



STATE OF HAWAII  
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November 3, 2020

The Honorable Ronald D. Kouchi  
Senate President  
Hawaii State Legislature  
415 South Beretania St., 409  
Honolulu, HI 96813

**DEPT. COMM. NO. 218**

The Honorable Scott K. Saiki  
Speaker of the House  
Hawaii State Legislature  
415 South Beretania St., Room 431  
Honolulu, HI 96813

Mr. President and Mr. Speaker,

**Regarding House Concurrent Resolution No. 224, S.D.1 (2019), Digital Gaming Advisory Group.**

Pursuant to House Concurrent Resolution No. 224, S.D.1 (2019), Senator Rhoads and Representative Lee convened the Digital Gaming Advisory Group to examine, assess, and monitor gambling practices in digital games and their potential impacts on the public, including impacts on public health, consumer risk, or other potential negative impacts to the public. Following significant research, discussion, and debate, the Advisory Group drafted a comprehensive report detailing its work, findings, and recommendation. As requested by House Concurrent Resolution No. 224, S.D.1 (2019), please find this report to the Legislature attached.

Sincerely,

Senator Karl Rhoads  
Chair, Senate Committee on Judiciary

Representative Chris Lee  
Chair, House Committee on Judiciary

**House Concurrent Resolution No. 224, HD1, SD1  
(2019)  
Digital Gaming Advisory Group**

**Report to the Legislature**

Submitted November 3, 2020.

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## Executive Summary

Pursuant to House Concurrent Resolution No. 224, H.D. 1, S.D. 1, (2019), the Digital Gaming Advisory Group submits this report to the Hawaii State Legislature.

Through House Concurrent Resolution No. 224, the Legislature found in part, that in recent years, gaming industry developers have begun to employ variable reward mechanisms, some known as "loot boxes," which operate similarly to slot machines, in digital games marketed to adults and children of all ages, through which players can pay real money for chances to win randomized virtual items of varying value. The Legislature also found that, without requirements for disclosure, transparency, or basic protection against exploitive practices, numerous families, individuals, and particularly vulnerable youth have been harmed by exposure to predatory practices and variable reward mechanisms in digital games, such as loot boxes. Accordingly, the Legislature requested the convening of an advisory group to examine, assess, and monitor evolving gambling practices in digital video games that may present a potential public health or consumer risk, potential negative impacts to the public, provide for education and awareness, and make recommendations.

The Digital Gaming Advisory Group (Advisory Group) was convened in October 2019, and its membership consisted of individuals in government and the private sector with an interest or expertise in digital gaming. The Advisory Group asked various interested parties to present on the history and modern practices of the gaming industry, various concerns related to monetization of digital games, and how the gaming industry is responding to these concerns.

The concerns examined by the Advisory Group relating to monetization in the gaming industry generally fall under three categories:

- 1) *Concerns relating to consumer protection;*
- 2) *Concerns relating to gambling; and*
- 3) *Concerns relating to addiction and public health,*

**1) *The concerns relating to consumer protection are categorized into five general areas:***

- Lack of disclosure of the odds of receiving particular randomized items from a loot box;
- Mischaracterized, manipulated, and deceptive odds of winning a particular item;
- The true cost of purchasing a loot box;
- Whether a game includes loot boxes; and
- Whether loot boxes and variable reward mechanisms are added to games after rating and purchase.

Common concerns have been raised over criticism of game developers and publishers for a lack of transparency regarding the odds of winning a particular item when purchasing chances to win it in a loot box. Many players have spent considerable sums expecting to win in-game

items from loot boxes, but in some cases the odds of winning have been found to be just fractions of a percent. Players have also reported loot boxes not paying out rewards as they have been advertised, and concerns have been raised that some games have begun to manipulate the odds of winning based on whether players are more or less likely to continue spending money.

Parents and players have also raised concerns that loot boxes have been included within games with no requirement to disclose their inclusion so consumers can make an informed decision about whether the game would be appropriate for them or not. Game ratings also do not consider the inclusion of loot boxes for age restrictions, meaning games including loot boxes are regularly recommended for minors. Finally, online game updates continue to add loot boxes to games long after the games were rated and after they are purchased, allowing minors and others for whom exposure may not be appropriate to access these mechanisms without parental knowledge.

Loot boxes and predatory monetization are unregulated by any level of government. Many of these unregulated practices are considered predatory, and some could constitute unfair and deceptive trade practices.

**2) *Concerns relating to gambling are categorized into five general areas:***

- Loot boxes effectively enable gambling, due to outdated legal definitions;
- Loot Boxes are made to be psychologically addictive like slot machines, carrying similar risks;
- Access by minors to games with loot boxes that some jurisdictions consider gambling or "Simulated Gambling";
- Loot box winnings can be cashed out for real currency; and
- Loot box items of value have been used to launder criminal money.

The concerns relating to gambling largely revolve around the inclusion and use of loot boxes in digital games as a monetization method. Loot boxes are in-game mechanisms that allow players to purchase a chance to win items of varying value that can assist a player in advancing in the game or to customize his or her game avatar. In some cases, players are able to cash out their winnings. Furthermore, research has been conducted that concludes spending on loot boxes is related to problem gambling behavior. However, it is unclear from these studies if this relation is causative or correlative.

Belgium and The Netherlands have determined that the inclusion and use of certain loot boxes constitute gambling under those the laws of those countries. Additionally, committees of the United Kingdom Parliament have recommended that United Kingdom gambling laws be updated to include loot boxes, although specific proposals have yet to be determined. Other countries have actively determined that loot boxes do not fall under the gambling laws of their country.

While gambling is highly restricted and regulated to protect minors and those susceptible to harm from gambling exposure, no such government or independent oversight or protections exist for minors and others currently being harmed by loot box gaming exposure. This is particularly concerning because loot box exposure and annual revenue is set to far exceed traditional gambling.

**3) *Concerns relating to addiction and public health are categorized into three general areas:***

- Harmful effects on mental, behavioral, and developmental health;
- Ways in which loot boxes are employed to make purchase more likely; and
- Employing psychologists to specifically exploit behavior.

Since 2018, various studies have concluded that spending on loot boxes is related to problem gambling behavior. The UK Gambling Commission recently found that between 2016 and 2018 the number of children with gambling problems in the UK quadrupled, with more than 50,000 children being classed as problem gamblers. There have also been numerous reports of consumers, including minors, spending thousands or tens of thousands of dollars on microtransactions in short periods of time.

While consumers and individual game developers have raised concerns and sounded the alarm on the impacts of loot boxes on minors and other predatory practices, gaming industry trade groups continue to decline to acknowledge any harm to minors and other players as a result of widespread loot box exposure. The response by the gaming industry to date has been compared to the tobacco industry, which was aware of the public harm its products caused, and which prompted significant litigation.

While the Advisory Group had productive conversations between relevant and interested parties on the concerns discussed above, the COVID-19 pandemic prevented the Advisory Group from examining the monetization practices in digital games as thoroughly as HCR No. 224 or the Advisory Group intended. Because of the pandemic, some questions and concerns around monetization practices of digital gaming remain unaddressed. Accordingly, the Advisory Group has not made any recommendations on specific legislation to address the concerns raised in HCR No. 224. However, based on the work that was completed, the Advisory Group does make the following general recommendations regarding continued examination of monetization in digital games:

- **The State of Hawaii, and other states, should examine, assess, and monitor predatory monetization practices in digital games, and begin collecting data from the gaming industry and general public to quantify and assess resulting financial and public health impacts;**
- **Until the conflict of interest between the game industry and the Entertainment Software Rating Board is resolved, state governments should consider establishing an**

**independent means of oversight and accountability for gaming industry practices to ensure the protection of consumers and address impacts to public health; and**

- **The State of Hawaii, and other states, should take action to address loot boxes and predatory monetization practices in digital games to ensure accountability, the protection of consumers, and public health.**

## Introduction

The Digital Gaming Advisory Group (Advisory Group) was convened and prepared this report pursuant to House Concurrent Resolution No. 224, H.D. 1, S.D. 1 (2019) (hereinafter HCR No. 224).<sup>1</sup> Through HCR No. 224, the Legislature found, in part, that in recent years, gaming industry developers have begun to employ variable reward mechanisms known as "loot boxes," which operate similarly to slot machines, in digital games marketed to adults and children of all ages, through which players can pay real money for chances to win randomized virtual items of varying value.<sup>2</sup> The Legislature also found that, without requirements for disclosure, transparency, or basic protection against exploitive practices, numerous families, individuals, and particularly vulnerable youth have been harmed by exposure to the variable reward mechanisms such as digital loot boxes.<sup>3</sup> Accordingly, the Legislature requested the convening of an advisory group to examine, assess, and monitor evolving gambling practices in digital video games that may present a potential public health or consumer risk, potential negative impacts to the public, provide for education and awareness, and make recommendations.<sup>4</sup>

HCR No. 224 identified individuals who were to serve on the Advisory Group, and also authorized the Co-Chairs of the Advisory Group to invite non-listed interested parties to join.<sup>5</sup> Advisory Group members included:

- Co-Chair of the Advisory Group, as selected by Advisory Group members, Representative Chris Lee (Chair of the House Committee on Judiciary);
- Co-Chair of the Advisory Group, as selected by Advisory Group members, Senator Karl Rhoads (Chair of the Senate Committee on Judiciary);
- Deputy Attorney General Landon Murata (designee of Attorney General Clare Connors);
- Executive Director of the Hawaii Office of Consumer Protection Stephen Levins;
- Chief of the Office of Planning, Policy, and Program Development & Legislative Coordinator Lorrin Kim (designee of the Director of Health Bruce Anderson);
- Travis Day, game designer (an individual from a game development company invited by the co-chairs of the Advisory Group);
- Representative Cynthia Thielen (interested party invited by the co-chairs of the Advisory Group);
- Senator Kurt Fevella (interested party invited by the co-chairs of the Advisory Group);
- The Entertainment Software Association (interested party invited by the co-chairs of the Advisory Group);
- The National Council on Problem Gambling (interested party invited by the co-chairs of the Advisory Group);
- Ed White, computer scientist (interested party invited by the co-chairs of the Advisory Group); and
- Molly Tapken, member of the University of Hawaii at Manoa Academy of Gamers (interested party invited by the co-chairs of the Advisory Group).

Pursuant to HCR No. 224, the co-chairs of the Advisory Group invited two individuals to join the Advisory Group to represent parents, but those invitations were unreturned and the participation of groups representing consumers broadly were deemed sufficient.

In addition to ongoing research and work done by many stakeholders throughout this time, the Advisory Group convened meetings in-person and over video-conference on three occasions: October 7, 2019, November 8, 2019, and December 20, 2019. At these meetings, the co-chairs asked interested parties and Advisory Group members to present on the history and modern practices of the gaming industry, various concerns related to modern gaming practices, and how the gaming industry is responding to various concerns. Discussion between the Advisory Group took place after the presentations. Presenters included:

- The Hawaii Department of Health;
- Game developer Travis Day;
- Consumer Reports;
- The National Consumers League;
- The Entertainment Software Association; and
- Prominent video game experts Joe Vargas and Yong Yea.

Given that HCR No. 224 continued the Advisory Group into 2020, and the final report from the Advisory Group was due to the Legislature in December 2020, the Co-Chairs intended to reconvene the Advisory Group upon the closing of the Regular Session of the 2020 Hawaii Legislature. However, the closure of the Hawaii State Capitol, extension of the Regular Session, and other complications related to the COVID-19 pandemic prevented the Co-Chairs from meeting as intended. The Advisory Group prepared this report based on the meetings, discussion, and research that was completed in 2019, and additional research conducted in 2020.

# Examination of evolving practices in digital gaming

## *Overview of Gaming Industry Business Model*

The home-video game industry first gained mainstream popularity in the 1970s, and has been a staple of markets worldwide since the mid-1980s. Beginning in the late 1970s and through the remainder of the 20th century, the business model for the home-video game industry generally required a consumer to make two purchases: (1) the console or device for which to play a game on (e.g. Atari 2600, Nintendo Entertainment System, Sega Genesis, Sony PlayStation, a personal computer etc.); and (2) the games to play on the purchased console or device. These games were loaded onto physical cartridges or discs, and the game purchased was a complete video game. This business model was cyclical and driven by popular games and characters that served as mascots for a console (e.g. the characters Mario for Nintendo consoles or Sonic the Hedgehog for Sega consoles.)<sup>6</sup> The price point to create and sell a game was generally fixed, the prices were typically managed by the console company, and the goal was to sell as many units of the individual games as possible.<sup>7</sup>

In the twenty-first century, the video game industry has moved toward a "games-as-a-service" business model.<sup>8</sup> The games-as-a-service model considers video game purchasers to be long-term players and repeat consumers of a single game, rather than the previous model that only required a one-time purchase.<sup>9</sup> Games-as-a-service has found success as high-speed internet connections allow game developers and publishers to continually offer updates to the games consumers are already playing, and for games to be playable with those across the planet in real-time.<sup>10</sup> Today, a game is either free or purchased, after which a consumer may or must purchase additional content to access the entirety of the game, finish the game in a reasonable time, or remain competitive with other players.<sup>11 12</sup> The types of available services or additional content offered for a game are often driven by feedback from the consumers, and consumers have expressed a desire for continual content.<sup>13</sup>

As the gaming business model evolved, game publishers created multiple ways to monetize a digital game to generate revenue under the games-as-a-service business model. The first change was the sale of large additions to games, allowing consumers to purchase new maps, missions, or characters.<sup>14</sup> As gaming evolved from stand-alone games to include ongoing gaming with other players online, publishers began requiring monthly or yearly subscriptions to continue to play a game online.<sup>15</sup> New content offered for limited periods of time and requiring multi-month subscriptions that give access to time limited content were also made available.<sup>16</sup> More recently microtransactions became a primary source of revenue.<sup>17</sup> A microtransaction is the purchase of in-game content, typically for a small fee.<sup>18</sup> Microtransactions can include, but are not limited to, the purchase of: more turns in a game; stronger tools or characters; cosmetic changes for a character or game tool.<sup>19</sup> While microtransaction sales are typically small in value, they can also include individual purchases of hundreds or thousands of dollars.

A common type of variable-reward microtransaction found in games is the purchase of chance to obtain an item, commonly known as a loot box.<sup>20</sup> Loot boxes are in-game rewards that contain a seemingly random assortment of virtual items to assist a player in advancing in the game or to customize his or her game avatar.<sup>21</sup> These rewards are often paid for with real currency or in-game currency, can impact gameplay, and in many cases the contents have been traded or sold both within games and online for real currency.<sup>22</sup> This type of random mechanism can have various names and designs across games other than loot boxes, including loot crates, supply drops, special orders item packs, and mystery rewards. Hereinafter, the term "loot box" will be used to describe all random mechanisms used to obtain additional unknown content in video games.

The current size of the gaming industry is rapidly expanding. The evolution of the gaming business model into the games as a service model has tripled the value of the digital game industry in recent years.<sup>23</sup> Digital gaming revenue is greater than revenue of the United States film and music industries combined, making over \$43B in 2018.<sup>24</sup> Approximately 214.4 million Americans play video games, and seventy percent of Americans under the age of eighteen play video games.<sup>25</sup> The growth of microtransactions, and revenue from loot boxes in particular, is staggering with the total amount of moneys spent on loot boxes and skin gambling forecast to be \$50 billion by 2022.<sup>26</sup> By comparison, in 2019 revenue from the entire casino industry the United States was \$43.6 billion.<sup>27</sup>

## *Overview of Gaming Industry Regulation in the United States*

### Government Regulation of Monetization Practices

There are no laws that regulate modern game modernization practices, including loot boxes, in the United States. Bipartisan legislation that would require disclosure of certain loot box information, declare loot boxes to be gambling, or further study the subject have been proposed or considered in the United States Senate, Washington State, California, Indiana, Minnesota, and Hawaii, among other states.<sup>28 29</sup>

In 2019, the Federal Trade Commission hosted a workshop with the purpose of providing a public forum to discuss consumer, industry, and academic viewpoints on loot boxes and related microtransactions.<sup>30</sup> In 2020, Federal Trade Commission staff issued a white paper detailing key takeaways from the 2019 workshop.<sup>31</sup> In the white paper's conclusion, the video game industry is encouraged to provide clear and meaningful information to consumers about in-game loot box and related microtransactions, and the Commission commits to evaluating developments surrounding loot boxes and take appropriate steps to prevent unfair or deceptive practices.<sup>32</sup>

## The Entertainment Software Ratings Board

In the early 1990s, video games were the subject of increased public scrutiny and congressional investigation due to violence in video games.<sup>33</sup> In 1994, in response to the criticisms and threats of government regulation, the video game industry trade group, the Entertainment Software Association (ESA, then known as the Interactive Digital Software Association) created the Entertainment Software Ratings Board (ESRB).<sup>34 35 36</sup> The ESRB created a rating system, similar to the one used by the movie industry, to help parents and consumers determine a game's appropriateness.<sup>37</sup> While receiving a game rating is technically voluntary for a game developer, all console manufacturers as well as certain U.S. retailers and mobile or online storefronts require ESRB ratings for the games or apps they offer.<sup>38</sup>

The types of ratings given by the ESRB have evolved with the gaming industry.<sup>39</sup> Currently, the rating system has three components: (1) age rating categories; (2) content descriptors; and (3) interactive elements.<sup>40</sup> The age rating categories assign letter grades to games based on their content to characterize if a game is suitable for different ages as follows:

- Everyone (represented by an "E" on games) – Content is general suitable for all ages. The game may contain minimal cartoon, fantasy, or mild violence and/or infrequent use of mild language;<sup>41</sup>
- Everyone 10+ (represented by a "10+" on games) – Content is generally suitable for ages ten and up. The game may contain more cartoon, fantasy or mild violence, mild language, and/or minimal suggestive themes;<sup>42</sup>
- Teen (represented by a "T" on games) – Content is generally suitable for ages thirteen and up. The game may contain violence, suggestive themes, crude humor, minimal blood, simulated gambling and/or infrequent use of strong language;<sup>43</sup>
- Mature 17+ (represented by an "M" on games) – Content is generally suitable for ages seventeen and up. The game may contain intense violence, blood and gore, sexual content and/or strong language;<sup>44</sup> and
- Adults Only 18+ (represented by an "AO" on games) – Content is suitable only for adults ages eighteen and up. The game may include prolonged scenes of intense violence, graphic sexual content and/or gambling with real currency.<sup>45</sup>

Content descriptors indicate what content is in a game that may have resulted in a particular rating, or that the ESRB feels may be of interest or concern to a consumer or parent.<sup>46</sup> Content descriptors are not intended to be a complete listing of content in a game.<sup>47</sup> There are currently thirty different content descriptors used by the ESRB, including: Real Gambling; Simulated Gambling; Violence; Cartoon Violence; Crude Humor; and Use of Drugs.<sup>48</sup>

Interactive elements indicate interactive or online features that may be of interest or concern to a consumer or parent, but do not influence the rating of a game.<sup>49</sup> The six interactive element categories are:

- In-Game Purchases – The game contains in-game offers to purchase digital goods or premiums with real world currency, including but not limited to bonus levels, skins, music, virtual coins and other forms of in-game currency, subscriptions, season passes and upgrades;<sup>50</sup>
- In-Game Purchases (Includes Random Items) – The game contains in-game offers to purchase digital goods or premiums with real world currency (or with virtual coins or other forms of in-game currency that can be purchased with real world currency) for which the player doesn't know prior to purchase the specific digital goods or premiums they will be receiving (e.g. loot boxes);<sup>51</sup>
- Users Interact – The game contains the possible exposure to unfiltered or uncensored user-generated content, including user-to-user communications and media sharing via social media and networks;<sup>52</sup>
- Shares Location – The game contains the ability to display the user's location to other users of the app;<sup>53</sup>
- Unrestricted Internet – The game provides unrestricted access to the internet through a browser or search engine;<sup>54</sup> and
- Online Music Not Rated by the ESRB – Warns that songs that are streamed or downloaded as add-ons for music-based games have not been rated and that their content has not been considered in the ESRB rating assignment.<sup>55</sup>

The ESRB has been involved in recent public controversy over loot boxes. Because the ESRB was created and is overseen by the ESA, which is composed of the nation's largest game developers and publishers who have a direct financial interest in game sales and ratings, there have been public concerns raised that the ESRB is incapable of providing meaningful regulation to protect consumers.<sup>56</sup> Loot box revenues account for a large portion of the exponential revenue growth the gaming industry has seen in recent years, and taking any steps to restrict access to loot boxes, even if it means protecting public health, could impact these high levels of revenue.

These concerns have escalated in recent years as the ESRB has consistently declined to acknowledge the growing evidence and public outcry over financial and public health harms associated with loot box mechanism exposure.<sup>57</sup> The ESRB does not consider the inclusion of loot boxes when determining age restrictions for games.

## *Concerns raised about monetization in gaming industry*

A variety of concerns exist relating to monetization in the gaming industry. The concerns examined by the Advisory Group generally fall into three categories, concerns relating to: (1) consumer protection; (2) gambling; and (3) addiction and harm to public health.

### Consumer Protection Concerns

The Advisory Group heard from presenters about and discussed concerns regarding how certain monetization practices in modern digital games can be harmful to consumers. Generally, these consumer protection concerns fall into five categories:

- Lack of disclosure of the odds of receiving particular randomized items from a loot box;
- Mischaracterized, manipulated, and deceptive odds of winning a particular item;
- The true cost of purchasing a loot box;
- Whether a game includes loot boxes; and
- Whether loot boxes and variable reward mechanisms are added to games after rating and purchase.

#### *Lack of disclosure of the odds of receiving particular randomized items from a loot box*

A common concern raised and discussed was the lack of transparency regarding the odds of winning a particular item when purchasing chances to win it in a loot box.<sup>58 59</sup> Randomness is key function of a loot boxes, but similar to slot machines, the odds of winning items is programmed into games at certain rates.<sup>60</sup> Unlike slot machines, the odds of winning items in loot boxes are often not disclosed to the public.<sup>61</sup> In one instance, consumers determined through trial and error that the odds of actually winning some heavily advertised items in a particular game was less than a fraction of one percent.<sup>62</sup>

The ESRB has declined to require that odds of winning items in loot boxes be disclosed to consumers purchasing chances to win them.<sup>63</sup> However, in 2018 and 2019 Apple and Google began requiring all mobile apps containing loot boxes offered for download on Apple and Google platforms to disclose basic odds to consumers.<sup>64</sup> Following considerable public criticism and government inquiries, Sony, Microsoft, and Nintendo have pledged to require all new games on their consoles that have loot boxes, or existing games that add new loot boxes, to disclose the odds of winning particular items.<sup>65</sup> Additionally, some other publishers have voluntarily agreed to begin disclosing odds by the end of 2020. However, without any universal requirement that loot box odds be disclosed, some games will continue to keep loot box odds secret from consumers, and some odds may not be disclosed in clear and conspicuous ways.<sup>66</sup>

*Mischaracterized, manipulated, and deceptive odds of winning a particular item*

The Advisory Group also heard concerns about loot box odds being disclosed in such a way so as to obfuscate or mislead about the odds of winning specific items.<sup>67</sup> When purchasing chances to win items in a loot box, some digital games clearly identify the exact items a consumer can acquire upon opening the loot box (e.g. a loot box with a 50% chance of receiving a wood sword, a 25% chance of receiving an iron sword, a 20% chance of winning a silver sword, a 4% chance of winning a gold sword, and a 1% chance of winning a platinum sword), while other games only identify arbitrarily named categories that relate to the exclusiveness or rarity of items that can be acquired (e.g. a loot box that has 50% chance of a basic item, 25% chance of a special item, 20% chance of a premium item, 4% chance of a rare item, 1% chance of a master item.) By only identifying an arbitrary category rather than the type of item to be receiving, consumers do not know what they are spending money on, and can be enticed to keep spending until they receive the "master item" even if they do not know what the "master item" is.

In other games, odds have been disclosed for specific set of items. For example, a player might be given a 10% chance of winning one of three specific items in a "special set." However, the most advertised and coveted item of the three may actually have only a 1% chance of being won, and the other two less valuable or worthless items may have a much higher chance of being won to meet the 10% threshold.

Another concern reviewed by the Advisory Group is the potential manipulation of disclosed odds to win a particular item from a loot box. The Advisory Group heard from presenters that were aware of a situation in which loot boxes were offered in a mobile game and the disclosed odds are alleged to have been misrepresented based on the results of actual purchases by consumers.<sup>68</sup> The Advisory Group also discussed how there is nothing preventing a game developer from misaligning disclosed odds of receiving a particular item from a loot box with the actual odds as written into a game's software code. Unlike casino games, there is no government or independent oversight of game algorithms, and no requirement to share access to them to ensure consumers are treated fairly.

The Advisory Group heard from presenters about other ways loot box odds are manipulated, such as situations in which multiple people purchased a series of allegedly random loot boxes, but the items received by each person came in a nearly identical order, with the most coveted items always being the last items received.<sup>69</sup>

Additionally, the Advisory Group discussed how loot box odds can be manipulated in real time and targeted to entice those who may be prone to addiction or more likely to keep spending money.<sup>70</sup> For example, a game could decrease the odds of winning for a person it detects exhibits patterns of addiction that would likely continue to purchase chances to win, while other players may not.

The Hawaii Office of Consumer Protection and Federal Trade Commission note that when a game is disclosing odds that are not accurate, it is likely committing an unfair and deceptive trade practice under Hawaii law.<sup>71 72</sup>

#### *The true cost of purchasing a loot box*

A significant concern related to transparency of loot boxes is the obfuscation of the true cost of purchasing a loot box. In most games, consumers do not buy a loot box directly with real currency, but rather use real currency to buy in-game currency, and then use in-game currency to purchase a loot box.<sup>73</sup> The real currency cost of in-game currency varies per game. Critics suggest that using in-game currency rather than actual currency to purchase a loot box disassociates the purchase for the consumer, resulting in a consumer being more likely to purchase numerous loot boxes without understanding the actual amount of currency spent.<sup>74</sup> Some game developers and publishers suggest that using in-game currency is an important part of world- and narrative-building that makes a game more appealing to consumers (e.g. characters in a game in a fantasy world would use fictitious currency, such as gems, gil, bells, etc., rather than US Dollars.)<sup>75 76</sup>

#### *Whether a game includes loot boxes*

There is no universal requirement for a game to disclose whether it contains loot boxes. In 2019, the ESRB began adding the "In-Game Purchases" Interactive Element label to games containing loot boxes.<sup>77</sup> However, this was criticized because the "In-Game Purchases" label did not distinguish between games with uncontroversial microtransactions and loot boxes.<sup>78</sup> Presenters suggested that this label simply masked whether a game does or does not contain loot boxes and renders the label meaningless for this purpose because nearly every game contains some form of in game purchases covered by this label, whether the in-game purchase is a loot box or not.<sup>79 80 81</sup> In April 2020, the ESRB attempted to address the concern about a lack of transparency as to whether a game includes loot boxes by creating a "In-Game Purchases (Includes Random Items)" Interactive Element label to be placed on games that include loot boxes or other randomized rewards.<sup>82</sup>

Further complicating transparency for parents and players, ESRB game ratings do not consider the inclusion of loot boxes when determining age restrictions, meaning games including heavy monetization through purchases of chances to win items in loot boxes are continue to be deemed age appropriate for minors. One consumer has noticed that the game, *NBA 2K20*, rated E for Everyone, included a screen that popped up when the game started advertising a \$100 pre-order, but the only button suggested on the screen was a button to purchase the pre-order, with no indication on how to leave that menu.<sup>83</sup> This commenter noted "I can see a young child not knowing what to do, and purchasing the game."<sup>84</sup>

*Whether loot boxes and variable reward mechanisms are added to games after rating and purchase*

In addition to concerns about a lack of transparency that would allow consumers to know whether a game contains loot boxes, the Advisory Group discussed the growing practice of developers or publishing producing a game, having it rated by the ESRB, and then after the fact adding loot boxes in a later update. This practice undermines a consumer's ability to choose to avoid purchasing games with loot boxes and undermines a parent's ability to do the same for their children.<sup>85</sup> Unless a parent is going to watch their child play a video game every moment, the parent cannot be completely sure that the game has not been updated to include loot boxes.

*Action taken by other jurisdictions regarding consumer protection concerns*

Other jurisdictions have begun to study and address the consumer protection concerns around monetization of digital games. In China and South Korea, it is required to disclose the odds of receiving a certain reward from a loot box, and in China, it is required for the odds of receiving a particular item to gradually change in a player's favor in correlation to how many loot boxes the player has purchased and there are daily limits on the number of loot boxes purchased.<sup>86</sup> As previously mentioned, a report from the European Union recommends tackling problematic game designs from a wide consumer protection perspective.<sup>87</sup>

## Gambling Concerns

The Advisory Group heard from presenters about and discussed the similarities between loot boxes and gambling.

As discussed above, loot boxes contain randomized in-game items of varying value that a player can purchase chances to win with real currency or in-game currency purchased with real currency. Items inside loot boxes can impact gameplay and are generally non-transferable.<sup>88</sup> However, players have found ways to trade or sell items received from loot boxes both within games, and online for real currency.<sup>89</sup> The randomized nature of what item a person gets from purchasing chances to win items in a loot box, the in-game and unsanctioned out-of-game value of the item, and ability to use real currency as a means to acquire a loot box and sometimes sell or trade its contents have led some to review and compare the inclusion and use of loot boxes in digital games to gambling.<sup>90 91 92</sup>

Legally defining what specifically constitutes gambling varies per jurisdiction.<sup>93</sup> Loot boxes that are purchased with real currency are considered a form of illegal gambling in Belgium, and loot boxes in which the received item is transferrable are considering illegal gambling in The Netherlands.<sup>94</sup> In 2018, the United Kingdom Gambling Commission, the governmental body tasked with regulating gambling in the Great Britain, found that loot boxes are not gambling in the United Kingdom.<sup>95</sup> However, the United Kingdom's House of Commons Digital, Culture,

Media and Sports Committee and the Select Committee on the Social and Economic Impact of the Gambling Industry of the United Kingdom's House of Lords recommend that loot boxes should be regulated as gambling.<sup>96 97</sup> The House of Lords Select Committee recommends that loot boxes and any other similar game of chance be regulated as gambling without waiting for wider review of the Gambling Act.<sup>98</sup> In part, The Select Committee reported that:

"It is too late to regulate a product as gambling, when it has already caused harm to children and young people. Neither the Government nor the Gambling Commission can afford to wait years before bringing new 'gambling-like' products within the remit of the Act.

The recommendation above will deal with the immediate issue of loot boxes, but gambling operators or gaming companies may develop new products which blur the distinction between video gaming and gambling. If these products cannot be brought within the legislative definition of a 'game of chance', they will not be regulated as gambling. Children and young people should be protected from all gambling and gambling-like products, not merely those that can be defined as a 'game of chance'. To ensure that all future gambling-like products are regulated as gambling, Ministers must have a power analogous to section 6(6) of the Act to specify that any activity which has the characteristics of gambling, even if not similar to a game of chance, should be brought within the purview of the Act."<sup>99</sup>

The Standing Committees on Environment and Communications of the Australian Senate released a preliminary report calling on the Australian Parliament to conduct a comprehensive review of loot boxes in video games and the potential for gambling-related harms to be experienced as a result of interaction with loot boxes.<sup>100</sup>

As recently as May 2020, Slovakia was in the process of reviewing whether the inclusion and use of loot boxes in video games constitutes gambling under its laws.<sup>101</sup> A report released at the request of the European Union Parliament acknowledged the concerns relating to gambling, but determined that it would not make any recommendations regarding the concerns due to the differing gambling laws in European Union member countries.<sup>102</sup> In contrast, that report did express concern about and suggest regulation of the various consumer protection issues relating to monetization in digital games.<sup>103</sup>

At least three class action lawsuits have been filed in 2020, two in California and one in Canada, alleging that loot boxes violate gambling laws.<sup>104 105</sup>

In the United States, minors are prohibited from gambling.<sup>106</sup> Hawaii is one of two states in the United States with no form of legalized gambling, regardless of a person's age.<sup>107</sup> Hawaii has a broad set of criminal offenses relating to gambling.<sup>108</sup>

Concerns raised about gambling include:

- Loot boxes effectively enable gambling, due to outdated legal definitions;
- Loot Boxes are made to be psychologically addictive like slot machines, carrying similar risks;
- Access by minors to games with loot boxes that some jurisdictions consider gambling or "Simulated Gambling";
- Loot box winnings can be cashed out for real currency; and
- Loot box items of value have been used to launder criminal money.

*Loot boxes effectively enable gambling, due to outdated legal definitions*

Although Deputy Attorney General Murata came to the conclusion that Hawaii's gambling statutes would likely need to be amended to apply to loot boxes, the Advisory Group noted that the current definition of gambling is not the focus of the Advisory Group as it was originally written decades before the internet was prevalent. What matters is whether the purchase and use of loot boxes produces similar risks and harms as gambling, and warrants similar cautionary regulation and protections as gambling. Others have similarly acknowledged that even if the inclusion and use of loot boxes in digital games does not meet statutory definitions of gambling, that it is close enough to gambling and promoted to minors in such a way that calls for regulation similar to gambling.<sup>109 110 111</sup>

The ESA and some others draw a comparison between loot boxes and trading cards or happy meals.<sup>112</sup> The Advisory Group makes a distinction between digital loot boxes and other purchases of chance such as trading cards or happy meals. Loot boxes have been associated with documented harms related to the purchase of a loot box, such as minors developing addictive or behavioral problems over long periods of constant exposure to loot boxes, and discovery of numerous youth unknowingly spending thousands of dollars on loot boxes because of the way in which they are presented and purchased.<sup>113</sup> Trading cards and similar purchases of chance are not correlated with these widespread harms, nor are they sold in a manner that would present similar risk to consumers.

*Loot Boxes are made to be psychologically addictive like slot machines, carrying similar risks*

Some game developers and publishers have designed loot boxes and other game mechanisms to "exploit potent psychological mechanisms associated with the development and maintenance of gambling like behaviors," and make it much more likely for players to keep spending real currency in the same way casino games and slot machines are so designed.<sup>114</sup> Such designs include loot boxes that look like slot machines, wheels of chance, and roulette wheels, and often include sounds and graphics intended to mimic casino games and produce similar chemical reactions in the brain to those a person experiences in a casino.<sup>115</sup> Loot box comparisons to slot machines have included random distribution of prizes, variable value of the

prizes, visual and sound cues associated with participation and reward, and trigger urges to play along with increased excitement and faster play.<sup>116</sup>

Game developers have acknowledged they frequently employ psychologists and other experts specifically to design game mechanisms that make it much more likely for people to play more, spend more, and are generally as addictive as possible. These trigger elements, combined with prolonged exposure for countless hours of gameplay day after day are resulting in behavioral change, addiction, and developmental changes in minors and predisposed adults. There have been multiple reports of consumers, including minors, spending thousands and tens of thousands of dollars on microtransactions in short periods of time.<sup>117 118 119 120 121</sup> One study reviewing game patents found systems designed to exploit behavioral tracking data to optimize purchasing offers.<sup>122</sup> Since 2018, various studies have concluded that spending on loot boxes is related to problem gambling behavior.<sup>123 124 125 126</sup>

*Access by minors to games with loot boxes that some jurisdictions consider gambling or "Simulated Gambling"*

While minors are barred from gambling in the United States and many other countries, loot box purchases are legal for all ages. While it is common for minors to spend real currency on loot box purchases through credit cards associated with the platforms through which they play games, they can also pay in cash even when their parents disable credit card purchasing electronic gift cards with cash at physical stores such as Walmart, Target, and Game Stop. These gift cards can be purchased by anyone of any age, and can be redeemed to directly or indirectly purchase chances to win items in loot boxes online.

The ESRB has been criticized for inconsistently labeling games with its "Simulated Gambling" content descriptor, and for having games include the "Simulated Gambling" content descriptor receive ratings of E for Everyone and E+10 for Everyone ten years or older, when the ESRB's own ratings suggest that any game with simulated gambling should be rated no lower than T for Teen.<sup>127 128</sup> The ESRB assigns the "Simulated Gambling" Content Descriptor label if a "player can gamble without betting or wagering real cash or currency." An advertisement for the game, *NBA2K0*, and ultimately the gameplay itself, specifically highlighted a virtual casino and loot boxes.<sup>129 130</sup> This game is rated E for Everyone and was marketed to all ages, including minors, and was not given a simulated gambling label.<sup>131</sup>

*Loot box winnings can be cashed out for real currency*

There have been reports of items of value won in loot boxes being sold within games, outside of games online, and on the black market for real currency. Most notably, the game *Counter Strike: Global Offensive* developed an online market for loot box items won and sold, allowing people to cash out their loot box winnings. One item, a digital paint job for a digital gun in the game, sold for \$61,000.<sup>132</sup> Another common way loot box items are cashed out and sold for real currency, is by players purchasing loot boxes, amassing winnings, and selling their entire gaming accounts, winnings included, to other players.

### *Loot box items of value have been used to launder criminal money*

Because loot box items carry value and are often traded and resold online, it has been a medium for criminal networks to launder money.<sup>133</sup> Purchasing a digital commodity of value is an easy way to invest money into a market out of which money can be washed and pulled.<sup>134</sup> Valve, a major game developer behind *Counter Strike: Global Offensive* acknowledged in 2019 that “At this point, nearly all key purchases that end up being traded or sold on the marketplace are believed to be fraud-sourced.”<sup>135</sup> Valve subsequently took steps to make it harder to move money through the buying and selling of *Counter Strike: Global Offensive* digital goods.<sup>136</sup> But other ways still exist to invest in and cash out digital loot box items of value.

### Addiction and Public Health Concerns

The Advisory Group heard from presenters about and discussed concerns regarding how certain monetization practices in modern digital games can be harmful to public health, including mental, behavioral, and developmental health. Generally, these concerns fall into three categories:

- Harmful effects on mental, behavioral, and developmental health;
- Ways in which loot boxes are employed to make purchase more likely; and
- Employing psychologists to specifically exploit behavior.

### *Harmful effects on mental, behavioral, and developmental health*

Mental health experts have recently expressed concern about the impact of problem gaming on behavior and development, and studies are beginning to quantify those impacts on mental, behavioral, and developmental health.<sup>137</sup> The American Psychological Association has identified “Internet Gaming Disorder” as an emerging diagnosis which warrants further study in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5).<sup>138</sup> The World Health Organization has identified “Gaming Disorder” alongside gambling as a pattern of gaming behavior which appreciably increases the risk of harmful physical or mental health and “Hazardous Gaming” as a threat to public health in the latest draft of its International Compendium of Diseases.<sup>139</sup>

Since 2018, various studies have concluded that spending on loot boxes is related to problem gambling behavior.<sup>140</sup> A 2019 study attempted to determine whether loot box use was associated with problem video gaming behavior in adults.<sup>141</sup> Again, there was a significant relationship found.<sup>142</sup> This is particularly relevant, given the that there seems to be a clear and concerning correlation between excessive exposure to loot box mechanisms and gambling in adolescents.<sup>143</sup> However, there may be additional factors, such as gender and existing traits (e.g., impulsivity and mental health problems) that may influence a person's inclination to participate in both gambling and gaming behaviors.<sup>144 145 146</sup> It is unclear from the limited studies so far

conducted whether problem gambling has led to digital game loot box spending or digital game loot box exposure has led to problem gambling.<sup>147</sup>

The UK Gambling Commission recently found that between 2016 and 2018 the number of children with gambling problems in the UK quadrupled, with more than 50,000 children being classed as problem gamblers.<sup>148</sup> There have been numerous reports of consumers, including minors, spending thousands or tens of thousands of dollars on microtransactions in short periods of time.<sup>149</sup> Often, symptoms of problem gambling are reflected in addictive purchasing. One teen spent over \$10,000, acknowledged and recognized his problem in news stories, but similar to other addictions, could not stop.<sup>150</sup> Parents are frequently finding themselves surprised by unexpected bills of hundreds or thousands of dollars from loot box purchases made by their children in games to which they were unaware their kids had been exposed.

*Ways in which loot boxes are employed to make purchase more likely*

The Advisory Group also reviewed monetization methods in digital games that have been considered predatory practices designed to exploit or induce addictive behaviors in consumers, including children. One study has said:

"Game monetization schemes have become increasingly sophisticated and have been featured more prominently within popular on-line games. In our view, some of these schemes could be considered predatory. Predatory monetization schemes typically involve in-game purchasing systems that disguise or withhold the true long-term cost of the activity until players are already financially and psychologically committed. Such schemes are designed to encourage repeated player spending using tactics or elements that may involve, either singularly or in combination, limited disclosure of the product; intrusive and unavoidable solicitations; and systems that manipulate reward outcomes to reinforce purchasing behaviors over skillful or strategic play. Such strategies may exploit inequalities in information between purchaser and provider, such as when the industry uses knowledge of the player's game-related preferences, available funds and/or playing and spending habits, to present offers predetermined to maximize the likelihood of eliciting player spending."<sup>151</sup>

The Advisory Group looked into the following predatory monetization practices in digital games:

- Paying real currency for extra lives or more time in a game to make a game last longer;<sup>152</sup>
- Paying real currency to advance in a game as an alternative to performing repetitive and time-consuming tasks;<sup>153</sup>

- Games, that are technically playable without microtransaction, but require in-game purchases in order to remain competitive or win in online games, commonly referred to as pay-to-win;<sup>154</sup>
- the use of psychological depictions of in-game currency to detach a consumer from the real currency used to purchase in-game currency or content;<sup>155</sup>
- The intentional targeting of a small subset of consumers that, based on data collected from purchasing patterns, are prone to spend excessive amounts of real currency, commonly known as whales or whaling; and <sup>156 157</sup>
- the utilization of designs that build habits of daily gameplay, often using loss aversion to compel a user to keep playing.<sup>158</sup>

#### *Employing psychologists to specifically exploit behavior*

Some game developers have acknowledged that many major game studios have employed psychologists and mental health experts specifically to craft game mechanisms to take advantage of psychological vulnerability, similar to casino games, that make players more likely to continue playing, and maximize spending. They have raised concerns that game mechanisms are being created to maximize the addictive nature of monetization mechanisms, and it is being done successfully.

One study reviewing game patents found systems designed to exploit behavioral tracking data to optimize purchasing offers.<sup>159</sup> This study also found that in-game purchasing systems lack basic consumer guarantees and protections.<sup>160</sup>

#### *Industry response to public health concerns*

While the gaming industry has evolved in response to certain consumer requests and criticism, so far it has declined to meaningfully acknowledge impacts on public health, despite the growing body of evidence demonstrating harm from loot box exposure for many minors and adults. Upon investigation, Members of the UK Parliament “found it difficult to get full and clear answers from the gaming industry representatives who had appeared before them, in particular when it came to answering questions about what data they collected, how it was used and the psychology underpinning how games were designed.” A committee of MPs had accused some of those who had given evidence of a “lack of honesty and transparency”. Additionally, several Advisory Group members have compared the gaming industry’s response to loot box concerns to the tobacco industry’s refusal to acknowledge for decades that its products cause cancer.

## Findings and Recommendations

The meetings of the Digital Gaming Advisory Group were productive in starting conversations between relevant and interested parties on the concerns of loot boxes and predatory monetization in digital games. However, the COVID-19 pandemic prevented the Advisory Group from examining, assessing, and monitoring current issues in digital gaming as thoroughly as HCR No. 224 or the Advisory Group intended. Because of the COVID-19 pandemic, some questions and concerns around monetization practices of digital gaming remain unaddressed.

**Accordingly, the Advisory Group does not make any recommendations on specific legislation to address the concerns raised in HCR No. 224.** However, the Advisory Group does make the following general findings and recommendations.

The Advisory Group finds that legitimate public concerns have been raised regarding loot boxes and predatory monetization practices in digital games accessible to minors and others for whom exposure can cause harm, as well as other practices designed to take advantage of player psychology which can lead to harm. These issues of consumer protection, gambling, and most of all public health are matters of clear public concern that fall, in part, under the jurisdiction of state governments.

**Accordingly, the Advisory Group recommends that the State of Hawaii, and other states, should examine, assess, and monitor predatory monetization practices in digital games, and begin collecting data from the gaming industry and general public to quantify and assess resulting financial and public health impacts.**

The Advisory Group also recognizes the initial efforts of the ESRB, the industry entity that regulates video games in the United States, to begin educating consumers on some of these issues. However, there have been significant concerns raised that ratings given by the ESRB have been inconsistent, do not always accurately represent the content of a game, do not address certain concerns raised by the public, or reflect the growing evidence of harm to consumers, and in particular, minors. Additionally, as the ESRB was founded and is currently overseen by a trade group of major game developers and publishers, there exists an inherent conflict of interest that may prevent the ESRB from taking action to protect consumers, if it comes at the expense of game developers or publishers.

**Accordingly, until the conflict of interest between the game industry and the ESRB is resolved, the Advisory Group recommends that state governments consider establishing an independent means of oversight and accountability for gaming industry practices to ensure the protection of consumers and address impacts to public health.**

The Advisory Group further finds that the gaming industry is one of the nation's largest and most influential industries which is bigger than the film and music industries combined with a reach into nearly every American household. The industry has recently seen revenue soar by tens of billions from loot boxes and similar monetization practices that make players more likely to buy chances to win items of value. These and other predatory monetization practices designed to manipulate player psychology often target minors. Consumers often have limited, if any, ability to determine which games may contain these practices, or when they may suddenly appear in a game after purchase. A growing body of evidence show exposure to these mechanisms may be causing or contributing to financial harm, addiction, and behavioral and developmental health impacts on consumers, especially minors. Other nations have already begun adopting regulations to address these concerns. Yet, in the United States these mechanisms and monetization practices, some similar to slot machines, are completely unregulated by any independent or governmental entity that would ensure consumers are treated fairly, to limit access when it may be inappropriate, and to protect public health.

**Accordingly, the Advisory Group recommends that the State of Hawaii, and other states, take action to address loot boxes and predatory monetization practices in digital games to ensure accountability, the protection of consumers, and public health.**

## Notes

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<sup>1</sup> House Concurrent Resolution No. 224, H.D. 1, S.D. 1 (2019).  
[https://www.capitol.hawaii.gov/session2019/bills/HCR224\\_SD1\\_.pdf](https://www.capitol.hawaii.gov/session2019/bills/HCR224_SD1_.pdf).

<sup>2</sup> *Id.*

<sup>3</sup> *Id.*

<sup>4</sup> *Id.*

<sup>5</sup> *Id.*

<sup>6</sup> John Breyault, National Consumers League, *Making Money From GaaS: Consumer Protection in and Evolving Video Game Industry*. Presentation to the Digital Gaming Advisory Group, October 7, 2019.

<sup>7</sup> *Id.*

<sup>8</sup> *Id.*

<sup>9</sup> *Id.*

<sup>10</sup> "More than 90 percent of video game consoles are connected to the Internet, said Mat Piscatella, a video games industry analyst with research firm NPD Group. That has allowed game studios to constantly update and refresh their existing games," Alana Semuels, Time Magazine, "Every Game You Like Is Built on the Backs of Workers.' Video Game Creators Are Burned Out and Desperate for Change." June 11, 2019. <https://time.com/5603329/e3-video-game-creators-union/>.

<sup>11</sup> See note 6.

<sup>12</sup> Travis Day, game designer, *Video Game Monetization*. Presentation to the Digital Gaming Advisory Group, October 7, 2019.

<sup>13</sup> Michael Warnecke, Entertainment Software Association, *An Industry Perspective on Loot Boxes*. Presentation to the Digital Gaming Advisory Group, November 8, 2019.

<sup>14</sup> See note 12.

<sup>15</sup> *Id.*

<sup>16</sup> *Id.*

<sup>17</sup> *Id.*

<sup>18</sup> *Id.*

<sup>19</sup> *Id.*

<sup>20</sup> *Id.*

<sup>21</sup> Being a relatively new term-of-art, there is yet to be a specific and common definition of loot box that is universally accepted throughout the gaming industry. This definition is taken from Federal Trade Commission, "FTC to Hold August Workshop on Consumer Issues Related to Loot Boxes." April 5, 2019.  
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<sup>22</sup> Syed Ejaz, Consumer Reports, *Consumer Issues in the marketplace: Lootboxes*. Presentation to the Digital Gaming Advisory Group, October 7, 2019.

<sup>23</sup> See note 6.

<sup>24</sup> Jonathan Shieber, Tech Crunch "Video game revenue tops \$43 billion in 2018, an 18% jump from 2017." January 22, 2019. <https://techcrunch.com/2019/01/22/video-game-revenue-tops-43-billion-in-2018-an-18-jump-from-2017>.

<sup>25</sup> Entertainment Software Association, 2020 Essential Facts about the Video Game Industry.  
[https://www.theesa.com/wp-content/uploads/2020/07/Final-Edited-2020-ESA\\_Essential\\_facts.pdf](https://www.theesa.com/wp-content/uploads/2020/07/Final-Edited-2020-ESA_Essential_facts.pdf).

<sup>26</sup> See note 6, discussing Juniper Research, *In-Game Gambling, The Next Cash Cow for Publishers*. April 2018.

<sup>27</sup> American Gaming Association, Press Release, "Commercial Gaming Industry Sees Record Revenue, 3.7% Growth in 2019." June 12, 2020. <https://www.americangaming.org/new/commercial-gaming-industry-sees-record-revenue-3-7-growth-in-2019/>.

<sup>28</sup> Jason M. Bailey, New York Times, "A Video Game 'Loot Box' Offers Coveted Rewards, but Is It Gambling?" April 24, 2018. <https://www.nytimes.com/2018/04/24/business/loot-boxes-video-games.html>.

<sup>29</sup> Owen S. Good, Polygon, "Anti-loot box bill gathers bipartisan support in the Senate." May 23, 2019.,  
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- <sup>31</sup> Federal Trade Commission, "FTC Video Game Loot Box Workshop: Staff Perspective." August 2020. [https://www.ftc.gov/system/files/documents/reports/staff-perspective-paper-loot-box-workshop/loot\\_box\\_workshop\\_staff\\_perspective.pdf?utm\\_source=govdelivery](https://www.ftc.gov/system/files/documents/reports/staff-perspective-paper-loot-box-workshop/loot_box_workshop_staff_perspective.pdf?utm_source=govdelivery).
- <sup>32</sup> *Id.*
- <sup>33</sup> Tiffany Hsu, New York Times, "When Mortal Kombat Came Under Congressional Scrutiny." March 8, 2018. <https://www.nytimes.com/2018/03/08/business/video-games-violence.html>.
- <sup>34</sup> Entertainment Software Ratings Board, About ESRB. <https://www.esrb.org/about/>.
- <sup>35</sup> Entertainment Software Association, About Us. " <https://www.theesa.com/about-esa>."
- <sup>36</sup> See note 33.
- <sup>37</sup> *Id.*
- <sup>38</sup> Entertainment Software Ratings Board, Frequently Asked Questions. <https://www.esrb.org/faqs/#are-all-games-required-to-have-a-rating>.
- <sup>39</sup> Entertainment Software Ratings Board, Our History. <https://www.esrb.org/history/>.
- <sup>40</sup> Entertainment Software Ratings Board, Ratings Guide. <https://www.esrb.org/ratings-guide/>.
- <sup>41</sup> *Id.*
- <sup>42</sup> *Id.*
- <sup>43</sup> *Id.*
- <sup>44</sup> *Id.*
- <sup>45</sup> *Id.*
- <sup>46</sup> *Id.*
- <sup>47</sup> *Id.*
- <sup>48</sup> *Id.*
- <sup>49</sup> *Id.*
- <sup>50</sup> *Id.*
- <sup>51</sup> *Id.*
- <sup>52</sup> *Id.*
- <sup>53</sup> *Id.*
- <sup>54</sup> *Id.*
- <sup>55</sup> *Id.*
- <sup>56</sup> Joe Vargas, Video Game Expert, Presentation to the Digital Gaming Advisory Group, November 8, 2019.
- <sup>57</sup> Owen S. Good, Polygon "ESRB introducing 'in-game purchases' label in response to loot box controversy." February 27, 2018. <https://www.polygon.com/2018/2/27/17057978/esrb-loot-crate-box-in-game-purchases-label>.
- <sup>58</sup> See note 22.
- <sup>59</sup> See note 31.
- <sup>60</sup> See note 22.
- <sup>61</sup> *Id.*
- <sup>62</sup> See note 56, regarding *Call of Duty Mobile*, Halloween 2019 event.
- <sup>63</sup> See note 57.
- <sup>64</sup> See note 31.
- <sup>65</sup> See note 13.
- <sup>66</sup> See note 56.
- <sup>67</sup> See note 22.
- <sup>68</sup> See note 56.
- <sup>69</sup> *Id.*
- <sup>70</sup> See note 6.
- <sup>71</sup> Statement by Hawaii Office of Consumer Protection Executive Director Stephen Levins during October 7, 2019, meeting.
- <sup>72</sup> See note 31.
- <sup>73</sup> See note 22.

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<sup>74</sup> *Id.*

<sup>75</sup> *Id.*

<sup>76</sup> See note 13.

<sup>77</sup> *Id.*

<sup>78</sup> Previous In-Game Purchases label description, " Game contains in-game offers to purchase digital goods or premiums with real world currency, including but not limited to bonus levels, skins, surprise items (such as item packs, loot boxes, mystery awards), music, virtual coins and other forms of in-game currency, subscriptions, season passes and upgrades (e.g., to disable ads.)"

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<sup>80</sup> See note 56

<sup>81</sup> Yong Yea, Video Game Expert, Presentation to the Digital Gaming Advisory Group, December 20, 2020.

<sup>82</sup> See note 31.

<sup>83</sup> Reddit, ViperCobra, "Does anybody else find it weird that this game is rated E for everyone, yet 2K is using really manipulative tactics to encourage purchasing." July 3, 2020.

[https://www.reddit.com/r/NBA2k/comments/hkxvj7/does anybody else find it weird that this game is/.](https://www.reddit.com/r/NBA2k/comments/hkxvj7/does_anybody_else_find_it_weird_that_this_game_is/)

<sup>84</sup> *Id.*

<sup>85</sup> See note 56.

<sup>86</sup> Nicholas Straub, Screen Rant, "Every Country with Laws Against Loot Boxes (& What the Rules Are). October 5, 2020. [https://screenrant.com/lootbox-gambling-microtransactions-illegal-japan-china-belgium-netherlands/.](https://screenrant.com/lootbox-gambling-microtransactions-illegal-japan-china-belgium-netherlands/)

<sup>87</sup> Cerulli-Harms, A. et al., *Loot boxes in online games and their effect on consumers, in particular young consumers*, Publication for the committee on the Internal Market and Consumer Protection (IMCO), Policy Department for Economic, Scientific and Quality of Life Policies, European Parliament, Luxembourg, 2020. <http://www.europarl.europa.eu/supporting-analyses>.

<sup>88</sup> See note 22.

<sup>89</sup> See note 87, "These games do not allow that virtual items won from loot boxes could be sold or traded for real-life currency. Grey markets for such virtual items do exist (by selling the items on third-party platforms.)

<sup>90</sup> See note 56.

<sup>91</sup> David J. Castillo, Santa Clara Law Review, "Unpacking the Loot Box: How Gaming's Latest Monetization System Flirts with Traditional Gambling Methods." 2019. [https://digitalcommons.law.scu.edu/lawreview/vol59/iss1/5/.](https://digitalcommons.law.scu.edu/lawreview/vol59/iss1/5/)

<sup>92</sup> Maddie Level, "Unboxing the Issue: The Future of Video Game Loot Boxes in the U.S.", Kansas Law Review, Kansas Law Review Inc. 2019 vol. 68(1). <https://kuscholarworks.ku.edu/handle/1808/29981>.

<sup>93</sup> *Id.*

<sup>94</sup> See note 87.

<sup>95</sup> United Kingdom Gambling Commission, About Us. <https://www.gamblingcommission.gov.uk/about/About-us.aspx>.

<sup>96</sup> Digital, Culture, Media and Sport Committee, United Kingdom House of Commons, "Immersive and addictive technologies." September 12, 2019. <https://publications.parliament.uk/pa/cm201719/cmselect/cmcmucmeds/1846/1846.pdf>.

<sup>97</sup> Select Committee on the Social and Economic Impact of the Gambling Industry, United Kingdom House of Lords, "Gambling Harm – Time for Action." July 2, 2020.

<https://publications.parliament.uk/pa/ld5801/ldselect/ldgamb/79/79.pdf>.

<sup>98</sup> *Id.*

<sup>99</sup> *Id.*

<sup>100</sup> Australia Senate Standing Committees on Environment and Communications, "Gaming micro-transactions for chance-based items." November 27, 2018.

[https://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Environment\\_and\\_Communications/Gamingmicro-transactions/Report](https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/Gamingmicro-transactions/Report).

<sup>101</sup> See note 87.

<sup>102</sup> *Id.*

<sup>103</sup> *Id.*

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