machines in Great Britain:
    - a. The Promotion of Player Control – Player Tracking Technologies.
    - b. Impact of Site and Access to Additional Funds.
    - c. Impact of Machine Structure.
    - d. The Role of the Socio-spatial and Cultural Environment.
    - e. Understanding the Development of Gaming Machine Related Harm.
  2. Research using player tracking technologies to investigate gaming machine player's behaviour and tracking-enabled responsible gambling features should be given the highest priority. In doing so the following issues should also be considered:
    - a. A scoping study should be carried out immediately assessing the feasibility and willingness of operators to implement and operate such technology in Great Britain. This is particularly important given that gaming machines vary considerably in their structure, site and provision. Therefore, the acceptance and regulation of such technology in this country may be particularly challenging. This recommendation is consistent with the Review of Research on Aspects of Problem Gambling (Abbott, Volberg, Bellringer and Reith, 2004), with the UK Scoping Study for assessing gaming impacts (May-Chahal, Volberg, Forrest, Bunkle, Paylor, Collins and Wilson, 2008) and with the latest

- review of the literature on cashless and card-based technology recently commissioned by the Gambling Commission (Parke, Rigby and Parke, 2008).
- b. This research should not be done in isolation but should be accompanied by concurrent research which focuses on wider issues at the individual, situational and cultural levels. In other words, if player tracking data is being analysed to explore gaming machine related harm, this analysis should also consider variables which exist outside of the player tracking data (eg socio-economic status, location, ethnic and cultural background; type and situation of local gambling venues). It was argued that by adopting this broad approach the validity and reliability of research findings would be increased.
3. A relationship needs to be developed between the gambling industry and other stakeholders which cultivates a two-way flow of information and openness that will facilitate research. Such research would improve our understanding of gaming machine related harm, and ultimately promote effective regulatory policy which would be effective yet not unnecessarily restrictive. It is clear that co-operation is required from the industry in order to:
    - a. obtain access to various forms of data that could be analysed
    - b. obtain access to venues, and customers therein, for conducting research on site, particularly live ecologically valid experiments
    - c. use their knowledge and experience to help identify the most appropriate lines of empirical enquiry which will save significant resources.
  4. While the feasibility of researching gaming machines using offline player tracking data is being considered, there may be some advantages, in the mean time, in using online player tracking data, which we know is already available, to help answer key questions regarding structural factors in gaming machines (eg what role do stake size, size of prizes and game speed play in creating or facilitating harm). While the applications of findings from internet gaming machines to land-based gaming machines should remain tentative, online research in this area may prove a fruitful line of enquiry until the same level of information is available for analysis for land-based gaming machines.
  5. Finally, it is recommended that a mixed method approach to understanding the impact of gaining access to additional funds in the gambling venue be given top priority in any medium to long-term research programme. This research should empirically examine:
    - a. if such access to additional funds makes a significant contribution to the creation or facilitation of harm
    - b. what kinds of restrictions (eg banning, relocating or limiting withdrawals) would be the most effective in minimising harm but would have the lowest overall negative impact on the customer experience in the affected venue.

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## Annex A - Glossary

**ATM** – automated teller machine.

**Autoplay** – any facility which enables a person using a gaming machine to pay more than one charge for use in respect of the machine without performing at least one separate action in respect of each charge for use (see s.10(6) The Gaming Machine (Circumstances of Use) Regulations 2007).

**Card-based technology** – the use of cards (smart cards or magnetic strip cards) as a cash alternative to enable payment from, rewards to, and behavioural tracking of gambling customers.

**Chasing** – persistent, unplanned and/or uncontrolled gambling in order to recoup past gambling losses.

**Cognitive biases** – irrational rules of thumb which, to some extent, govern gambling decisions and behaviour, and which have the potential to heighten gambling related harm and risk.

**Compensation** – a method of outcome determination for gaming machines which is partially influenced by the ratio of monies paid out in prizes to money taken in as stakes (often contrasted with **random** outcome determination).

**Continuity of game** – the extent to which a game can be played continuously without breaks in play.

**Ecological validity** – the extent to which the context and setting of a research experiment resembles the real-life phenomenon being studied.

**Event frequency** - the number of times an event, which is the focus of the gambling, occurs any given time period.

**Near miss** – a losing outcome of a gamble that is perceived to be almost successful, which may cause players to overvalue gambles. These can occur naturally, or be built into the machine.

**Percentage return to player** - the percentage of the winnings paid out in relation to the money staked.

**Pre-commitment** – a consumer protection practice which promotes or mandates that players commit to how much they are willing to spend before their gambling session begins in order to minimise harm from poor decision-making (as a result of frustration and not thinking clearly) during the gambling session.

**Radio frequency identification (RFID)** – a device which can be used as a cashless alternative in gambling to identify and/or track information to enable payment from, rewards to, and behavioural tracking of gambling customers. Unlike most forms of card-based technology RFID does not need contact with a device in order to be read.

**Random number generator (RNG)** - a device used to ensure that outcome of a gaming machine is always random and unpredictable. Gaming machines in some jurisdictions use pseudo-random devices (see compensation above) which are argued to be predictable to a limited extent and may allow for the use of more complex feature games.

**RTP** – see Percentage return to player.

**Situational characteristics** - features of a gambling environment that can be external (eg location, number of venues, entry requirements) or internal (eg layout; design, heating, lighting, music) that may determine levels of participation, duration of session and levels of enjoyment.

**Size of prize** – the value of money or other resources being given as a reward for a gambling win.

**Stake size** – the value of the money or other resources being risked on the outcome of a gamble.

**Structural characteristics** the properties of a gambling game that determine how players interact with it, enjoy it, understand it, pay for credits and receive rewards.

**Volatility** - refers to how a gaming machine's pay-table is set up to meet its expected return to player percentage, for example whether it is designed to pay more large prizes, with correspondingly fewer smaller prizes (more volatile), or a greater spread of prizes with correspondingly fewer large prizes (less volatile).

**Tracking technology** – a device which permits individual player data (demographic, behavioural and/or transactional) to be identified, stored and analysed in a meaningful way.

## **Annex B – Stage 1 questionnaire<sup>14</sup> (international panel)**

1. Having read the 'Machines briefing for expert panel' what do you consider to be the most distinctive features of machine gambling in Great Britain in relation to machine gambling in other jurisdictions?

*From its initial review of the literature, the Commission has identified the following items (questions 2 to 9) as potential factors affecting gambling related harm in relation to machine gambling. Please explain whether you think these factors are, or may be, significant in the British context. Please provide the details of available evidence which supports your view.*

### **2. Size of stake:**

Please explain whether you think size of stake is or may be significant in the British context. Please provide the details of available evidence which supports your view.

### **3. Size of prize:**

Please explain whether you think size of prize is or may be significant in the British context. Please provide the details of available evidence which supports your view.

### **4. Speed of play:**

Please explain whether you think speed of play is or may be significant in the British context. Please provide the details of available evidence which supports your view.

### **5. Opportunity for repetitive and continuous play (including availability of money to fund the gambling):**

Please explain whether you think the opportunity for repetitive and continuous play (including availability of money to fund the gambling) is or may be significant in the British context. Please provide the details of available evidence which supports your view.

### **6. Return to player:**

Please explain whether you think the return to player is or may be significant in the British context. Please provide the details of available evidence which supports your view.

### **7. Frequency of wins:**

Please explain whether you think the frequency of wins is or may be significant in the British context. Please provide the details of available evidence which supports your view.

### **8. Geographical proximity of machines (including the location of venues offering gaming machine gambling and the arrangement of gaming machines within those venues):**

Please explain whether you think the geographical proximity of machines (including the location of venues offering gaming machine gambling and the arrangement of gaming machines within those venues) is or may be significant in the British context. Please provide the details of available evidence which supports your view.

### **9. Mixed availability of both compensated and random machines:**

Please explain whether you think the mixed availability of both compensated and random

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<sup>14</sup> The following instructions were provided to experts

1. Please read the machine briefing document 'Machines briefing for expert panel' before answering the questions. The brief is intended to provide important contextual information for collecting views from the expert panel.

2. Some questions refer to gambling-related harm – in answering these questions we would like you to consider harms which could result from both excessive gambling by individuals a) who may be new to a particular form of gambling or b) who may have the occasional loss of self-control on the one hand and more systematic problem gambling on the other. This is important as prevention and harm mitigation measures may differ depending on the nature of the harm. Please distinguish the type of behaviour you are referring to in your responses where this is relevant.

3. In providing responses about the importance of different risk factors and measures we encourage you to explain your reasons why and offer supporting evidence where this exists.

4. Please feel free to direct the research team to, or provide them with materials, diagrams or other resources which may help to illustrate your points where appropriate.

machines is or may be significant in the British context. Please provide the details of available evidence which supports your view.

**10.** Please explain whether you think that there are other factors associated with gambling related harm arising from machine gambling. What else might be important that's not on our list? Please provide the details of available evidence which supports your view.

**11.** Which of the factors in questions 2-9 and from your response to question 10 are the most important in the British context and why?

**12.** Which harm minimisation measures could be effective in Britain? Which risk factors would these measures address? Please provide the details of available evidence which supports your view.

**13.** What further research should be undertaken to identify both risk factors and appropriate measures? Please include those which are in your opinion the most important and explain if there are a number of dependent factors which should be reviewed concurrently.

## Annex C – Stage 2 questionnaire (international panel)

### 1. Consideration

The Gambling Commission's current thinking is that there are four broad categories of gambler that may initially be relevant to our research objectives. The distinctions between the categories are important to help the Commission consider whether regulatory actions would be appropriate to prevent and minimise harm and should therefore be the subject of further research:

- Non-Problem and recreational gamblers.
- Occasional binge gamblers who spend more (money and time) than they intended but do it infrequently and not usually in a way that has a lasting damaging effect. Some measures might have a useful impact on this group.
- At-risk and Vulnerable Gamblers – those who are at risk of developing or are developing already a longer term problem. This is considered to be the group at which most measures that might be taken to control machine play would be directed.
- People who are problem gamblers (whether or not pathological). This group is in need of help, however it is less likely that any measures that we might take to control machine play would be of benefit to this particular subgroup.

It is preferred that experts consider their responses to questions raised in this iteration with the 'At-risk and Vulnerable Gambler' group in mind.

However, we are interested in any views from experts regarding the accuracy of the above classification of problem gamblers and our respective conclusions regarding the potential for harm prevention and minimisation for each group. Please use the box below to set out any views you have on the categorisation.

### 2. Stake size

#### A) Association with harm

Please rank<sup>15</sup> the following propositions according to which are more likely to create or facilitate harm for 'At-risk and Vulnerable Gamblers'. These propositions have been informed by experts' submissions in Round One of this consultation:

- Lower stakes are likely to encourage a greater number of players to participate.
- Lower stakes on gaming machines are likely to encourage players to play for longer periods of time.
- Higher stakes are likely to increase the financial cost per hour to play a gaming machine.
- Higher stakes are likely to increase chasing.
- Having numerous betting lines per spin are likely to encourage players to play all lines to avoid perceiving near misses'.
- Other<sup>16</sup> (please include in your ranking, other propositions which have not been included).

#### B) Prevention and minimisation of harm

Please rank the following options for preventing and minimising harm (specific to stake size) according to perceived effectiveness in harm reduction among 'At-risk and Vulnerable Gamblers' in Great Britain:

- An upper limit on stake size.
- A lower limit on stake size.
- Ban on variation in stake size.
- Limit on the number of betting lines.
- Limit expenditure using smart card technology.
- Other (please include in your ranking, other propositions which have not been included).

#### C) Proportion and wider impact

We are aware that there may be cases where a change intended to prevent and /or minimise harm

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<sup>15</sup> Here and throughout the questionnaire the experts were asked to rank statements on the scale of one to six. Where appropriate experts were also invited to provide additional comment, including their rationale for the ranking.

<sup>16</sup> Here and throughout the questionnaire, if experts selected 'other' they were invited to specify.

among 'At-risk and Vulnerable Gamblers' may have a disproportionate adverse impact on gamblers without problems. Please identify any such harm prevention or minimisation approaches (specific to stake size) including reasons why you think there may be such an adverse impact and how significant it would be.

#### **D) Research on stake size, gambling-related harm, prevention and harm minimisation**

Which of the above propositions mentioned in Part A and B above should be prioritised for a gaming machine research programme in Great Britain and why?

### **3. Size of prizes**

#### **A) Association with harm**

Please rank the following propositions according to which are more likely to have a negative impact on levels of gambling-related harm for 'At-risk and Vulnerable Gamblers'. These propositions have been informed by experts' submissions in Round One of this consultation:

- Higher prizes are likely to encourage chasing.
- Lower prizes are likely to increase harm because such gaming machines offer higher rates of positive reinforcement.
- Problem gamblers will prefer to play gaming machines with higher, more infrequent prizes rather than gaming machines with lower more frequent prizes.
- Gaming machines with higher prizes are likely to attract individuals to start playing compared to gaming machines with lower prizes.
- Gaming machines with higher prizes are likely to encourage gamblers to play for longer compared to gaming machines with lower prizes.
- A big win afforded by gaming machines offering higher prizes are likely to lead a non-problem gambler to play more heavily and more frequently.
- Other (please include in your ranking, other propositions which have not been included).

#### **B) Prevention and minimisation of harm**

Please rank the following options for preventing and minimising harm (specific to size of prizes) according to perceived effectiveness in harm reduction among 'At-risk and Vulnerable Gamblers' in Great Britain:

- An upper limit on size of prizes.
- A lower limit on size of prizes (which may reduce frequency of wins).
- Large wins not paid out in cash to encourage time to consider reinvestment.
- Pop-up message checking if player wishes to cash out.
- Education strategies and signage regarding the chances of winning prizes of various sizes.
- Other (please include in your ranking, other propositions which have not been included).

#### **C) Proportion and wider impact**

We are aware that there may be cases where a change intended to prevent and /or minimise harm among 'At-risk and Vulnerable Gamblers' may have a disproportionate adverse impact on gamblers without problems or may reduce the commercial appeal of the product. Please identify any such harm prevention or minimisation approaches (specific to size of prizes) including reasons why you think there may be such a disproportionate adverse impact.

#### **D) Research on size of prizes, gambling-related harm, prevention and harm minimisation**

Which of the above propositions mentioned in A and B above should be prioritised for a gaming machine research programme in Great Britain and why?

### **4. Speed of play**

#### **A) Association with harm**

Please rank the following propositions according to which are more likely to have a negative impact on levels of gambling-related harm for 'At-risk and Vulnerable Gamblers'. These propositions have been informed by experts' submissions in Stage 1 of this consultation:

- Faster gaming machine play is likely to permit players to lose money at a faster pace.
- Faster gaming machine play is likely to allow the gambler less time to consider the implications of their actions.

- Faster gaming machine play is likely to be more exciting than slower gaming machine play.
- Slowing reel spin speed may have the unintended consequence of spending more time playing rather than spending less money.
- Other (please include in your ranking, other propositions which have not been included).

### **B) Prevention and minimisation of harm**

Please rank the following options for preventing and minimising harm (specific to speed of play) according to perceived effectiveness in harm reduction among 'At-risk and Vulnerable Gaming Machine Gamblers' in Great Britain (please note that continuity and breaks in play is considered in the next section):

- Reduce reel spin speed.
- Banning 'Autoplay'.
- Banning other options for players to speed up play (eg override time consuming sound effects; stop buttons).
- Other (please include in your ranking, other propositions which have not been included).

### **C) Proportion and wider impact**

We are aware that there may be cases where a change intended to prevent and /or minimise harm among 'At-risk and Vulnerable Gamblers' may have a disproportionate adverse impact on gamblers without problems or may reduce the commercial appeal of the product. Please identify any such harm prevention or minimisation approaches (specific to speed of play) including reasons why you think there may be such a disproportionate adverse impact.

### **D) Research on speed of play, gambling-related harm, prevention and harm minimisation**

Which of the above propositions mentioned in A and B above should be prioritised for a gaming machine research programme in Great Britain and why?

## **5. Continuous play and access to additional funds**

### **A) Association with harm**

Please rank the following propositions according to which are more likely to have a negative impact on levels of gambling-related harm for 'At-risk and Vulnerable Gamblers'. These propositions have been informed by experts' submissions in Round One of this consultation:

- Continuous gaming machine play is likely to offer less time for reflection on consequences of play.
- Continuous gaming machine play is likely to facilitate dissociative states.
- Onsite access to additional funds is likely to increase unplanned spending.
- Extended opening hours are likely to increase gambling related harm.
- 'Cooling off' periods may have the unintended consequence of people playing faster in anticipation of the break.
- Other (please include in your ranking, other propositions which have not been included).

### **B) Prevention and minimisation of harm**

Please rank the following options for preventing and minimising harm (specific to continuous play and/or access to additional funds) according to perceived effectiveness in harm reduction among 'At-risk and Vulnerable Gamblers' in Great Britain:

- Enforced 'cooling off' periods.
- Banning onsite access to additional funds (eg ATMs; electronic funds transfer).
- Imposing limits on the amount of additional funds players can access onsite.
- Locating sources of additional funds (ATMs or electronic fund transfers) away from the gaming machine area.
- Restricting opening hours.
- Include mandatory cash-out features on machines.
- Banning note acceptors.
- Impose limits on size of notes accepted.
- Other (please include in your ranking, other propositions which have not been included).

What is the minimum amount of time required for a 'cooling off' period and why?

### **C) Proportion and wider impact**

We are aware that there may be cases where a change intended to prevent and /or minimise harm among 'At-risk and Vulnerable Gamblers' may have a disproportionate adverse impact on gamblers without problems or may reduce the commercial appeal of the product. Please identify any such harm prevention or minimisation approaches (specific to continuity and/or access to additional funds) including reasons why you think there may be such a disproportionate adverse impact.

### **D) Research on continuity/access to additional funds, gambling-related harm, prevention and harm minimisation**

Which of the above propositions mentioned in A and B above should be prioritised for a gaming machine research programme in Great Britain and why?

## **6. Percentage return to player**

### **A) Association with harm**

Please rank the following propositions according to which are more likely to have a negative impact on levels of gambling related harm for 'At-risk and Vulnerable Gamblers'. These propositions have been informed by experts' submissions in Round One of this consultation:

- Gaming machine players are unable to accurately determine percentage return to player based on game play.
- A gaming machine with a higher percentage return to player is likely to offer a higher rate of reinforcement in the form of wins.
- A gaming machine with a higher percentage of return to player is likely to be more attractive to those players trying to chase losses.
- A gaming machine offering a lower percentage return to player is likely to require players to spend more money per hour of play.
- Other (please include in your ranking, other propositions which have not been included).

### **B) Prevention and minimisation of harm**

Please rank the following options for preventing and minimising harm (specific to percentage return to player) according to perceived effectiveness in harm reduction among 'At-risk and Vulnerable Gamblers' in Great Britain:

- Impose a maximum limit on percentage return to player.
- Impose a minimum limit on percentage return to player.
- Require that the percentage return to player is clearly presented on each gaming machine.
- Require that a pop-up option clearly and comprehensively explains percentage return to player and challenges common misconceptions.
- Other (please include in your ranking, other propositions which have not been included).

### **C) Proportion and wider impact**

We are aware that there may be cases where a change intended to prevent and /or minimise harm among 'At-risk and Vulnerable Gamblers' may have a disproportionate adverse impact on gamblers without problems or may reduce the commercial appeal of the product. Please identify any such harm prevention or minimisation approaches (specific to percentage return to player) including reasons why you think there may be such a disproportionate adverse impact.

### **D) Research on percentage return to player, gambling-related harm, prevention and harm minimisation**

Which of the above propositions mentioned in A and B above should be prioritised for a gaming machine research programme in Great Britain and why?

## **7. Distribution of prizes and volatility**

### **A) Association with harm**

Please rank the propositions according to which are more likely to have a negative impact on levels of gambling-related harm for 'At-risk and Vulnerable Gamblers'. These propositions have been informed by experts' submissions in Round One of this consultation:

- Higher volatility (a payout distribution involving random, more infrequent but higher wins) is likely to increase arousal.

- Higher volatility (a payout distribution involving random, more infrequent but higher wins) is likely to increase chasing.
- Higher volatility (a payout distribution involving random, more infrequent but higher wins) is likely to increase perseverance during a losing sequence.
- Near wins and 'win events' (including very small wins such those of lesser value than the original stake) are likely to give the illusion of a higher frequency of prizes.
- Lower volatility (a payout distribution involving random [or compensated], more frequent but lower wins) is likely to increase the level of enjoyment experienced by players.
- Lower volatility (a payout distribution involving random [or compensated], more frequent but lower wins) is likely increase the ratio of wins to spins (ie increase the 'hit frequency').
- Other (please include in your ranking, other propositions which have not been included).

### **B) Prevention and minimisation of harm**

Please rank the following options for preventing and minimising harm (specific to distribution of prizes and volatility) according to perceived effectiveness in harm reduction among 'At-risk and Vulnerable Gamblers' in Great Britain:

- Impose specifications to ensure gaming machines perform with lower volatility (a payout distribution involving random [or compensated], more frequent but lower wins).
- Impose specifications to ensure gaming machines perform with higher volatility (a payout distribution involving random, more infrequent but higher wins).
- Ban near misses.
- Limit near misses.
- Ban wins lower than original credit value.
- Limit wins lower than original credit value.
- Other (please include in your ranking, other propositions which have not been included).

### **C) Proportion and wider impact**

We are aware that there may be cases where a change intended to prevent and /or minimise harm among 'At-risk and Vulnerable Gamblers' may have a disproportionate adverse impact on gamblers without problems or may reduce the commercial appeal of the product. Please identify any such harm prevention or minimisation approaches (specific to prize distribution and volatility) including reasons why you think there may be such a disproportionate adverse impact.

### **D) Research on prize distribution and volatility, gambling-related harm, prevention and harm minimisation**

Which of the above propositions mentioned in A and B above should be prioritised for a gaming machine research programme in Great Britain and why?

## **Annex D – Stage 3 questionnaire<sup>17</sup> (international panel)**

### **Research priority 1**

Research Area and Aims

Suggested Methodological Approach (including research design and procedure where relevant)

Expected benefits of research and possible implications for gaming machine policy

### **Research priority 2**

Research Area and Aims

Suggested Methodological Approach (including research design and procedure where relevant)

Expected benefits of research and possible implications for gaming machine policy

### **Research priority 3**

Research Area and Aims

Suggested Methodological Approach (including research design and procedure where relevant)

Expected benefits of research and possible implications for gaming machine policy

### **Research priority 4 (optional)**

Research Area and Aims

Suggested Methodological Approach (including research design and procedure where relevant)

Expected benefits of research and possible implications for gaming machine policy

### **Research priority 5 (optional)**

Research Area and Aims

Suggested Methodological Approach (including research design and procedure where relevant)

Expected benefits of research and possible implications for gaming machine policy

### **Association between research initiatives**

Where relevant please give details regarding how, and to what extent, the research priorities mentioned above are related and interlink.

### **Research item list (provided to experts for information)**

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#### **<sup>17</sup> Instructions provided to the Experts:**

The Commission's overall aim for the international panel exercise was to provide expert input into the development of medium to long-term research recommendations which could be implemented to help with effective regulation prevention measures to minimise harm from machine gambling. The Commission is committed to setting out these recommendations to Government Ministers in June of this year. Through previous rounds, expert panel members have been asked to identify the factors associated with gambling-related harm and machines, relevant harm minimisation measures and areas where further research would be beneficial. The Commission would like to use this final round to refine and expand on the recommendations made to date by panel members regarding appropriate research.

In making its recommendations for future research the Commission will look to the newly formed Responsible Gambling Strategy Board to consider these recommendations within its overall priority setting for research, education and treatment for problem gambling. The Strategy Board will use industry raised funds to take forward its research programme and its overall budget for research will be approximately £1m per year on a three year rolling basis. This amount of funding must cover all of its research priorities including evaluating the effectiveness of different approaches to prevention and treatment within the British context. We hope that this information provides a useful guide against which to consider your suggestions for research projects.

Within this context, please outline below at least three research initiatives (with a maximum of five) ranked in order of importance as clearly and specifically as you can. These should be specific to gaming machines and should be prioritised in order to advance the understanding of the association between gaming machine play and gambling-related harm. The Gambling Commission would be grateful for any additional specific advice you would be willing to give regarding how such research priorities would be actualised including recommendations for approach, research designs and methodology.

A list of suggestions made by panel experts during rounds one and two and also some supplementary suggestions made by the Gambling Commission are included as an annex. These are intended to provide additional information which may inform your views, although please feel welcome to include anything which not been considered in this list.

Below is a list of suggestions made by panel experts during rounds one and two and also some supplementary suggestions made by the Gambling Commission. Expert views do not necessarily need to include items presented in any of boxes below. These are only intended to provide additional information which may or may not inform your views.

Research projects may combine one or more of the items presented below. This information also comprises both potential research topics (section i to iii) and methodological approaches (section iv):

i) General research investigating the association of gaming machines with harm.

- An investigation into the transition between adolescent and adult machine gambling.
- An investigation into the relationship between geographical location (eg density, distance, accessibility) of gaming machines and harm.
- Regular evaluations of the knowledge and behaviour of the staff and management of gaming venues regarding principles of harm minimisation and their promotion.
- Regular evaluations of changes to gaming machine policies (eg increases in stake size) and the impacts on gaming machine player behaviour and related harm.
- Mandatory 'community impact' assessments for venues seeking licences for gaming machines in new or existing venues including follow-up studies.
- A review of voluntary harm minimisation measures in Great Britain including an assessment of the extent of implementation.
- An investigation into the impact of use and misuse of alcohol on machine gambling.
- An investigation into the impact of emotional and affective state (eg sad, happy, anxious) on machine gambling.
- An exploration into the impact of frequency of play and machine gambling
- A comparison of existing harm minimisation for gaming machines in Great Britain with other jurisdictions.

ii) Research investigating the association of structural and design factors in gaming machines with harm.

Research into the role of the following factors in the creation and/or facilitation of harm:

- Stake Size.
- Size of Prizes.
- Speed of Play.
- Access to Additional Funds.
- Percentage Return to Player.
- Distribution of Prizes and Volatility.
- Ambient Factors (eg lights, colour, music etc).
- Theme or Branding (eg The Simpsons, Wheel of Fortune etc.).

iii) Research regarding approaches to harm mitigation for gaming machines.

Research investigating the following in relation to gambling behaviour and harm mitigation:

- The impact of upper stake limits.
- The impact of upper limits on size of prize.
- The impact of large wins not paid out in cash.
- The impact of pop-up messages checking if player wishes to cash out.
- The use and impact of player transaction statements (ie record of net expenditure enabled through card-based technology).
- The use and impact of self-set player financial spend limits (enabled through card-based technology).
- The use and impact of self-set player time limits (enabled though card-based technology).
- The use and impact of self-exclusion options (enabled through card-based technology).
- The general acceptance and use of card-based technology by players (are they willing to use and under what conditions).
- The impact of limiting the number of betting lines.
- The impact of knowing pay-tables and odds of winning for each prize.
- The impact of reducing reel speed.

- The impact of banning autoplay.
- The impact of banning ATMs in venues.
- The impact of promoting the knowledge and understanding of percentage RTP.
- The impact of banning/limiting near misses.
- The use and impact of mandatory specifications which would ensure that gaming machines perform with a lower volatility.
- The impact of limiting amount withdrawn from ATMs.
- The impact of banning note acceptors.
- The impact of enforcing 'cooling-off' periods.
- The impact of restricting opening hours.
- The impact of mandatory cash-out features.

#### iv) Methodologically Specific Approaches

Certain methodological approaches will be more relevant for certain research topics. However, broadly speaking we would be interested in your views regarding which approaches may yield the most useful findings for advancing the understanding of the association between gaming machine play and gambling-related harm:

- Use of player data (eg card-based loyalty data) to examine the impact of structural and/or situational factors on gambling behaviour and gambling-related harm.
- Ecologically valid experiments (where player data may be unavailable) run in live gambling venues to examine the impact of various structural and situational factors on gambling behaviour and gambling-related harm.
- Qualitative research to develop theory for subsequent testing.
- Longitudinal studies with large, staged cohorts to explore the nature, incidence, risk & protective factors of gambling problems and harm in various socio-cultural groups.

## Annex E – Stage 4 questionnaire<sup>18</sup> (British panel)

### Question 1: Overall views on research priorities

Please rank<sup>19</sup> the five priority research areas, as identified by the International Panel, according to how you think they should be prioritised for a Gaming Machine Research Programme for Great Britain. Please ignore any proposed research topic that you deem irrelevant by not assigning it a rank. You are also permitted to add other research topics to the ranking task that you feel have been ignored:

- The Promotion of Education, Information and Player Control.
- Impact of Site and Access to Additional Funds.
- Impact of Machine Structure.
- The Role of the Socio-spatial and Cultural Environment Developmental Aspects of Gaming Machine Related Harm.
- Other<sup>20</sup> (please specify in comment box below).

### Question 2: The Promotion of education, information and player control

Having read the summary of this research topic, please state your views regarding the following:

(a) The relevance and appropriateness of the research topic for developing a better understanding of gaming machines in Great Britain.

(b) The potential challenges inherent in exploring the research topic in the British context.

### Question 3: Impact of site and access to additional funds

Having read the summary of this research topic, please state your views regarding the following:

(a) The relevance and appropriateness of the research topic for developing a better understanding of gaming machines in Great Britain.

(b) The potential challenges inherent in exploring the research topic in the British context.

### Question 4: Impact of machine structure

Having read the summary of this research topic, please state your views regarding the following:

(a) The relevance and appropriateness of the research topic for developing a better understanding of gaming machines in Great Britain.

(b) The potential challenges inherent in exploring the research topic in the British context.

### Question 5: The role of the socio-spatial and cultural environment

Having read the summary of this research topic, please state your views regarding the following:

(a) The relevance and appropriateness of the research topic for developing a better understanding of gaming machines in Great Britain.

(b) The potential challenges inherent in exploring the research topic in the British context.

### Question 6: Developmental aspects of gaming machine related harm

Having read the summary of this research topic, please state your views regarding the following:

(a) The relevance and appropriateness of the research topic for developing a better understanding of gaming machines in Great Britain.

(b) The potential challenges inherent in exploring the research topic in the British context.

### Question 7: Other topics as identified by you in question 1

If you identified other topics in question 1, please state your views regarding the following:

(a) The relevance and appropriateness of the research topic for developing a better understanding of gaming machines in Great Britain.

(b) The potential challenges inherent in exploring the research topic in the British context.

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#### <sup>18</sup> Instructions provided to the Experts:

Panellists are asked to read the summary of views regarding suggested research priorities for a Gaming Machine Research Programme for Great Britain based on an International Panel Exercise. The International Panel is composed of academic and other experts from various jurisdictions who were identified as experts in the area of gaming machines and problem gambling.

<sup>19</sup> Here and throughout the questionnaire the experts were asked to rank statements on the scale of one to six.

<sup>20</sup> Here and throughout the questionnaire, if experts selected 'other' they were invited to specify.

**Question 8: Additional views on a gaming machine research programme for Great Britain...**

Finally, we are interested in any other views you may like to share regarding a Gaming Machine Research Programme for Great Britain (eg timescales, links to other research priorities, costs, potential for collaboration).

Gambling Commission November 2009

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## Keeping gambling fair and safe for all

For further information or to register your interest in the Commission please visit our website at:  
**[www.gamblingcommission.gov.uk](http://www.gamblingcommission.gov.uk)**

Copies of this document are available in alternative formats on request.

Gambling Commission  
Victoria Square House  
Victoria Square  
Birmingham B2 4BP

**T** 0121 230 6666

**F** 0121 230 6720

**E** [info@gamblingcommission.gov.uk](mailto:info@gamblingcommission.gov.uk)

**INFO 09/69**