THE UNIVERSITY OF SYDNEY

14th June 2022

Legislation, Policy and Programs Division
Justice and Community Safety Directorate
ACT Government
GPO Box 158
Canberra ACT 2601

Dear Justice and Community Safety Directorate,

Thank you for the opportunity to contribute to your public consultation on the **Discussion Paper - Lowering bet and credit limits for electronic gaming machines**.

This submission focuses on providing evidence-informed responses to two main aspects of the Discussion Paper, namely cashless gambling and self-exclusion.

Cashless gambling

The ACT Government has signalled potential changes to the way people pay to use electronic gaming machines (EGMs) in gaming venues. This submission aims to outline the potential benefits and risks of a shift to cashless gambling in venues from the perspective of gambling harm minimisation. As no specific details of the proposed regulatory reforms to payment method are currently available, we have adopted a broad approach in considering the range of potential challenges and benefits associated with the implementation of cashless gambling, including card-based and digital payment systems.

Our review of the academic literature and research conducted to date indicates that there is little evidence available to guide the design and implementation of cashless payment systems for in-venue gambling. Noteworthy risks include the reduced psychological salience of cashless transactions ('tokenisation', making money seem less 'real' compared to cash), and the potential elimination of natural breaks in play inherent in cash-based EGM gambling (suspension of play to withdraw additional funds from ATMs outside the gaming floor). However, if systems are implemented with robust and effective controls to mitigate risks (i.e., responsible gambling/consumer protection tools), it seems plausible that cashless gambling might incorporate important strategic potential that could contribute to minimising harms associated with gambling.

Importantly, we note that the strategic potential of cashless gambling for harm minimisation appears to be contingent on a completely cashless system being adopted. That is, should a cashless system be adopted, a ban on cash payments would seem logical to prevent circumvention of integrated harm minimisation strategies.

Self-exclusion

We fully support a uniform territory-wide self-exclusion system and establishment of an online portal. We expect a territory-wide self-exclusion system and online portal to increase program uptake and effectiveness, provide greater opportunity for cross-venue collaboration, and improve research capacity. Requirement for account-based cashless gambling payments would greatly enhance the ability of venues to enforce self-exclusion agreements.

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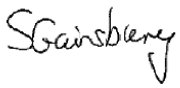
The capacity to personalise certain aspects of a self-exclusion agreement to meet the individual needs and expectations of consumers is likely to improve general uptake and adherence to self-exclusion programs. We support options for longer self-exclusion periods, up to lifetime (with routine monitoring), after individuals complete an initial self-exclusion period. We recommend developing a separate 'break-in-play' or 'timeout' scheme with shorter timeframes for lower risk groups or those wanting to trial the exclusion concept before they commit to a full self-exclusion program.

Multi-stakeholder collaboration and investment in research trials are needed to investigate the impact of proposed changes on the way individuals gamble, and to test the effectiveness of different types and combinations of interventions to ensure any changes have the desired effect in terms of reducing harm and avoiding unintended adverse consequences.

We are actively conducting research in this area and would be happy to respond to any questions.

Sincerely,



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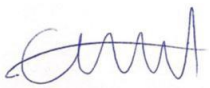

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Submission to the ACT Government's public consultation on lowering bet and credit limits for electronic gaming machines

CASHLESS GAMBLING PAYMENT SYSTEMS

Background

Many countries are rapidly moving towards becoming predominantly or completely cashless societies as consumers increasingly adopt digital payment instruments over banknotes and coins.[1] By 2024, cash is forecast to be overtaken by mobile and digital wallets (33.4%), credit cards (22.8%), and debit cards (22.4%) as the top point-of-sale payment methods globally.[2] The COVID-19 pandemic appears to be accelerating this process as authorities and industry encourage consumers to use contactless payment methods as part of efforts to reduce disease transmission.[3] The shift to cashless payment is occurring across industries, including many which even recently have been predominantly cash-based.[4] Internationally, several jurisdictions are actively considering permitting cashless payments for land-based gambling venues, which have typically dealt in cash and cash-like tokens, such as casino chips.[5]

Defining cashless gambling

For the purposes of this submission, we define cashless gambling as any method by which a person can pay to engage in a gambling activity in a land-based gambling venue without using cash (i.e., physical currency, such as banknotes and coins). Examples of cashless payment methods for gambling include:

- Paper-based ticketing systems (e.g., 'ticket-in, ticket-out' [TITO] systems);
- Card-based payment methods:
    - Gambling-specific magnetic stripe cards or smart cards with embedded integrated circuit chips;
    - Non-gambling-specific card-based payment methods (e.g., bank-issued debit cards);
- Digital payment methods (e.g., via smartphones, tablets, digital watches):
    - Gambling-specific virtual cards accessed using an app on a mobile device;
    - Gambling-specific digital wallets and payment apps (e.g., a gambling-specific app) in which funds can only be used to facilitate payment directly at the gambling activity (i.e., gaming machine or table);
    - Venue-specific digital wallets and payment apps in which funds can only be used within the gaming venue, but may be used for non-gambling amenities (e.g., food and beverages);
    - Non-gambling-specific digital wallets and payment apps (e.g., Apple Pay, Google Pay).

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[1] Brainard, L. (2019, October 16). *Digital currencies, stablecoins, and the evolving payments landscape*. The Future of Money in the Digital Age, Washington, D.C. https://www.federalreserve.gov/newsevents/speech/files/brainard20191016a.pdf; Caddy, J., Delaney, L., Fisher, C., & Noone, C. (2020). *Consumer payment behaviour in Australia*. Reserve Bank of Australia. https://www.rba.gov.au/publications/bulletin/2020/mar/pdf/consumer-payment-behaviour-in-australia.pdf; Commonwealth Bank of Australia. (2019). *Turning point: Calling time on cash*. https://www.commbank.com.au/content/dam/commbank-assets/business/industries/2019-06/CBBUS2035_Whitepaper_190605.pdf

[2] Worldpay. (2021). *Global payments report*. https://worldpay.globalpaymentsreport.com/en/

[3] Agarwal, S. (2020, April 27). The top eight ways COVID-19 will impact payments. *Accenture Banking Blog*. https://bankingblog.accenture.com/top-eight-ways-covid-19-will-impact-payments; World Health Organization, & Global Health Cluster Cash Task Team. (2020). *Guidance note on the role of cash and voucher assistance to reduce financial barriers in the response to the COVID-19 pandemic, in countries targeted by the Global Humanitarian Response Plan COVID-19*. https://www.who.int/health-cluster/about/work/task-teams/Guidance-note-CVA-COVID.pdf

[4] Caddy et al. (2020).

[5] Nevada Gaming Commission. (2020). *Notice of heading for consideration of proposed amendments to Nevada Gaming Commission regulations 1 and 14 regarding, without limitation, electronic transfers of money to a game or gaming device*. https://gaming.nv.gov/modules/showdocument.aspx?documentid=16767; Parker, G. (2020, July 23). Crown Perth to trial EFTPOS transactions to buy chips at the gaming table. *6PR*. https://www.6pr.com.au/exclusive-crown-perth-to-trial-eftpos-transactions-to-buy-chips-at-the-gaming-table/; Sieroty, C. (2020, June 4). *Coronavirus pandemic pushes Nevada regulators to consider cashless gaming*. https://gamblingcompliance.com/premium-content/insights_analysis/coronavirus-pandemic-pushes-nevada-regulators-consider-cashless; Velotta, R. N. (2020, June 25). Nevada commission considers regulations for more cashless gaming. *Las Vegas Review-Journal*. https://www.reviewjournal.com/business/casinos-gaming/nevada-commission-considers-regulations-for-more-cashless-gaming-2060594/

Each of the above payment methods can vary in other manners that are highly relevant to their role in consumer protection, including:

- Anonymous vs. registered play on gaming machines;
- Ability to fund account remotely vs. in-venue;
- Ability to fund account independently (i.e., using a kiosk) vs. with cashier/staff assistance;
- Ability to fund account with physical cash vs. electronic funds transfer;
- Ability to withdraw funds in-venue vs. via electronic funds transfer;
- Extent of integration with venue loyalty cards and rewards programs.

The gambling payments landscape in Australia

Although land-based gambling is still predominantly cash-based in Australia, two variants of cashless gambling have been permitted in some jurisdictions for nearly 20 years:[6]

1. 'Ticket-in, ticket-out' (TITO) systems: The user typically begins gambling by inserting cash (banknotes or coins) to load credits onto a gaming machine. When the user finishes playing on that machine, remaining credits are collected via a printed ticket ('ticket out' functionality), which can be used to continue playing at another machine by scanning the printed barcode ('ticket in' functionality), or alternatively, exchanged for cash at a cash redemption terminal (kiosk).
2. Card-based systems: These systems allow the user to load funds onto a magnetic stripe card or smart card (with an embedded integrated circuit chip), such as by cash, cheque, or electronic funds transfer payments at a kiosk. The stored value is kept in a venue-based account or 'cashless wallet'. The card can be used to play on gaming machines and funds can be withdrawn at kiosks. Cards may be multifunctional through integration with member loyalty programs and pre-commitment systems.[7] Alternatively, cards can be used anonymously (e.g., by non-members).

From an industry perspective, cashless payment technologies are attractive to gambling operators for a number of reasons and are ultimately expected to have positive impacts on the company bottom line, although up-front setup costs may be high.[8] Potential benefits for operators include:

- Better customer retention rates (e.g., customers may be more likely to re-visit a gambling venue for which they already have funds loaded in a digital wallet);
- Enhanced compliance and reporting capabilities (e.g., for mandatory 'Know Your Customer' and anti-money laundering regulatory requirements);
- Greater operational and cost efficiencies (e.g., avoiding maintenance and security issues relating to cash handling);
- Increased opportunities for highly personalised marketing based on individual preferences (e.g., member loyalty programs).

Aside from the hygiene issues related to cash handling during the COVID-19 pandemic, industry stakeholders generally argue that cashless payment methods enhance customers' overall recreational experience by providing three key benefits:[9]

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[6] Blaszczynski, A., & Nower, L. (2008). *Differences in attitudes toward money between subgroups of gamblers: Implications for smart card technologies and an exploration of the Tool and Drug Theories of Money in gambling*. Queensland Treasury. https://www.publications.qld.gov.au/dataset/4d12b47b-d516-4851-82f5-65218fcaadfb/resource/3e99b16d-1454-4c8b-8b35-42f7632f77c7/fs_download/differences-in-attitudes-toward-money-between-subgroups-of-gamblers-implications-for-smart-card-.pdf; Nisbet, S. (2005). Alternative gaming machine payment methods in Australia: Current knowledge and future implications. *International Gambling Studies*, *5*(2), 229–252. https://doi.org/10.1080/14459790500303477; Nower, L., & Blaszczynski, A. (2010). Gambling motivations, money-limiting strategies, and precommitment preferences of problem versus non-problem gamblers. *Journal of Gambling Studies*, *26*(3), 361–372. https://doi.org/10.1007/s10899-009-9170-8; Parke, J., Rigbye, J., & Parke, A. (2008). *Cashless and card-based technologies in gambling: A review of the literature*. http://usir.salford.ac.uk/id/eprint/18206/1/

[7] Victorian Commission for Gambling and Liquor Regulation. (2019). *Ticket-in ticket-out (TITO) and card based cashless (CBC) gaming in gaming venues: Technical standards*. https://www.vcglr.vic.gov.au/sites/default/files/version_2_ticket-in_ticket-out_tito_and_card_based_cashless_cbc_gaming_in_gaming_venues_-_technical_standards.pdf

[8] Bontempo (2019).

[9] American Gaming Association. (2020). *Principles for casino gaming payments modernization*. https://www.americangaming.org/wp-content/uploads/2020/06/AGA_Payment_Choice.pdf

1. Increased convenience (e.g., ability to make 'frictionless' payments in the same way consumers pay for non-gambling transactions, such as for food and beverages in gambling venues);
2. Enhanced security (e.g., not having to carry around large amounts of cash);
3. Better provision of harm minimisation features (e.g., ability to set deposit limits and greater personalisation of activity statements by using payment options linked to customer accounts).

Despite these potential benefits for consumers, a review by Gainsbury and Blaszczynski[10] concluded that there is little empirical evidence available regarding the impact of cashless payment technologies on gambling behaviour, nor is there consensus regarding the most effective strategies for integrated harm minimisation.

What are the risks and concerns regarding digital payment systems for in-venue gambling in relation to gambling harm minimisation?

Cashless transactions typically have lower psychological salience, making money seem less 'real' compared to cash which can reduce awareness of gambling expenditure

A substantial body of research mainly situated in the consumer psychology and marketing literature suggests that different payment methods impact how consumers spend their money. One of the key findings is that consumers are typically less aware of their spending and are willing to spend more when paying with cashless methods relative to cash.[11] Cashless payments may facilitate over-spending as transactions have lower psychological salience compared to payments made in cash.[12] This is particularly concerning in the gambling context where spending (and losing) more money than is personally affordable can result in the experience of significant harms for the individual, their family, and the broader community.[13] Very little research has investigated the impact of payment methods on spending behaviour in the specific context of gambling. The limited evidence available from studies relating to online gambling suggests that digital payment may make it more difficult for some individuals to maintain control over their gambling due to money seeming less 'real' compared to cash.[14]

Research from outside the gambling field shows that payment methods can be distinguished from one another based on several structural characteristics. These structural characteristics affect the overall 'transparency' (salience) of the payment process, which in turn differentially impact how individuals

[10] Gainsbury, S. M., & Blaszczynski, A. (2020). Digital gambling payment methods: harm minimization policy considerations. *Gaming Law Review*, *24*(7), 466-472. https://doi.org/10.1089/glr2.2020.0015

[11] Agarwal, S., Ghosh, P., Li, J., & Ruan, T. (2019, March 4). Digital payments induce over-spending: Evidence from the 2016 demonetization in India. *Proceedings of the 7th Annual Conference of the Asian Bureau of Finance and Economic Research*. http://abfer.org/media/abfer-events-2019/annual-conference/economic-transformation-of-asia/AC19P4028_Digital_Payments_Induce_Excessive_Spending_Evidence_from_Demonetization_in_India.pdf; Bandi, C., Moreno, A., Ngwe, D., & Xu, Z. (2019). *The effect of payment choices on online retail: Evidence from the 2016 Indian demonetization* (Working Paper No. 19–123). Harvard Business School. https://www.hbs.edu/faculty/Publication%20Files/19-123_ea5e9c88-8207-4aef-acb5-b206333b70dc.pdf; Boden, J., Maier, E., & Wilken, R. (2020). The effect of credit card versus mobile payment on convenience and consumers' willingness to pay. *Journal of Retailing and Consumer Services*, *52*, 101910. https://doi.org/10.1016/j.jretconser.2019.101910; Ceravolo, M. G., Fabri, M., Fattobene, L., Polonara, G., & Raggetti, G. (2019). Cash, card or smartphone: The neural correlates of payment methods. *Frontiers in Neuroscience*, *13*, 1188. https://doi.org/10.3389/fnins.2019.01188; Prelec, D., & Simester, D. (2001). Always leave home without it: A further investigation of the credit-card effect on willingness to pay. *Marketing Letters*, *12*, 5–12. https://doi.org/10.1023/A:1008196717017; See-To, E. W. K., & Ngai, E. W. T. (2019). An empirical study of payment technologies, the psychology of consumption, and spending behavior in a retailing context. *Information & Management*, *56*(3), 329–342. https://doi.org/10.1016/j.im.2018.07.007; Soman, D. (2003). The effect of payment transparency on consumption: Quasi-experiments from the field. *Marketing Letters*, *14*, 173–183. https://doi.org/10.1023/A:1027444717586

[12] Raghubir, P., & Srivastava, J. (2008). Monopoly money: The effect of payment coupling and form on spending behavior. *Journal of Experimental Psychology: Applied*, *14*(3), 213–225. https://doi.org/10.1037/1076-898X.14.3.213; Runnemark, E., Hedman, J., & Xiao, X. (2015). Do consumers pay more using debit cards than cash? *Electronic Commerce Research and Applications*, *14*(5), 285–291. https://doi.org/10.1016/j.elerap.2015.03.002; Soman et al. (2003).

[13] Armstrong, A., Thomas, A., & Abbott, M. (2018). Gambling participation, expenditure and risk of harm in Australia, 1997–1998 and 2010–2011. *Journal of Gambling Studies*, *34*, 255–274. https://doi.org/10.1007/s10899-017-9708-0; Swanton, T. B., & Gainsbury, S. M. (2020). Gambling-related consumer credit use and debt problems: A brief review. *Current Opinion in Behavioral Sciences*, *31*, 21–31. https://doi.org/10.1016/j.cobeha.2019.09.002

[14] Gainsbury, S. M., Wood, R., Russell, A. M. T., Hing, N., & Blaszczynski, A. (2012). A digital revolution: Comparison of demographic profiles, attitudes and gambling behavior of Internet and non-Internet gamblers. *Computers in Human Behavior*, *28*(4), 1388–1398. https://doi.org/10.1016/j.chb.2012.02.024; Hing, N., Cherney, L., Gainsbury, S. M., Lubman, D. I., Wood, R. T., & Blaszczynski, A. (2015). Maintaining and losing control during Internet gambling: A qualitative study of gamblers' experiences. *New Media & Society*, *17*(7), 1075–1095. https://doi.org/10.1177/1461444814521140; Hing, N., Gainsbury, S. M., Blaszczynski, A., Wood, R., Lubman, D., & Russell, A. (2014). *Interactive gambling*. Gambling Research Australia. https://www.responsiblegambling.nsw.gov.au/__data/assets/pdf_file/0016/138121/Interactice-Gambling-study.pdf

spend their money.[15] The physical form of the payment method (e.g., cash, card, smartphone) is an example of these structural characteristics. Inherent in the payment form is a degree of feedback about the transaction, which may vary in its quality and frequency.[16] For example, a relatively high level of immediate feedback is involved in cash payments as the payment process typically involves multiple steps, such as counting out the appropriate sum in banknotes and coins from a wallet, physically handing over the money to a cashier attendant, receiving change, and stowing the change in a wallet (thereby providing feedback about the balance of funds remaining in the wallet). In contrast, contactless card or smartphone payments generally involve fewer steps (e.g., retrieving one's card or smartphone and tapping it at the EFTPOS terminal) and may provide less feedback (e.g., the transaction value is usually displayed on the cashier screen, but there is typically no feedback on funds remaining in the account). The relative intangibility of cashless payments may reduce the salience of transactions.

Cashless gambling may increase accessibility of funds and reduce opportunities for breaks in play which can increase unplanned or impulsive gambling

Cashless gambling could potentially involve consumers using bank-issued debit cards directly at gaming machines or casino table games. Alternative implementations of cashless gambling could involve consumers using digital wallets or smartphone payment apps linked to their bank account. In effect, without integrated pre-commitment strategies such as bank transfer or deposit limits in place, such technologies have the potential to substantially increase an individual's access to funds for gambling compared to cash-based gambling. Overall, this could facilitate gamblers spending excessive amounts of time and money at gambling machines with reduced opportunities for breaks in play and staff-patron interactions, which are theorised to assist gamblers in maintaining control over their gambling.[17]

Card-based payment systems currently permitted in Australia do not allow gamblers to transfer funds directly from their bank account to a gaming machine, for example, by using credit or debit cards (although this is permitted in some international jurisdictions).[18] Rather, intermediate steps are required to add credits onto a card for gambling. Under the current system in Australia, if a patron runs out of credits, they generally have to leave the gaming machine either to reload their card with more funds or, if they are using cash, to withdraw more funds from an ATM or EFTPOS facility.[19] In effect, this may function as a temporary 'break in play' or 'cooling-off' period whereby the gambler has an opportunity to reconsider whether to continue playing away from the emotional 'hot state' of play.[20,21] Breaks in play may facilitate interactions between at-risk patrons and venue staff as EFTPOS transactions, for example, often require face-to-face interaction. Several studies show that use of in-venue ATMs and EFTPOS facilities is associated with problem gambling.[22] For this reason, several jurisdictions have limits on cash withdrawals and requirements for ATMs to be located away from the gaming floor.[23] The requirements to leave a gaming machine and the gaming floor, engage in physical movement, and interact with non-gambling stimuli (potentially including interactions with venue staff) all provide an opportunity for individuals to reduce the emotional arousal that can be caused by gambling and to consider whether they wish to continue gambling, ideally in a calm, rational, and informed state. It is therefore critical to understand how changes to gambling payment methods may impact individuals' risk of experiencing gambling-related harms.

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[15] Soman, D., Cheema, A., & Chan, E. Y. (2012). Understanding consumer psychology to avoid abuse of credit cards. In D. G. Mick, S. Pettigrew, C. Pechmann, & J. L. Ozanne (Eds.), *Transformative consumer research for personal and collective well-being* (1st ed., pp. 423–443). Routledge. https://doi.org/10.4324/9780203813256

[16] Soman et al. (2012).

[17] Nower & Blaszczynski (2010).

[18] Livingstone, C. (2017). *How electronic gambling machines work: EGM structural characteristics* (AGRC Discussion Paper No. 8). Australian Gambling Research Centre, Australian Institute of Family Studies. https://aifs.gov.au/agrc/sites/default/files/publication-documents/1706_argc_dp8_how_electronic_gambling_machines_work.pdf

[19] Office of Liquor, Gaming and Racing. (2016). *Gaming machine harm minimisation measures: Consultation paper*. https://s3.ap-southeast-2.amazonaws.com/hdp.au.prod.app.vic-engage.files/7514/8590/8989/Gaming_Machine_Harm_Minimisation_Measures_Consultation_Paper.pdf

[20] Nower & Blaszczynski (2010).

[21] However, there is little empirical evidence available to support this assertion. For example, Parke et al. (2008) note that it is unclear whether such a break in play allows sufficient time for problem gamblers to 'cool off' and make rational spending choices.

[22] Productivity Commission. (2010). *Gambling: Productivity Commission inquiry report (Volume 1)*. https://www.pc.gov.au/inquiries/completed/gambling-2009/report/gambling-report-volume1.pdf

[23] It would be important to ensure any cashless payment system is consistent with existing limits on access to cash in venues.

What are the potential benefits of digital payment systems for in-venue gambling in relation to gambling harm minimisation?

The strategic value of cashless gambling systems for minimising gambling-related harm is largely derived from their potential for capturing customer transaction data and for integration with existing harm-minimisation strategies, such as multi-venue self-exclusion registers and the National Consumer Protection Framework for Online Wagering. For example, when coupled with a pre-commitment tool, cashless systems have the potential to help individuals manage their gambling expenditure within personally affordable limits (e.g., by requiring or incentivising limit-setting).[24,25] When transaction data is linked with customer accounts, it is possible to obtain a much clearer overview of an individual's overall gambling and to make more accurate risk assessments, which can be used to guide personalised interventions to reduce risk of harm.

Gainsbury and Blaszczynski have outlined a number of potential ways in which cashless gambling systems could be leveraged for gambling harm minimisation: [26]

- *Mandatory age verification:* Requiring customers to provide proof of identity when registering for a cashless gambling account and integration with facial recognition technology detection systems would act as a measure to prevent minors from accessing gambling products in venues.
- *Integration with self-exclusion registers:* Requiring customers to use their cashless gambling account and not permitting the use of cash to play on gaming machines would reduce the potential for individuals who have active self-exclusion agreements to access gaming machines.
- *Integration with financial institution gambling blocks:* Many financial institutions have begun offering their customers the option to block gambling transactions on their debit and credit cards.[27] Cashless gambling systems should be integrated with these blocks (e.g., via the relevant merchant category code, where possible) to prevent deposits into gambling accounts when blocks are activated.
- *Enhanced limit-setting capabilities:* A default upper limit could be imposed on the amount that can be deposited into a cashless gambling account at any one time, and a delay could be imposed before deposited funds can be gambled to prevent rapid gambling of funds in emotional 'hot states.' Customers could be incentivised or required to set limits on the amount of time and money that can be spent within specific time periods (e.g., per day/week/month). Open banking technology could be leveraged to help individuals set appropriate limits based on their personal financial situation and to conduct affordability checks in cases where indicators of risky gambling behaviour are present.
- *Immediate processing of withdrawals:* Customers should be able to withdraw funds from their cashless gambling account with immediate effect, and there should be no limit on the amount that can be withdrawn. Winnings could be deposited directly into a bank account linked to the gambling account to prevent immediate re-gambling of funds.
- *Real-time temporary time-outs:* Customers should have the ability to temporarily pause gambling activity on their account with immediate effect.
- *Activity statements with increased accuracy:* Cashless gambling potentially allows a customer's transaction data to be aggregated across different gambling sessions, venues, activities, modes, and licensed operators in real time. Aggregate outcomes (e.g., net losses) should be presented to customers in the form of meaningful activity statements incorporating

[24] Nower & Blaszczynski (2010); Rintoul, A., & Thomas, A. (2017). *Pre-commitment systems for electronic gambling machines: Preventing harm and improving consumer protection* (AGRC Discussion Paper No. 9). Australian Gambling Research Centre, Australian Institute of Family Studies. https://aifs.gov.au/agrc/sites/default/files/publication-documents/1707_agrc_dp9-pre-commitment.pdf

[25] Evidence on the effectiveness of pre-commitment tools is mixed and uptake of voluntary tools is generally low, especially among higher risk gamblers. Ladouceur, R., Blaszczynski, A., & Lalande, D. R. (2012). Pre-commitment in gambling: A review of the empirical evidence. *International Gambling Studies*, *12*(2), 215–230. https://doi.org/10.1080/14459795.2012.658078; Ladouceur, R., Shaffer, P., Blaszczynski, A., & Shaffer, H. J. (2017). Responsible gambling: A synthesis of the empirical evidence. *Addiction Research & Theory*, *25*(3), 225–235. https://doi.org/10.1080/16066359.2016.1245294; McMahon, N., Thomson, K., Kaner, E., & Bambra, C. (2019). Effects of prevention and harm reduction interventions on gambling behaviours and gambling related harm: An umbrella review. *Addictive Behaviors*, *90*, 380–388. https://doi.org/10.1016/j.addbeh.2018.11.048

[26] Gainsbury, S. M., & Blaszczynski, A. (2020). Digital gambling payment methods: Harm minimization policy considerations. *Gaming Law Review*. https://doi.org/10.1089/glr2.2020.0015

[27] Financial Counselling Australia. (2020). *FCA welcomes NAB's self-serve gambling restriction in app*. https://www.financialcounsellingaustralia.org.au/fca-welcomes-nabs-self-serve-gambling-restriction-in-app/

graphical representations that allow the customer to better understand their overall gambling expenditure and behaviour.

- *Proactive monitoring and personalised interventions:* Aggregate transaction data presents a clearer picture of an individual's overall gambling behaviour, meaning risk assessments can be made with greater accuracy and targeted interventions can be delivered to customers at varying levels of risk. Customers could receive regular personalised feedback messages, which could be designed to increase gamblers' awareness of aggregate outcomes (e.g., net losses) and delivered on-screen or via smartphone push notifications. The system could prompt venue staff to interact with customers in cases where accounts display indicators of risky gambling behaviour.

Table 1 summarises the key risks identified and potential mitigation strategies that could be integrated into cashless gambling systems. We note that the proposed mitigation strategies are suggestions only and have not been empirically tested in Australia.

Table 1

Potential strategies for mitigating key risks of cashless gambling in relation to harm minimisation

Risk of increasing gambling harms	Potential risk mitigation strategies
Reduced awareness of spending	• Requirement to enter exact amount to deposit into the cashless gambling account with low-value anchors suggested (e.g., $10) • Multiple approvals from customer required before a transaction is processed (e.g., please confirm) • Immediate alerts and records of expenditure delivered electronically (e.g., via SMS) • Regular (e.g., monthly) activity statements delivered automatically (e.g., via email) • Requirements to pre-set daily and monthly expenditure limits • Waiting periods before requests to increase expenditure limits can take effect • Default maximum expenditure limits • Automated system to monitor risk including alerts to the individual and venue in cases where indicators of potentially risky gambling are present
Impulsive or unplanned spending	• Requirements for customers to physically leave the gaming floor to load credit onto their account • Waiting periods before being able to spend credits loaded onto account
Spending more than intended or unaffordable gambling expenditure	• Requirements to pre-set daily and monthly expenditure limits • Waiting periods before requests to increase expenditure limits can take effect • Default maximum expenditure limits • Automated system to monitor risk including alerts to the individual and venue in cases where indicators of potentially risky gambling are present • Automatic withdrawal of funds to customer's bank account following a "big win" or when funds reach a specified level • Integration with self-exclusion registers • Ability to take immediate, temporary "time-outs" to take a break from gambling (e.g., 24 hours, 7 days, 1-5 months)

Further research is recommended

One important avenue for further attention is the integration of gambling tools provided by financial institutions and banks. Implementing consumer protection tools integrated with individual bank accounts would potentially allow global limits, blocks, and tracking for all gambling expenditure via the relevant merchant category code, and gambling-specific harm-minimisation monitoring by financial institutions.[28] This implementation may be advantageous from a harm-minimisation perspective for several reasons:

- Aggregate gambling expenditure across licensed operators and modes (i.e., land-based and online) can be easily tracked by the customer's bank via the relevant merchant category code;
- Pre-commitment could be applied via the relevant merchant category code so that expenditure limits are comprehensive and effective across all licenced operators and modes (as opposed to consumers having to set limits with individual operators);
- Financial institutions are better placed than gambling operators to conduct affordability checks as banks already have access to information about their customers' financial situation, including income, spending, and debts;
- Potential conflicts of interest for gambling operators are diminished if financial institutions have responsibility for conducting affordability checks and ensuring customers set gambling expenditure limits appropriate to their personal financial situation;
- Consumers could use their existing bank-issued debit card (either via physical card or smartphone app), rather than having to use a gambling- or venue-specific card.

Multi-stakeholder collaboration is critical to advancing our understanding of this complex issue: government, the gambling industry, the financial services industry, researchers, gambling and financial counselling providers, and consumers all have relevant knowledge and expertise that must be considered.[29]

Given the absence of robust scientific evidence in this area, research studies are needed to provide an evidence base for the creation of harm-minimisation policies and practices relating to in-venue cashless gambling systems. Conceptual studies are needed to advance our understanding of how payment methods impact gambling behaviour and interact with individual characteristics, including vulnerabilities to experiencing gambling harms. Qualitative studies involving end-users should seek to understand the influence of payment-related environmental factors in the pathways from recreational gambling to problem gambling. These findings would be useful for identifying touchpoints for payment-related interventions to prevent and minimise gambling-related harms. In-venue live trials should take place as part of a regulatory sandbox approach to examine the effects of new payment systems on customer gambling behaviour, and to optimise design features for harm minimisation. Trials should carefully consider the optimal implementation of any new technology to ensure the aims and capabilities are appropriately understood by consumers and venue staff, and crucially to avoid misperceptions. Unintended negative consequences need to be investigated, such as consumers transitioning to alternative and less regulated forms of gambling, swapping cards, or taking other actions to circumvent restrictions. Ultimately, it is imperative that any proposed system shows substantive evidence for effective gambling harm minimisation.

Conclusions regarding cashless gambling payment systems

There is relatively little scientific evidence available to guide the design and implementation of cashless gambling systems. We have identified several noteworthy risks that have the potential to increase experience of gambling-related harms. However, provided that effective risk mitigation strategies are employed, cashless gambling appears to present promising opportunities for more integrated approaches to minimising the significant harms associated with gaming machines. Many of these strategies are not feasible for implementation with a cash-based system due to the inherent difficulties in tracking expenditure. Importantly, we note that the strategic potential of cashless

[28] Swanton, T. B., Gainsbury, S. M., & Blaszczynski, A. (2019). The role of financial institutions in gambling. *International Gambling Studies*, *19*, 377-398. https://doi.org/10.1080/14459795.2019.1575450

[29] Gainsbury, S. M., Black, N., Blaszczynski, A., Callaghan, S., Clancey, G., Starcevic, V., & Tymula, A. (2020). Reducing Internet gambling harms using behavioral science: A stakeholder framework. *Frontiers in Psychiatry*, *11*, 598589. https://doi.org/10.3389/fpsyt.2020.598589; Swanton, T. B., Blaszczynski, A., Forlini, C., Starcevic, V., & Gainsbury, S. M. (2019). Problematic risk-taking involving emerging technologies: A stakeholder framework to minimize harms. *Journal of Behavioral Addictions*. https://doi.org/10.1556/2006.8.2019.52

gambling for harm minimisation appears to be contingent on a completely cashless system being adopted. That is, should a cashless system be adopted, a ban on cash payments would seem logical to prevent circumvention of integrated harm minimisation strategies. We recognise that a period of transition would be required. Thorough consultation and careful communication with venues, staff, and customers would be essential to ensure the successful implementation of a cashless system that contributes to effective gambling harm minimisation.[30]

SELF-EXCLUSION

Length of self-exclusion

We support the concept of variable self-exclusion periods enabling consumers the flexibility of choosing their preferred ban length. The capacity to personalise certain aspects of a self-exclusion agreement to meet the individual needs and expectations of consumers is likely to improve general uptake and adherence to these programs.[31] In support, a qualitative investigation of key stakeholder perspectives conducted by the authors identified 'flexibility' as an important underlying characteristic of self-exclusion systems[32]. Other studies have found that individuals enrolled in self-exclusion for longer than 12 months reported higher overall satisfaction with their 'quality of life' than those enrolled for less time[33]. Participants have also indicated their preference for longer self-exclusion options than what was currently available (i.e., 48 months maximum), including the potential for lifetime bans.[34] This finding is supported by our team's research in the online gambling setting where longer self-exclusion periods are available.[35] In an investigation of account data from nearly 40,000 Australian wagering customers from six sites they found that, of those who used self-exclusion tools, only 22% chose to self-exclude for a period of one to five years, whereas 78% chose to self-exclude for five or more years.[36] Therefore, we recommend options for longer self-exclusion periods, up to lifetime (with routine monitoring), after individuals complete an initial self-exclusion period. We recommend developing a separate 'break-in-play' or 'timeout' scheme with shorter timeframes for lower risk groups or those wanting to trial the exclusion concept before they commit to a full self-exclusion program.

Territory-wide self-exclusion system with online registration portal

We strongly support the implementation of a territory-wide self-exclusion system and development of an online registration portal. A single self-exclusion register will reduce the cost and complexity of maintaining independent registers; resources may be pooled together and invested in ongoing efforts to develop an optimal system. A centralised digital database including data collected from all self-excluded individuals in the ACT will significantly enhance the capacity to monitor and evaluate program effectiveness. Ultimately, consumers will benefit from a more accessible, streamlined system, with enhanced detection capabilities and capacity to provide timely intervention.

Self-exclusion programs internationally are beginning to transition to centralised digital systems. This will occur in Australia through the National Consumer Protection Framework, which includes the implementation of national online self-exclusion system that encompasses all licensed wagering sites[37]. Nationwide programs operate in several European countries, including the UK, France, Poland, Denmark, Sweden, Estonia, and Switzerland.[38] The potential impact of such programs is

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[30] Gainsbury, S. M., Jakob, L., & Aro, D. (2017). Understanding end-user perspectives to enhance perceived uptake of harm-minimization tools: Considering gambler's views of a pre-commitment system. *International Gambling Studies*, *18*, 22-38. https://doi.org/10.1080/14459795.2017.1370723

[31] Pickering, D., Nong, Z., Gainsbury, S. M., & Blaszczynski, A. (2019). Consumer perspectives of a multi-venue gambling self-exclusion program: A qualitative process analysis. *Journal of Gambling Issues, 41*, 20-39. https://doi.org/10.4309/jgi.2019.41.2

[32] Pickering, D., Serafimovska, A., Cho, S. J., Blaszczynski, A., Gainsbury, S. M. (2020). *Development of a website for self-directed gambling venue self-exclusion: A multi-stakeholder requirements content analysis* [Unpublished manuscript]. The School of Psychology, University of Sydney.

[33] Pickering, D., Blaszczynski, A., & Gainsbury, S. M. (2018). Multi-venue self-exclusion for gambling disorders: A retrospective process investigation. *Journal of Gambling Issues*, *38,* 127-151. https://doi.org/10.4309/jgi.2018.38.7

[34] Pickering, D., Nong, Z., Gainsbury, S. M., & Blaszczynski, A. (2019). Consumer perspectives of a multi-venue gambling self-exclusion program: A qualitative process analysis. *Journal of Gambling Issues, 41, 20-39*. https://doi.org/10.4309/jgi.2019.41.2

[35] Heirene, R., & Gainsbury, S. M. (2021). Encouraging and evaluating limit-setting among on-line gamblers: a naturalistic randomized controlled trial, *Addiction*, *116*, 2801-2813. https://doi.org/10.1111/add.15471

[36] Heirene, R., Vanichkina, D., & Gainsbury, S. M. (2020). The use and effectiveness of consumer protection tools (presentation). Retrieved from https://osf.io/tr2px/

[37] Pickering, D. & Hunt, C. J. (2017). *Action on problem gambling online is a good first step, but no silver bullet.* The Conversation. https://theconversation.com/action-on-problem-gambling-online-is-a-good-first-step-but-no-silver-bullet-76857

[38] Laansoo, S., & Niit, T. (2009). Estonia. In Meyer, G., Hayer, T., & Griffiths. M. D (Eds.), *Problem gaming in Europe: Challenges, prevention, and interventions* (pp. 37–52). https://doi.org/10.1007/978-0-387-09486-1

demonstrated by Sweden's *Spelpaus* system which exceeded 50,000 sign-ups in its first year of inception[39].

Our research has found that multiple factors act as barriers to uptake of existing self-exclusion programs including feelings of shame and perceived stigma, time intensive registration and verification procedures, and the desire to self-manage problems.[40] The requirement to attend gambling venues in-person to initiate self-exclusion is contraindicated to effective harm minimisation as exposure to gambling environments has been shown to generate strong urges in those with gambling problems, which is a known predictor of gambling relapse.[41] In our qualitative evaluation of self-exclusion, most participants preferred the option of self-excluding remotely and unassisted by venue staff or a counsellor.[42] Participants highlighted the potential of an online system to increase accessibility and privacy, streamline processes, avoid embarrassment, and encourage personal ownership of help-seeking behaviour.

Efforts to develop an online exclusion portal should be guided by input derived from all relevant stakeholders including self-exclusion consumers (i.e., individuals with lived experience of gambling problems), policy makers, gambling industry representatives, problem gambling researchers and clinicians, and community advocacy groups. This approach is expected to engender superior decision-making with respect to development and implementation, in addition to greater collaboration and buy-in across all stakeholder groups.[43] Based on person-centred health design principles,[44] the perspectives and priorities of self-exclusion consumers should be weighted highest compared to other groups given their core status as the service recipient.

The authors have conducted research, funded by NSW Office of Responsible Gambling, to develop and evaluate a pilot website enabling individuals to conveniently self-exclude from land-based gaming machine venues in NSW, without being required to attend a face-to-face meeting with staff or a counsellor. We have developed a pilot version of the self-exclusion website informed by findings from a multi-stakeholder qualitative requirements analysis, the existing self-exclusion literature, and our own professional knowledge of these programs. The site has been tested for usability (the ease with which systems can be learned and used) and acceptability (consumer willingness to use technology in real life) among self-exclusion consumers.[45] Results to date have shown that end-users completed the full online self-exclusion process in 15-16 minutes on average and found the system to be 'highly usable'. Three-quarters of participants reported greater satisfaction using the pilot website compared to their experiences with the existing self-exclusion process. Applying a person-centred approach, participants identified various potential improvements to the website that were incorporated into subsequent system upgrades.

Conclusions regarding an enhanced self-exclusion scheme

An online, territory-wide self-exclusion scheme provides a cost-effective solution to several of the limitations associated with existing programs. Our own work in this area highlights the importance of involving multiple stakeholders, especially end-users, when designing and testing enhanced self-exclusion schemes. The 'co-design' approach leads to development of person-centred program features, such as customisable timeframes, that can be expected to improve self-exclusion uptake and effectiveness.

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[39] Håkansson, A., Henzel, V. (2020). Who chooses to enroll in a new national gambling self-exclusion system? A general population survey in Sweden. *Harm Reduction Journal, 17*, 82. https://doi.org/10.1186/s12954-020-00423-x

[40] Pickering, D., Blaszczynski, A., & Gainsbury, S. M. (2018). Multi-venue self-exclusion for gambling disorders: A retrospective process investigation. *Journal of Gambling Issues, 38*, 127–151. https://doi.org/10.4309/jgi.2018.38.7

[41] Smith, D. P., Battersby, M. W., Pols, R. G., Harvey, P. W., Oakes, J. E., & Baigent, M. F. (2013). Predictors of Relapse in Problem Gambling: A Prospective Cohort Study. *Journal of Gambling Studies, 31*, 299–313. https://doi.org/10.1007/s10899-013-9408-3

[42] Pickering, D., Nong, Z., Gainsbury, S. M., & Blaszczynski, A. (2019). Consumer perspectives of a multi-venue gambling self-exclusion program: A qualitative process analysis. *Journal of Gambling Issues*, 41, 20-39. https://doi.org/10.4309/jgi.2019.41.2

[43] Dawda, P., & Knight, A. (2017). Experience based co-design: A toolkit for Australia. Australian Healthcare and Hospitals Association (AHHA) and Consumers Forum of Australia (CHF). Retrieved from https://chf.org.au/experience-based-co-design-toolkit

[44] North, J. (2020). *Achieving Person-Centred Health Systems: Evidence, Strategies and Challenges* (European Observatory on Health Systems and Policies) (E. Nolte, S. Merkur, & A. Anell, Eds.). Cambridge: Cambridge University Press. https://doi.org/10.1017/9781108855464

[45] Pickering, D., Blaszczynski, A., Serafimovska, A., Cho, S., & Gainsbury, S. (2020). *Evaluation of a pilot self-exclusion website for NSW gaming machine venues: Final report.* Responsible Gambling Fund, New South Wales Government. https://www.sydney.edu.au/content/dam/corporate/documents/brain-and-mind-centre/gambling-and-tech-addiction/org_selfexclusion_website_final-report_09032021.pdf

About Us

Our research takes place within the Gambling Treatment and Research Clinic, the only university-affiliated gambling treatment service in Australia, and the Technology Addiction Team, a multi-disciplinary team in the Brain and Mind Centre at the University of Sydney. We are one of the world's leading academic research groups on problem gambling and gambling harm minimisation. The GTRC's mission is to conduct research that informs both policy and practice including a focus on understanding how gambling harms develop and establishing effective evidence-based prevention and treatment approaches. The GTRC receives clinical funding under the NSW Office of Responsible Gambling to provide support, counselling and treatment to people experiencing gambling harm and those affected by other people's gambling. Our clinical services operate across three NSW health districts in the Greater Sydney area: Central Sydney, Blue Mountains and Western Sydney, and South-Western Sydney.

Professor Sally Gainsbury is Director of the Gambling Treatment and Research Clinic, and Founder and Leader of the Technology Addiction Team. Her research focuses on the impact of technology on gambling and behavioural addictions, including understanding the use of technology to minimise harms. She has led and worked with numerous university and consulting teams and policy makers to design and evaluate harm-minimisation policies for gambling venues, including technology-based systems. She is a highly experienced and respected researcher in the gambling field and serves on many policy advisory boards internationally. She is the academic member of Liquor and Gaming NSW Gaming Technology Working Group and the Strategic Pillar Champion for the Regulatory Framework and Technology / Environment working group, Queensland Office of Regulatory Policy Responsible Gambling Advisory Committee. Professor Gainsbury has won numerous awards and fellowships in recognition of her research excellence and its impact for the community, including being named the 2019 NSW Tall Poppy of the Year by the Australian Institute of Policy and Science. Professor Gainsbury has authored over 120 peer-review journal publications, received over $5 million in research funding, and is the Editor of the leading academic journal International Gambling Studies.

Thomas Swanton, supervised by Professor Gainsbury, is currently undertaking a three-year program of PhD research focused on understanding the impact of payment method on gambling behaviour. Mr Swanton was awarded a PhD scholarship through the NSW Government's Gambling Research Capacity Grants program, funded by the NSW Responsible Gambling Fund, and supported by the NSW Office of Responsible Gambling.

Dr Dylan Pickering is a postdoctoral research associate at the Gambling Treatment and Research Clinic at the University of Sydney. Dr Pickering has almost a decade of professional experience in gambling harm minimisation program development and evaluation. This includes his research to monitor long-term outcomes of the ClubsNSW multi-venue self-exclusion program for NSW gambling venues which has been used by over 10,000 Australians. In 2020, Dr Pickering completed a NSW Government funded project to build and pilot test a self-directed website to increase the accessibility and convenience of self-exclusion entry. He completed his PhD in 2019 on the conceptualisation and measurement of recovery in Gambling Disorder. This research led him to develop the Recovery Index for Gambling Disorder (RIGD) – a patient-reported outcome measure that has since been implemented in clinical trial protocols and as an assessment tool at gambling clinics in Australia and internationally.

Dr Christopher John Hunt is the Senior Clinical Supervisor at the University of Sydney's GambleAware clinics, which are responsible for co-ordinating government-funded gambling treatment throughout Central, Western and South-Western Sydney, operating out of the University's Brain and Mind Centre. Dr Hunt first began work at the University in the then-titled Gambling Treatment Clinic in early 2007. Since then, he has gained wide recognition for his work with problem gamblers. He has published work on clinical phenomena observed in gambling clients, has been asked to testify before both federal and state parliamentary committees on gambling, has been extensively quoted on gambling in local, national and international media, and has written several pieces on gambling for lay audiences. He is also responsible for co-ordinating clinical supervision to psychologists and counsellors who are working in the gambling field throughout Sydney ,and organises training seminars for mental health practitioners working in the field of problem gambling and information seminars for the general public. Dr Hunt is a registered clinical psychologist. He completed his PhD in social psychology at the University of Sydney in 2012. His PhD research was entitled "Links Between Masculinity Threats and Increased Gender Conformity: An Investigation of New Empirical Directions, Process and Individual Differences" and focused on the maintenance of gender role norms. He previously completed a Bachelor of Science (Advanced) (Honours) from the University of Sydney and a Master of Psychology (Clinical) from the University of New South Wales. Dr Hunt also completed a research fellowship at the University of Trieste (Italy) in 2014 and spent some time visiting the University of Padua (Italy) in 2012.