Danish gambling market statistics

Third quarter, 2017

Spillemyndigheden

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A. Introduction

The Danish gambling market underwent a partial liberalisation in 2012. The gambling sector comprises of the following eight sub-sectors, each defined under the Danish Gambling Act (Lov om Spil): *Lotteries; class lotteries; charity lotteries; online casinos; land-based casinos; the liberalised betting market; betting on horse, dog, and pigeon racing; and, gaming machines (AWP).*

These categories are used for defining the markets and the recording of gambling statistics. The sub-sectors each have their own licensing procedure, reflecting the varying regulatory and commercial issues associated with each market. As such, the data for gambling statistics is recorded at different points in time for each sub-sector, with varying levels of regularity.

This report covers the liberalised betting market,[1] online casinos, gaming machines,[2] and land-based casinos. Statistics for lotteries, class lotteries, charitable lotteries and betting on horse-racing[3] are not available for the third quarter of 2017 at the time of publication.

The data presented in this report is based upon the estimates that can be drawn from the data available at the time of going to press. Following improved calculation methods, the Danish gambling authority has changed from rounding GGR numbers to the nearest DKK 5 million, and now rounds numbers to the nearest DKK 1 million; in some instances, the nearest DKK 100,000. These figures are still subject to change, for example in connection with delayed reporting of fees. Figures do not take account for inflation.

Statistics relating to gross gaming revenue (GGR), stakes, and winnings are based upon data submitted to the Danish Tax Authority (SKAT). Data concerning consumer behaviour in the gambling market, including gambling forms within individual markets and sales channels, is sourced from data submitted to the Danish Gambling Authority by gambling operators. Please note, based upon the different data collection methods for recording gambling duties and recording gambling transactions, slight statistical discrepancies between the two datasets are unavoidable.

Quarterly statistics are published approximately two months after the end of the relevant quarter. This reflects the different tax reporting periods for the four focus markets.

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[1] From this point onwards, the term “betting” is used. As noted in the opening paragraph, betting on horse, dog, and pigeon racing is not liberalised. Liberalisation of betting on these events will come into effect from January 1st, 2018.

[2] From this point onwards, the term “gaming machines” is used instead of “prize-giving gaming machines”. The Danish Gambling Authority does not hold data for gaming machines that do not offer cash prizes.

[3] The Danish Gambling Authority does not collect statistics for trackside betting pools at dog and pigeon races.

B. Quarterly market statistics for the Danish Gambling market

The latest quarterly GGR figures for the liberalised betting market, online casinos, gaming machines, and land-based casinos reflect market developments that are broadly in line with seasonal expectations, with combined growth in the four markets of 34 million kroner relative to the second quarter of 2017. This equates to quarterly growth of 2.3 percent, while when measured relative to the third quarter of 2016, growth was 9.3 percent (128 million kroner).

Table 1. Quarterly GGR for the four focus markets since first quarter of 2014 (million kroner)

		Q1	Q2	Q3	Q4	Year
2014	Combined	1150	1181	1218	1177	4726
	Betting	437	441	494	420	1791
	Online casinos	252	248	267	290	1058
	Land-based casinos	75	88	83	85	330
	Gaming machines	386	404	374	382	1547
2015	Combined	1170	1336	1332	1366	5204
	Betting	416	487	548	548	1999
	Online casinos	303	337	319	349	1308
	Land-based casinos	74	99	89	87	349
	Gaming machines	377	413	376	382	1548
2016	Combined	1416	1406	1369	1424	5615
	Betting	565	523	529	550	2168
	Online casinos	376	395	382	410	1563
	Land-based casinos	96	97	93	94	379
	Gaming machines	379	391	365	370	1504
2017	Combined	1397	1463	1497	-	-
	Betting	519	522	577	-	-
	Online casinos	415	458	456	-	-
	Land-based casinos	93	95	95	-	-
	Gaming machines	370	388	369	-	-

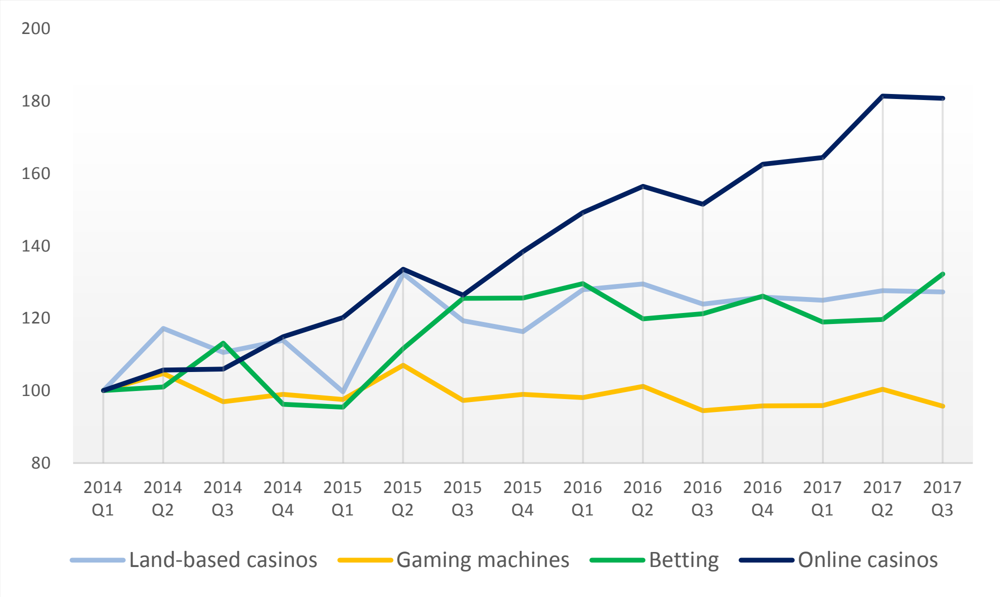
Source: Tax returns submitted to the Danish Tax Authority by licence holders, and the Danish Gambling Authority's own calculations.

As Table 1 shows, combined GGR for the four sectors is 279 million kroner higher than the third quarter of 2014. However, this growth has not been equally distributed, with online casinos recording the bulk of combined growth (189 million kroner).

The varying quarterly GGR growth rates are presented in figure 1, where, taking a starting point in the first quarter of 2014,[4] quarterly GGR in each sector is benchmarked at index 100. Here it is clear to see the relative strength of the online casino market contra the three other focus areas. Gaming machines have recorded relatively consistent quarterly GGR figures since the first quarter of 2014, albeit with a slight downward trend. GGR for both betting and land-based casinos has been relatively stable since the quarter of 2015, though betting is 48 million kroner higher than the third quarter of 2016.

[4] The first quarter of 2014 is chosen as the starting point, as this point in time marks two years after the liberalisation of the betting and online casino markets, giving the markets time to have stabilised.

Figure 1. Indexed quarterly GGR (2014 Q1: index 100)



Source: Tax returns submitted by licence holders to the Danish Tax Authority.

C. Online casinos

GGR for online casinos in the third quarter of 2017 was almost unchanged relative to the preceding quarter, with a fall of just 1.5 million kroner; a decline of 0.3 percent. Though less pronounced than previous years, this drop continues a pattern seen since 2015 whereby GGR generated by online casinos is lower in the third quarter than the second quarter.

Third quarter figures are also significantly higher than the third quarter of 2016, with year-on-year growth standing at 19.3 percent. The decline in GGR seen in the third quarter was proportionally largest for casino games with commission (multi-player casino games), where GGR fell by 3.9 percent between the second and third quarters of 2017. GGR for games without commission (single player casino games) fell by under 0.1 percent in the same period. Quarterly figures for online casinos are presented in Table 2.

Table 2. Quarterly stakes, prizes, commission, and GGR[5] for online casinos (million kroner)

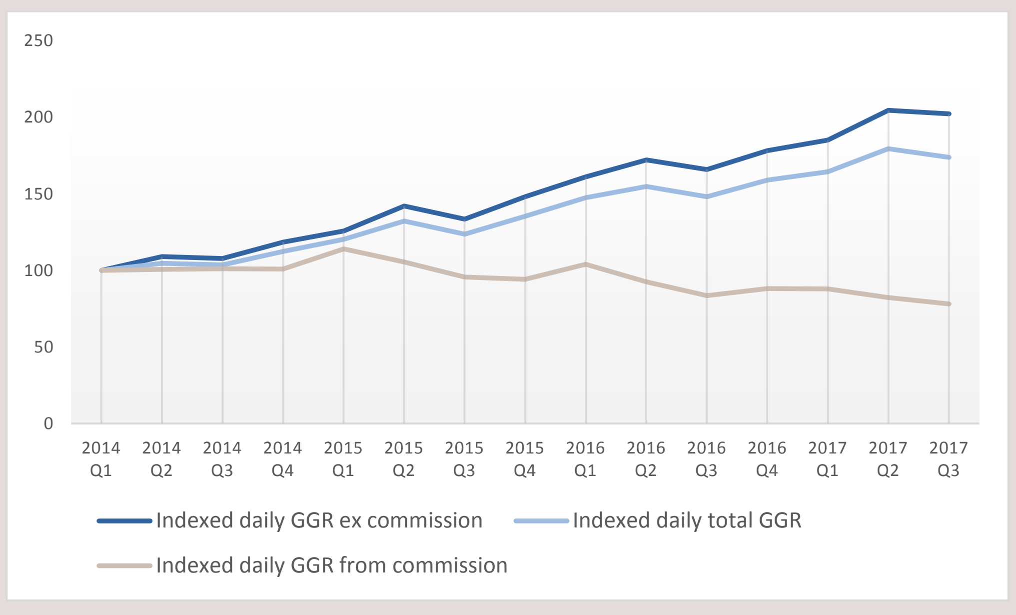
		Quarter 1	Quarter 2	Quarter 3	Quarter 4	Year
2014	Total GGR	252,3	248,4	267,3	289,7	1.057,7
	- Stakes	5.109,8	5.242,3	5.844,7	6.109,5	22.306,3
	- Prizes	4.904,5	5.031,7	5.618,4	5.860,7	21.415,2
	- Commission	46,9	37,8	41,0	40,9	166,6
2015	Total GGR	303,3	337,0	318,8	349,1	1.308,2
	- Stakes	6.447,0	7.318,3	7.277,7	7.975,7	29.018,7
	- Prizes	6.189,0	7.023,6	6.997,7	7.664,8	27.875,1
	- Commission	45,3	42,3	38,8	38,2	164,6
2016	Total GGR	376,3	394,6	382,1	410,0	1.562,9
	- Stakes	8.590,2	9.278,5	8.819,0	10.028,8	36.716,6
	- Prizes	8.255,7	8.921,1	8.470,8	9.654,6	35.302,1
	- Commission	41,7	37,1	33,9	35,8	148,4
2017	Total GGR	414,8	457,5	456,0	-	-
	- Stakes	10.290,6	11.604,3	11.443,9	-	-
	- Prizes	9.910,6	11.179,8	11.019,6	-	-
	- Commission	34,9	33,0	31,7	-	-

Source: Tax returns submitted to the Danish Tax Authority.

Taking the first quarter of 2014 as a benchmark, by the end of the third quarter of 2017, GGR generated by online casinos grew by 80.7 percent. As table 2 shows, the high growth rate has been driven by the single-player online casino market, with third quarter 2017 figures 106.6 percent higher than the first quarter of 2014. In contrast, average daily GGR from commission to participate in multi-player games fell by 32.4 percent over the same period. Total quarterly GGR growth, non-commission GGR, and commission GGR are charted in Figure 2, benchmarked against the first quarter of 2014 and corrected for the varying lengths of each quarter.

[5] Stakes and prizes only cover games without commission. As such, GGR is the sum of commission and stakes minus winnings.

Figure 2. Indexed development of quarterly GGR since 2014



Source: Tax returns submitted by licence holders to the Danish Tax Authority.

The high growth seen for single player online casino games means that stakes placed in online casinos have also more than doubled since the first quarter of 2014. Whereas just over 5.1 billion kroner in stakes were placed in the first quarter of 2014, in the third quarter of 2017, this had risen to 11.4 billion kroner. This though represented a moderate fall in stakes between the second and third quarters of 2017 of 160.4 million kroner.

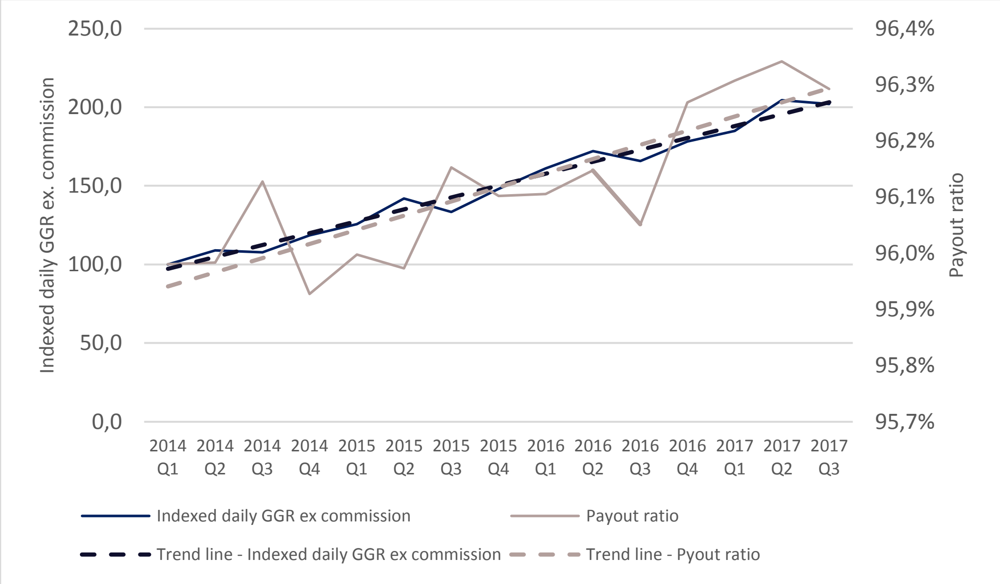
Stakes are not equivalent to money deposited in a gambling account. A player that starts with 100 kroner and stops with 40 kroner has typically placed stakes worth 1,000 kroner, and won prizes worth 960 kroner, without the player ever having deposited more than 100 kroner in their account. The figures become higher, as stakes and prizes are measured for every individual game.

While there has been significant growth in GGR since the first quarter of 2014, the payout ratio has remained in the region of 96 percent this entire period. Since the first quarter of 2014, there has been a difference of just 0.41 percent between the highest and lowest payout ratio. As figure 3 shows, developments in the quarterly payout ratio and GGR from non-commission online casino games have followed a similar positive trajectory, as illustrated in figure 3 below.[6] Although growth in the payout ratio has been gradual, even slight adjustments to the payout ratio can have significant consequences for GGR, for example:

- GGR would halve been 33.5 million kroner higher in the third quarter of 2017, if the payout ratio from the first quarter of 2014 (96.0 percent) was applied to stakes placed in the third quarter of 2017.
- GGR would halve been 15.8 million kroner lower in the first quarter of 2017, if the payout ratio from the third quarter of 2017 (96.3 percent) was applied to stakes placed in the first quarter of 2014.

[6] Data in Figure 3 is again corrected for the varying lengths of each quarter.

Figure 3. Development in daily GGR from non-commission games and payout ratio



Source: Tax returns submitted to the Danish Tax Authority.

As set out in table 3, GGR was highest for non-commission online casino games in April 2017, with just over 4 billion kroner in stakes placed. However, in July 2017, GGR was just 2.8 million kroner lower, despite stakes being just under 200 million kroner lower. The relatively modest change in GGR is due to a payout ratio that was just 0.1 percentage point lower in July than April.

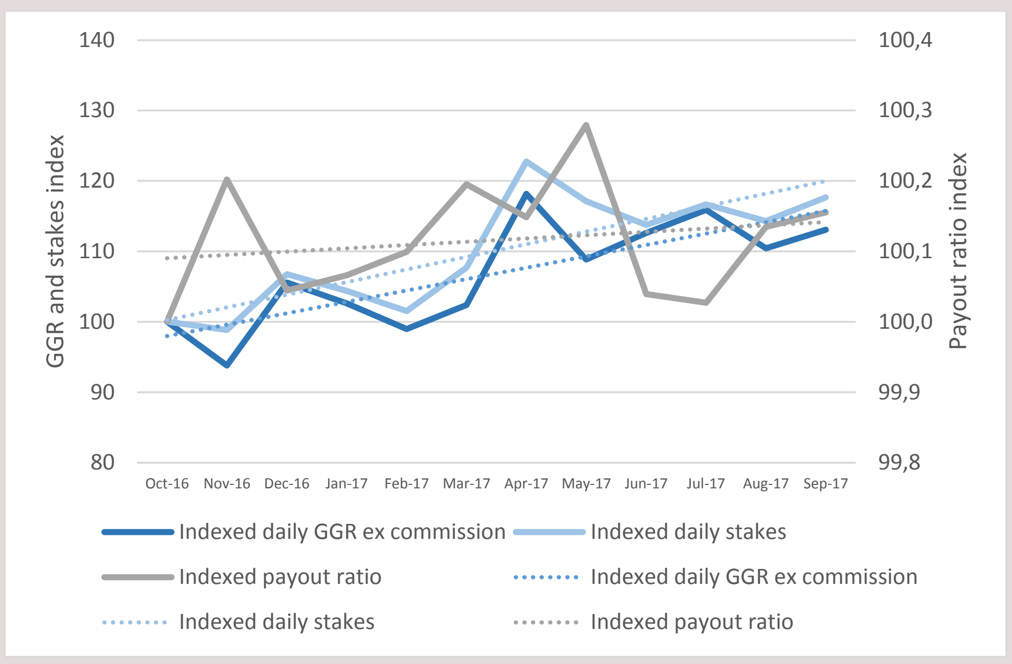
Table 3. Monthly GGR for online casino (million kroner), ex. GGR from commission games

	GGR (ex. com)	Stakes	Prizes	Pay-out ratio
Sep 17	141,4	3.862,5	3.721,2	96,3%
Aug 17	138,0	3.751,8	3.613,7	96,3%
Jul 17	144,9	3.829,6	3.684,7	96,2%
Jun 17	140,8	3.732,7	3.591,9	96,2%
Maj 17	136,1	3.843,3	3.707,2	96,5%
Apr 17	147,7	4.028,3	3.880,6	96,3%
Mar 17	128,0	3.534,2	3.406,2	96,4%
Feb 17	123,7	3.331,2	3.207,5	96,3%
Jan 17	128,3	3.425,2	3.296,9	96,3%
Dec 16	132,0	3.503,6	3.371,6	96,2%
Nov 16	117,2	3.243,2	3.126,0	96,4%
Oct 16	125,0	3.282,0	3.157,0	96,2%
Last twelve months	1.603,0	43.367,6	41.764,6	96,3%

Source: Tax returns submitted to the Danish Tax Authority.

Figure 4 charts the indexed values for average stakes, payout ratios, and non-commission GGR on a daily basis. It shows that while stakes, non-commission GGR and the payout ratio have all grown over the twelve months between October 2016 and September 2017, they have grown at slightly different rates. The payout ratio has grown at a marginally slower rate than growth in stakes, hence growth in GGR does not match growth in stakes.

Figure 4. Indexed development n GGR, stakes, and payout ratio (index 100 = June 2016)



Source: Tax returns submitted by licence holders to the Danish Tax Authority.

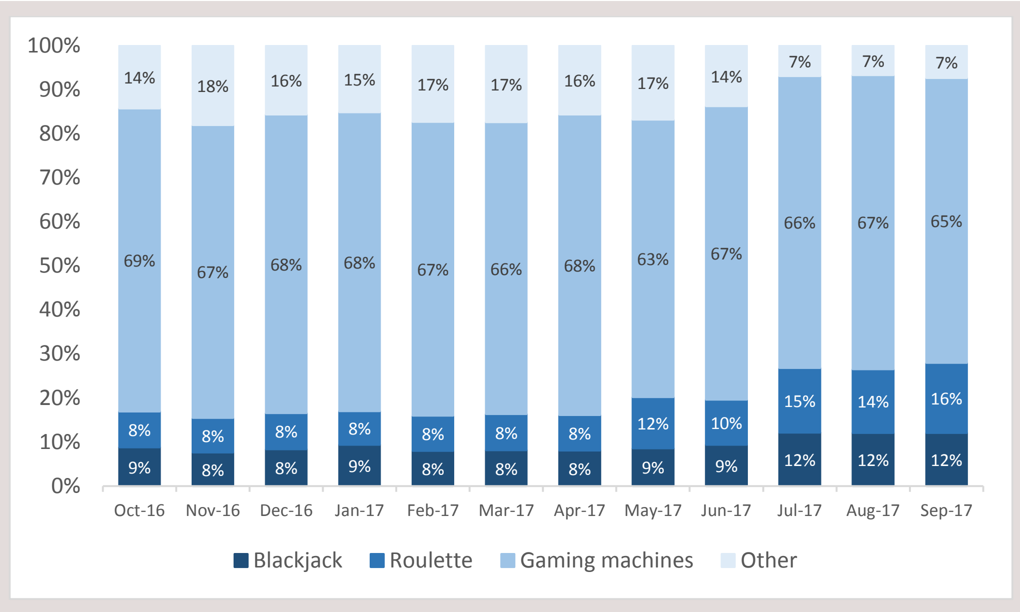
Game types (online casino)

Online gaming machines, were the most popular type of casino game over the last twelve months, with a market share of 66.6 percent.[7] In the third quarter of 2017, roulette was the next most popular game with approximately 15 percent market share, followed by blackjack in third place with 12 percent of the market.

As figure 5 illustrates, market shares for these game types has been relatively stable until June 2017. From July 2017 and onwards, market shares for roulette and blackjack have significantly risen. The Danish Gambling Authority believes that this is not necessarily a sign of significant changes in the market, but instead that many gambling operators have improved classification of their products instead of using the “other” category for their data. This means that it is likely that the figures for roulette and blackjack are higher than shown in Figure 5.

[7] Measured according to GGR from non-commission games

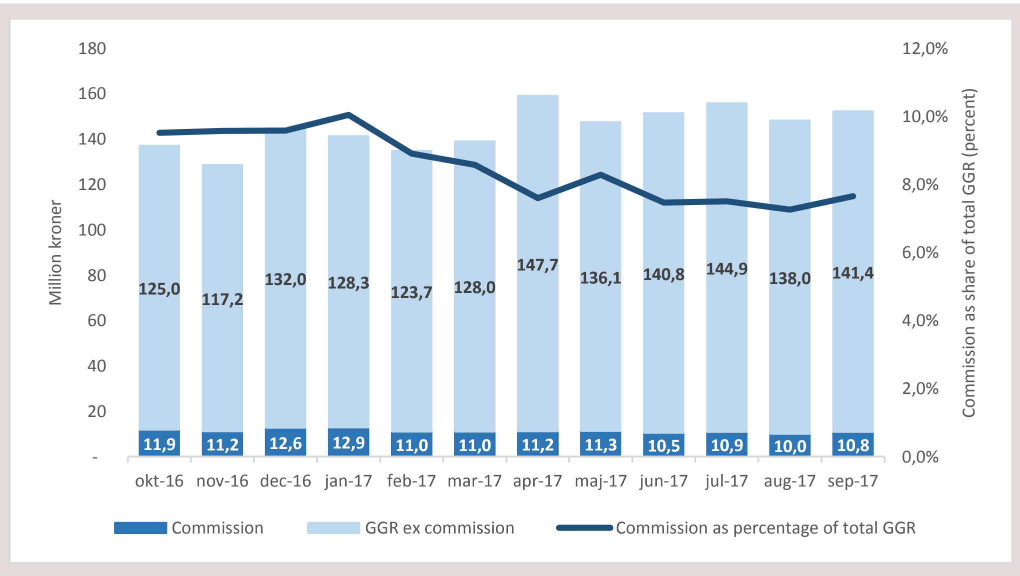
Figure 5. Market share stakes, online casino (ex. com. games) – Oct. 2016 – Sep. 2017



Based upon gambling transaction data submitted by license holders to the Danish Gambling Authority. Market share is calculated according to the total value of stakes placed. Multi-player games, where GGR is calculated on the basis of commission, such as multi-player poker, are not included. Due to data irregularities, June 2017 figures are based upon estimates drawn from a selection of online casino operators.

In figure 5, "other" covers a range of various games including poker played against a machine, sometimes called video poker. For commission games, such as poker cash and poker tournaments, where players pay *commission* to online casino operators to participate, then afterwards play other players for the remaining stakes, GGR is defined as this commission. This commission is then used to calculate gambling duties and therefore stakes and winnings are not traced in the Danish Gambling Authority's statistics, which are based upon taxation data. Due to this difference, commission games are not included in the statistics in Figure 5. Commission-based games are instead represented in Figure 6 and are based upon GGR filings submitted to the Danish Tax Authorities by gambling operators. There has been a steady downward trend in GGR from these games, both in absolute terms and as a proportion of total GGR. However, lower GGR may also be an indicator of lower prices and sharper competition for online casinos.

Figure 6. Development in commission as an element of GGR – last twelve months

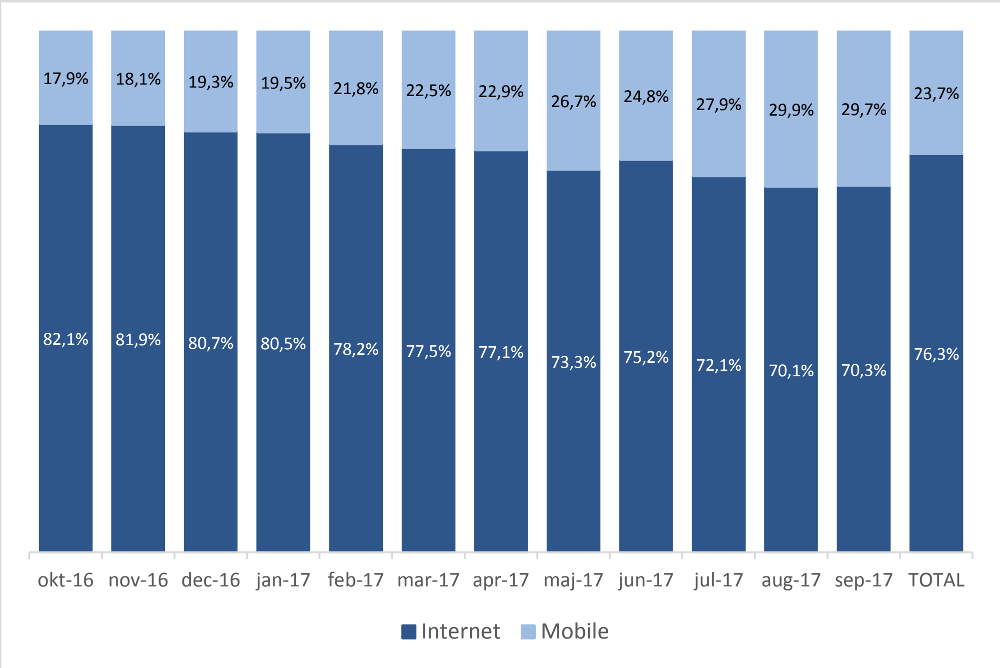


Source: Tax returns submitted by licence holders to the Danish Tax Authority.

Sales channel

Over the course of the twelve months between October 2016 and September 2017, 76.3 percent of total turnover in online casinos came from gaming providers' standard websites, with the remaining 23.7 percent generated through mobile platforms.[8] Data in this quarterly report differs from the second quarter report for similar reasons to the amendments to game type data. Despite the alterations to the figures for internet and mobile market shares, the data still shows an underlying trend whereby mobile transactions account for a growing share of the online casino market. Over this period, the share of turnover coming from mobile platforms has risen from 17.9 percent to 29.7 percent, as shown in figure 7.

Figure 7. Market share for internet and mobile platforms – weighted by GGR



Source: Based upon gambling transaction data submitted by licence holders to the Danish Gambling Authority.

[8] The definition of what constitutes sales through a "mobile" platform and sales through the "internet", i.e. gambling operators' standard desktop homepages, is defined by operators' themselves. Some sales classified as "internet" sales could, therefore, have taken place on mobile hardware running a desktop version of an operator's website.

D. Betting

In the third quarter of 2017, the betting market grew by 10.5 percent relative to the second quarter of 2017. At the same time, the betting market experienced 9.7 percent growth in GGR between the third quarter of 2016 and the third quarter of 2017, with quarterly GGR also now 140.6 million kroner higher than the first quarter of 2014. Quarterly GGR has though remained relatively stable since the third quarter of 2015, despite the relatively large growth seen in the third quarter. With that said, these figures are still provisional at this point, with some market data still outstanding. These figures will be re-evaluated in the fourth quarter report, with slight amendments expected.

Table 4. Market indicators for the betting market (financial figures in million kroner)

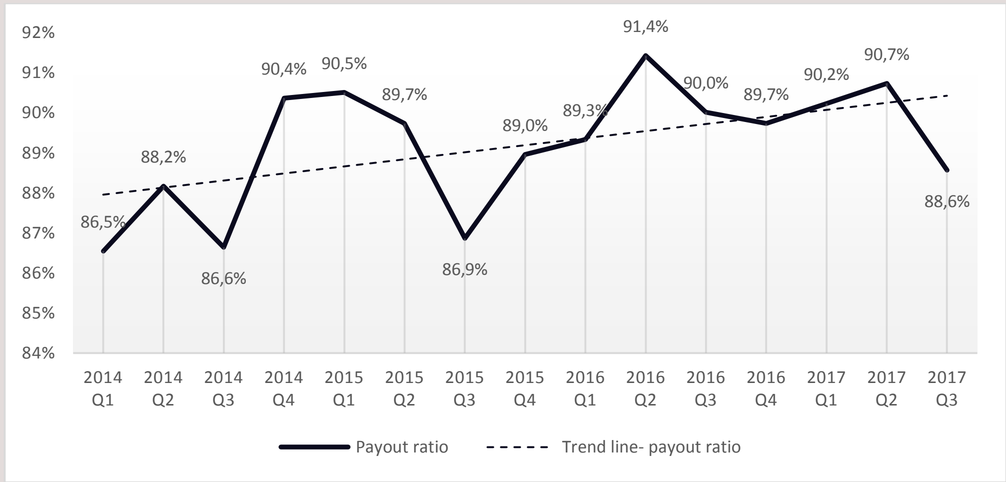
		Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total
2014	Total GGR	436,5	440,8	493,8	420,1	1.791,2
	- Payout ratio	86,5%	88,2%	86,6%	90,4%	88,1%
	- Stakes	3.206,8	3.699,1	3.674,0	4.327,5	14.907,3
	- Quarterly growth	-	1,0%	12,0%	-14,9%	-
2015	Total GGR	416,4	487,3	547,6	548,0	1.999,2
	- Payout ratio	90,5%	89,7%	86,9%	89,0%	89,0%
	- Stakes	4.349,5	4.711,1	4.146,4	4.938,6	18.145,6
	- Quarterly growth	-0,9%	17,0%	12,4%	0,1%	-
2016	Total GGR	565,4	523,2	529,3	550,4	2.168,3
	- Payout ratio	89,3%	91,4%	90,0%	89,7%	90,1%
	- Stakes	5.271,3	6.063,5	5.272,3	5.333,0	21.940,1
	- Quarterly growth	3,2%	-7,5%	1,2%	4,0%	-
2017	Total GGR	519,2	522,4	577,1	-	-
	- Payout ratio	90,2%	90,7%	88,6%	-	-
	- Stakes	5.293,3	5.617,4	5028,6	-	-
	- Quarterly growth	-5,7%	0,6%	10,5%	-	-

Source: Tax returns submitted by licence holders to the Danish Tax Authority.

As can be seen in Table 4, since 2014, there has been a trend whereby the payout ratio drops in the third quarter relative to the second quarter, resulting in a rise in GGR despite a fall in stakes.[9] The sharp rise in GGR seen in 2017 between the second and third quarters also saw a fall in the payout ratio by 2.1 percentage points. Although there is a general trend whereby the third quarter payout ratio is lower than the second quarter, the payout ratio in the third quarter of 2017 has not been lower since the third quarter of 2015, just as stakes are the lowest since the fourth quarter of 2015. This is reflected in GGR figures, where despite stakes being 243.7 million kroner lower in the third quarter of 2017 than the third quarter of 2016, GGR was 47.8 million kroner higher.

[9] There is a delay between placing a bet and collecting winnings that one does not see in the online casino market. While a fair proportion of bets are most likely placed in the immediate period before or during an event, the Danish Gambling Authority does not have (automatic) access to data on which events individual place their bets upon. The outcome of some bets will first be determined in the months to come.

Figure 8. Payout ratio for betting – 2014 Q1 - 2017 Q3



Source: Tax returns submitted to the Danish Tax Authority.

As is illustrated in Figure 8 above, there have been significant variations in the payout ratio, though with a general upward trend. As earlier mentioned, even slight adjustments to the payout ratio can have significant consequences for GGR, for example:

- GGR would halve been 101.8 million kroner higher in the third quarter of 2017, if the payout ratio from the first quarter of 2014 (86.5 percent) was applied to stakes placed in the third quarter of 2017.
- GGR would halve been 70.9 million kroner lower in the first quarter of 2017, if the payout ratio from the third quarter of 2017 (88.6 percent) was applied to stakes placed in the first quarter of 2014.

Table 5. GGR (exclusive commission), stakes, and payout ratio for betting – Oct. 2016 to Sep. 2017 – million kroner

	GGR[10]	Stakes	Payout ratio
September-17	181,0	1.830,8	90,1%
August-17	213,3	1.711,5	87,5%
July-17	180,2	1.486,3	87,9%
June-17	139,9	1.450,5	90,4%
May-17	192,6	1.820,1	89,4%
April-17	188,1	2.346,8	92,0%
March-17	137,6	1.876,5	92,7%
February-17	156,6	1.672,1	90,6%
January-17	223,0	1.744,8	87,2%
December-16	170,7	1.735,3	90,2%
November-16	176,4	1.769,4	90,0%
October-16	200,8	1.828,3	89,0%
TOTAL	2.160,2	21.272,3	89,8%

Source: Tax returns submitted to the Danish Tax Authority

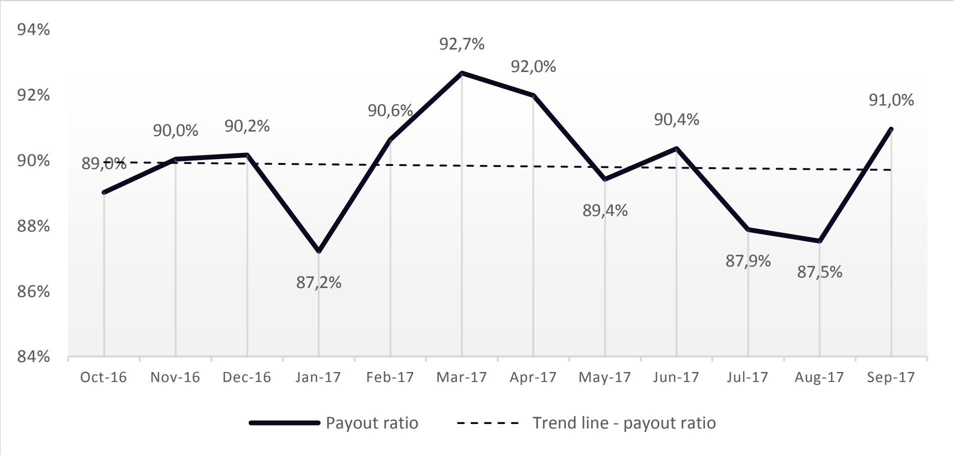
Between October 2016 and September 2017, April 2017 was the busiest month for licence holders, with over 2.3 billion kroner wagered. But it was not the month with the highest GGR; this honour fell to January 2017, where licence holders generated 223 million kroner in GGR from non-commission betting. The variation in GGR is reflected by a payout ratio with far greater variation over the twelve months than for online

[10] Excluding GGR from commission

casinos, which is a natural consequence of the differences between the two markets. The average monthly payout ratio for the betting market was as high as 92.7 percent in March 2017, but in January 2017, was a full 5.5 percentage points lower at 87.2 percent. The difference in payout ratio for September 2017 (90.1 percent) compared with, for example, March 2017 (92.7 percent) results in a significant difference in GGR, with September's figures 43.4 million kroner higher than March. This is despite the fact that stakes were 45.7 million kroner lower in September.

As Figure 9 shows, between October 2016 and September 2017, there was a slight downwards trend in the payout ratio, which lies at 89.8 percent on average for the period.

Figure 9. Betting payout ratio (calculated per month) – October 2016 – September 2017



Source: Tax returns submitted by licence holders to the Danish Tax Authority.

Sales channels

Unlike the market for casino games, betting licenses may provide for both land-based and online gambling, with online betting divided between mobile and desktop (internet) platforms. According to the Danish Gambling Authority's estimates,[11] in the third quarter of 2017, 50.5 percent of GGR from fixed odds betting came through mobile platforms, 16.1 percent from desktop versions of homepages, and the remaining 33.4 percent from land-based bookmakers.

Table 6. Market share according to sales channel, fixed odds betting, weighted by GGR

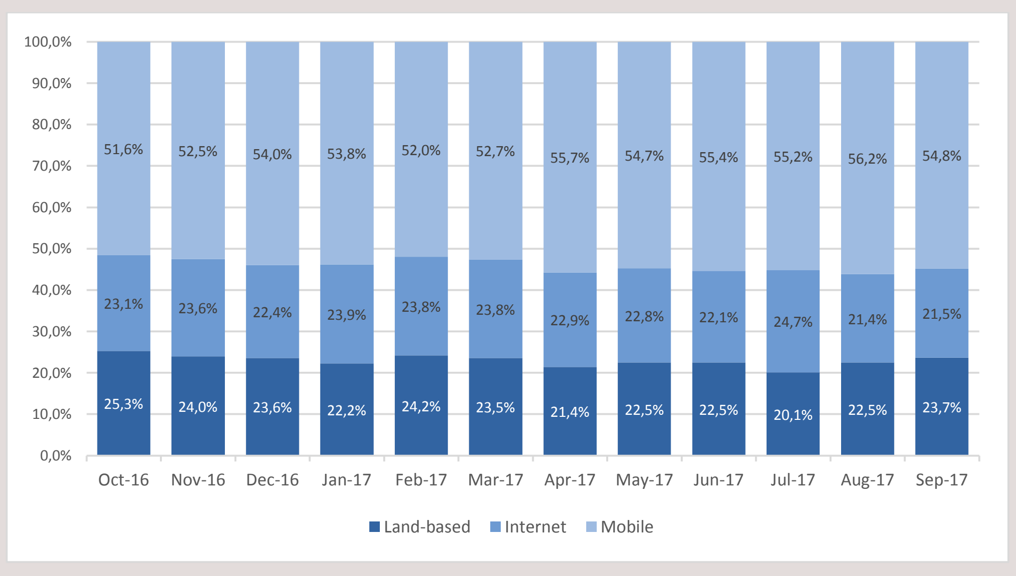
Sales channel	2016 Q4	2017 Q1	2017 Q2	2017 Q3
Land-based	35,9%	34,3%	34,7%	33,4%
Internet	17,1%	16,5%	15,5%	16,1%
Mobile	47,0%	49,2%	49,8%	50,5%

Source: The Danish Tax Authority / Danish Gambling Authority's Gambling Control System

[11] It is important to note that the data presented in Table 6 are estimates based upon a comparison of two sets of data – data on gambling duties paid by gambling operators and figures drawn from the Danish Gambling Authority's gambling control system. The two systems measure different types of data and according to different timelines. Whereas data on transactions (stakes/turnover) is categorised according to sales channels, tax data is not. Instead, tax data is aggregated on a monthly basis, with GGR then calculated according to the formula set out by the Danish Tax Authority. In order to provide an estimate of GGR according to sales channels, transactions data for individual licence-holders is compared with the turnover data used to calculate their GGR, which is then used as the basis for an estimate of aggregated GGR per sales channel. Furthermore, this data does not include data for income-limited gambling licences.

When seen in relation to turnover (not GGR), the online sector continues to dominate, with mobile platforms accounting for 54.0 percent of total turnover over the months between October 2016 and September 2017 (see Figure 10). Other online transactions (desktop homepages) accounted for 23.0 percent of turnover, while land-based transactions delivered the remaining 23.0 percent.

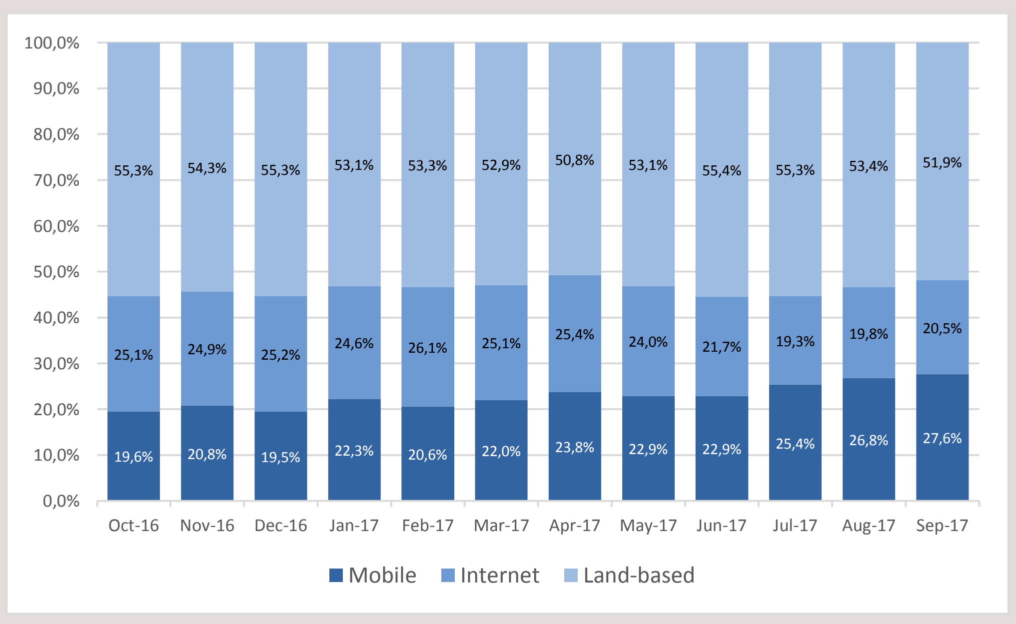
Figure 10. Sales channels for betting, ex. commission betting, according to turnover



Source: Based upon gambling transaction data submitted by licence holders to the Danish Gambling Authority.

When looking at the total number of transactions taking place, land-based bookmakers lead the way however, accounting for over half of all transactions in the same period, with mobile transactions accounting for approximately a fifth of all transactions, as illustrated in Figure 11. As our statistics show, the frequency of mobile transactions have though overtaken internet transactions in recent months, though the reason behind this may also be due to better registration of data by gambling operators.

Figure 11. Sales channels for betting, according to total number of bets placed



Source: Based upon gambling transaction data submitted by licence holders to the Danish Gambling Authority.

E. Gaming machines/Slot machines

GGR from gaming machines was 18.1 million kroner lower in the third quarter of 2017 than the second quarter of 2017, though 4.6 million kroner higher than the third quarter of 2016. This equates to a fall of 4.7 percent relative to the second quarter of 2017 and a rise of 1.3 percent relative to the third quarter of 2017. These developments are in line with previous years, where third quarter figures are lower than second quarter figures.

Table 7. Quarterly GGR for gaming machines

		Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total
2014	Total	386,2	404,2	374,4	382,2	1.546,9
	- Restaurants	89,8	92,7	89,4	88,8	360,7
	- Gaming arcades	296,4	311,5	284,9	293,4	1.186,1
2015	Total	376,8	413,1	375,6	382,0	1.547,6
	- Restaurants	87,6	92,7	87,5	86,0	353,8
	- Gaming arcades	289,3	320,4	288,2	295,9	1.193,7
2016	Total	378,6	390,6	364,8	370,0	1.504,0
	- Restaurants	85,0	86,4	84,0	84,9	340,3
	- Gaming arcades	293,6	304,2	280,8	285,0	1.163,6
2017	Total	370,3	387,5	369,4	-	-
	- Restaurants	85,2	87,6	84,4	-	-
	- Gaming arcades	285,0	299,9	285,0	-	-

Source: Tax returns submitted by licence holders to the Danish Tax Authority.

GGR for gaming arcades has fallen by 5,0 percent between the second and third quarters of 2017, just as GGR from gaming machines in restaurants also fell, though by less – 3.7 percent – as is shown in Table 8.

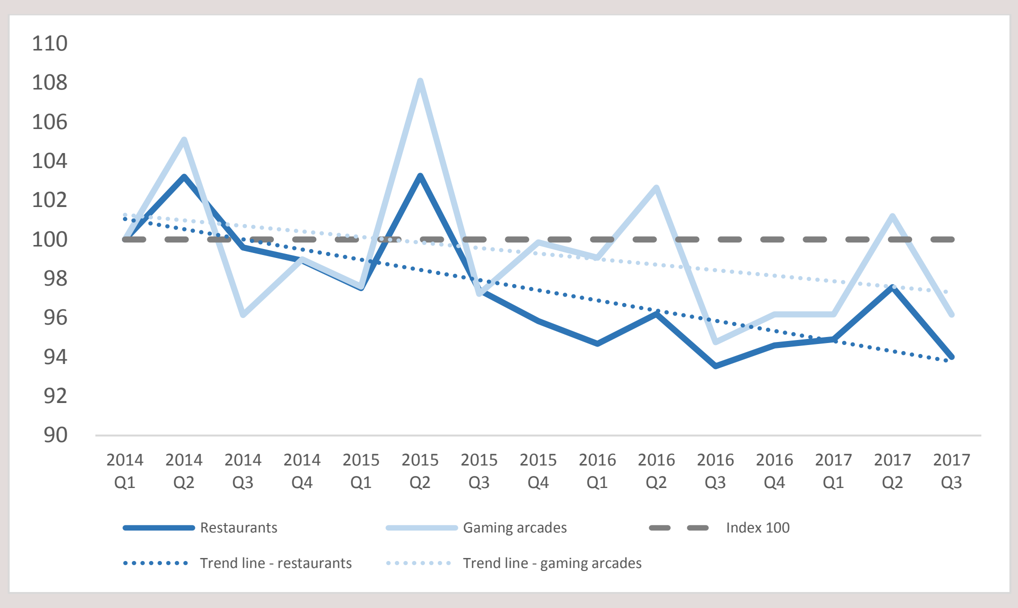
Table 8. Quarter-on-quarter growth in GGR from gaming machines

		Quarter 1	Quarter 2	Quarter 3	Quarter 4
2014	Total	-3,5%	4,7%	-7,4%	2,1%
	- Restaurants	-28,0%	3,2%	-3,5%	-0,7%
	- Gaming arcades	7,6%	5,1%	-8,5%	3,0%
2015	Total	-1,4%	9,6%	-9,1%	1,7%
	- Restaurants	-1,4%	5,9%	-5,7%	-1,6%
	- Gaming arcades	-1,4%	10,8%	-10,1%	2,7%
2016	Total	-0,9%	3,2%	-6,6%	1,4%
	- Restaurants	-1,2%	1,6%	-2,8%	1,1%
	- Gaming arcades	-0,8%	3,6%	-7,7%	1,5%
2017	Total	0,1%	4,7%	-4,7%	
	- Restaurants	0,3%	2,8%	-3,7%	
	- Gaming arcades	0,0%	5,2%	-5,0%	

Source: Tax returns submitted by licence holders to the Danish Tax Authority.

It is important to note, however, that the decline between second and third quarters is less than that seen in previous years, though still greater for gaming arcades. However, when seen in relation to the first quarter of 2014, it is restaurants that have experienced the relatively largest decline in quarterly GGR.

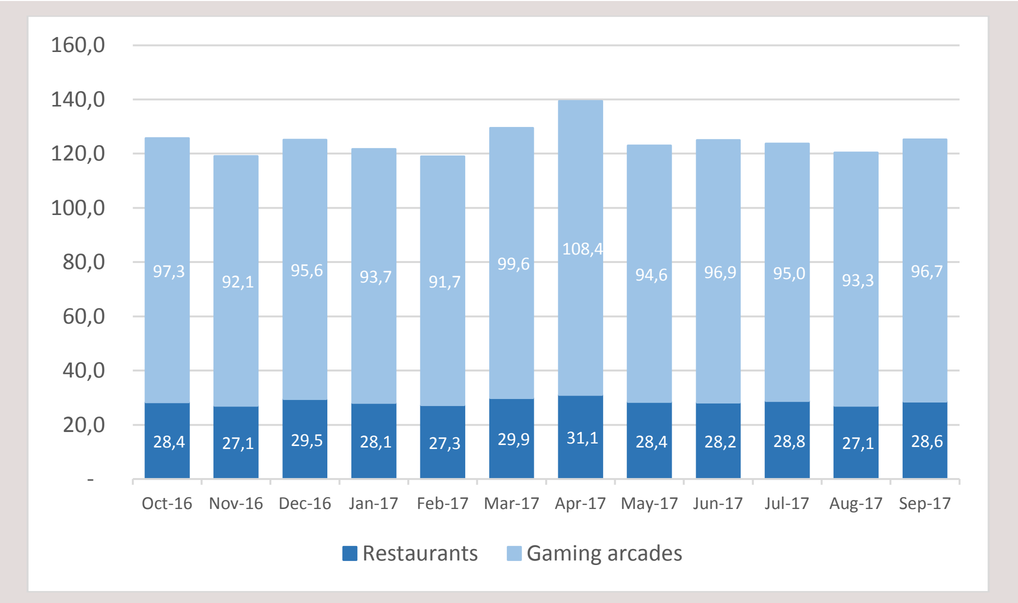
Figure 12. Development in quarterly GGR indexed against 2014 Q1 (index 100) – gaming machines



Source: Tax returns submitted by licence holders to the Danish Tax Authority.

Gaming machines generated 1.5 billion kroner in GGR over the twelve months between October 2016 and September 2017. On average, restaurants generated 28.5 million kroner in GGR a month, whilst arcades generated 96.2 million kroner a month. For both restaurants and arcades, GGR was highest in April 2017, totalling 31.1 million and 108.4 million kroner respectively.

Figure 13. Monthly GGR for gaming machines, October 2016 – September 2017



Source: Tax returns submitted by licence holders to the Danish Tax Authority.

F. Land-based casinos

Quarterly GGR generated by Denmark's seven land-based casinos in the second quarter of 2017 is 0.3 percent lower than the second quarter of 2017, though marginally higher than the second quarter of 2016, with year-on-year growth of 2.7 percent.

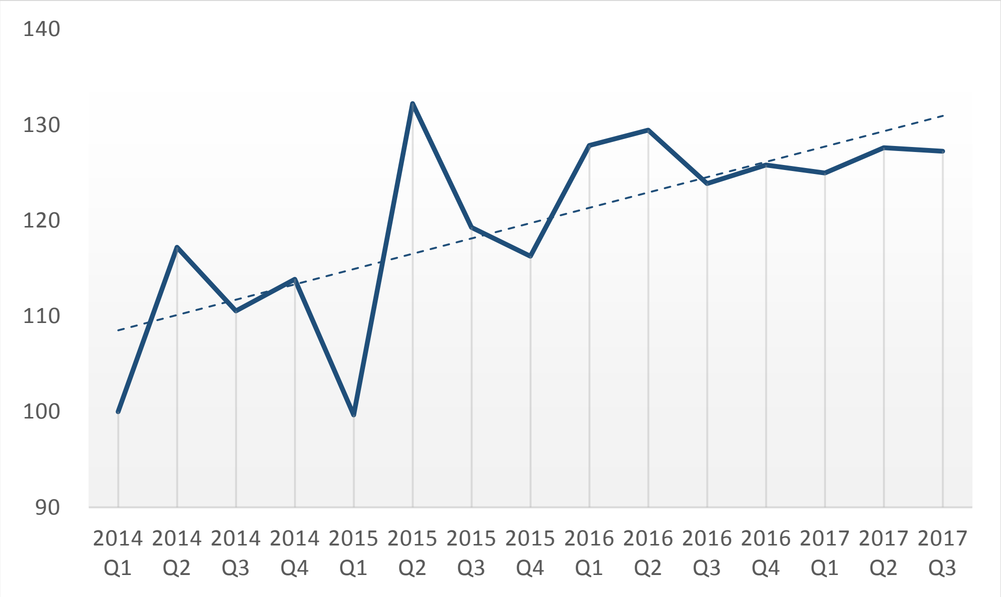
Table 9. Quarterly GGR and growth on previous quarter

	Quarter 1	Quarter 2	Quarter 3	Quarter 4
2014	74,7	87,6	82,6	85,1
- Growth on previous quarter	-12,2%	17,2%	-5,7%	3,0%
2015	74,5	98,8	89,2	86,9
- Growth on previous quarter	-12,5%	32,7%	-9,8%	-2,5%
2016	95,6	96,7	92,6	94,0
- Growth on previous quarter	10,0%	1,2%	-4,3%	1,6%
2017	93,4	95,4	95,1	
- Growth on previous quarter	-0,7%	2,1%	-0,3%	

Source: Tax returns submitted by licence holders to the Danish Tax Authority.

Figure 14 charts the value of quarterly GGR indexed against the first quarter of 2014 (index = 100). As Figure 14 shows, developments in GGR have followed a slight upward trend in this period. Quarterly GGR was highest in the second quarter of 2015, though this followed a drop in the first quarter of 2015. Quarterly GGR has remained relatively consistent in the period since.

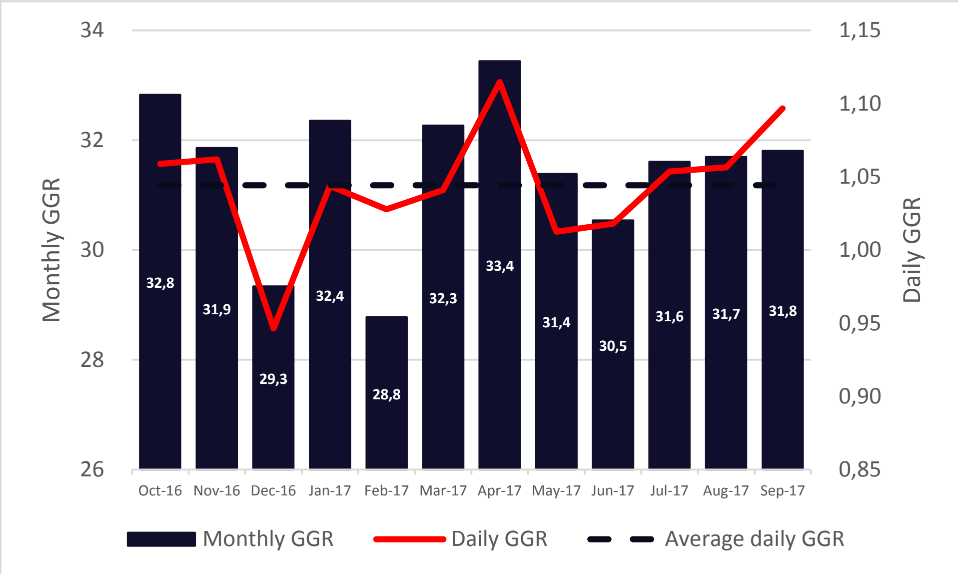
Figure 14. Quarterly GGR benchmarked against Quarter 1, 2014 (index 100) – land casinos



Source: Tax returns submitted by licence holders to the Danish Tax Authority.

Over the course of the twelve months between October 2016 and September 2017, land-based casinos generated 377.9 million kroner in GGR, or an average of 31.5 million kroner a month. When taking account for the varying lengths of each month, GGR was lowest in December 2016 (0.95 million kroner in GGR per day), while April 2017 was highest (1.11 million kroner in GGR a day). On average, casinos generated 1.04 million kroner a day in GGR between October 2017 and September 2016.

Figure 15. Monthly GGR for land-based casinos – last twelve months



Source: Tax returns submitted by licence holders to the Danish Tax Authority.

G. ROFUS

ROFUS is the Danish Gambling Authority's voluntary gambling self-exclusion register. Registrations in ROFUS cover all online gambling services offered by gambling operators licensed by the Danish Gambling Authority. From January 6th 2017, registration in ROFUS also includes land-based casinos.

Table 10. Registrations in ROFUS

Date	Total registrations	- of which, permanent	Permanent regis-traions as share of to-tal registations
October 3 2016	7.962	5.627	70,7%
November 1 2016	8.338	5.811	69,7%
December 2 2016	8.512	5.943	69,8%
January 3 2017	8.822	6.156	69,8%
February 1 2017	9.744	6.646	68,2%
March 2 2017	9.993	6.705	67,1%
April 3 2017	10.234	6.885	67,3%
May 1 2017	10.490	7.088	67,6%
June 12017	10.896	7.323	67,2%
July 3 2017	11.130	7.534	67,7%
August 1 2017	11.173	7.737	69,2%
September 1 2017	11.367	7.777	68,4%
October 2 2017	11.748	7.891	67,2%
November 2 2017	12.109	8.483	70,1%
December 1 2017	12.448	8.643	69,4%

Source: Data from ROFUS

As can be seen from the table, the monthly increase has typically been around 2-300 persons (these are the total number of entries, not the number of new entries). The increase of more than 1200 registrations between December and February is probably due to the ROFUS (TV) infomercial that has been shown in "OBS" and the TV-2 channels from Boxing Day 2016 to the end of January 2017.

On the 1st December 2017, there were 3,936 more registrations in ROFUS than there were on the 2nd December 2016, equating to year-on-year growth of 46.2 percent. The majority of this growth was in permanent self-exclusions, with 2,700 more registrations in the period, accounting for 68.6 percent of growth in registrations.