Taxation and online sports betting in Germany

Considering the relative merits of a tax on gross gaming revenue and a tax on stakes for the potential regulation of online sports betting

Prepared by PwC’s Gaming Centre of Excellence, London

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About the authors

PwC is a major provider of consulting and advisory services to the public and private sectors covering: strategy, policy and economics, financial management, people, outsourcing and shared services, procurement, technology, governance, risk and controls and programme/project management.

Our experience and credentials in the gaming sector range widely, spanning from evaluations of the socio-economic impact of casino developments, to numerous engagements where we have provided commercial, financial and operational due diligence services, as well as strategic advice and market reviews, to numerous types of gaming operators (casino, gaming machine, bingo and online gaming operators among others), financial institutions, and public bodies in various countries (including the UK, France, Germany, Italy, South Africa, Macau, Greece, Eastern Europe, the US and the Netherlands).

This study was prepared by PwC’s Gaming Centre of Excellence.

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1 Executive summary

This study investigates the potential impact of regulating online sports betting in Germany. Specifically, it considers the relative merits of doing so with a tax on stakes or with a tax on gross gaming revenue, and the consequent impact on the proportion of the market which is regulated in Germany.

We conclude that regulation of the online sports betting market in Germany has the potential to significantly increase the proportion of the market which is locally regulated, eliminating much of the non-German regulated market, and the most effective means of doing so is with a tax on gross gaming revenue (GGR). We believe that regulating the market with a tax on GGR as opposed to a tax on stakes will result in higher ‘absorption’ (defined as the proportion of the online sports betting market in Germany, in GGR terms, which is regulated in Germany), thereby reducing the size of the market which is non-German regulated, better protecting German customers and capturing more potential tax revenue. Furthermore, we believe that betting restrictions such as customer stakes limits or banning ‘in-game’ betting will significantly shift gaming from the German regulated market to the unregulated market; such restrictions are designed to protect players but we believe they could drive activity away from the German regulated market, where German customers are not protected by the German regulatory regime.

Our conclusions are based on a number of key findings which we discuss in detail within this study:

- No attempts to block customers accessing online sites have proven to be wholly effective due to legal, practical and technical limitations. The online gaming sector will therefore exist regardless of regulation, so an effective tax and regulatory regime is key to reducing the size of the gaming market which is non-German regulated
- A tax on GGR stimulates a higher proportion of the market to become regulated in Germany relative to a tax on stakes. This limits the size of the non-German regulated market, and ensures a competitive market of locally regulated German operators
- By encouraging a higher proportion of the market to become regulated in Germany, a tax on GGR supports the effective implementation of social responsibility policies, enabling greater control of ‘problem gambling’ and player protection, as a higher proportion of German customers will be playing on sites that are licensed with appropriate regulatory oversight
- The experience of EU Member States that have already regulated online gaming supports the assertion that a tax on GGR is the most effective way to regulate the market
  - “Regarding taxes, we have now realised that the taxation model where a percentage of stakes is levied does not work” - Chairman, ARJEL (French gaming regulator), July 2011
- A GGR tax works with all gaming products and therefore future proofs the tax regime to potential regulation of other products such as cash poker which does not work with stakes
- A higher GGR tax increases the potential of customers using non-German regulated operators, because it reduces the incentive for operators to obtain a license. We expect that betting restrictions on e.g. ‘in-game’ betting could have the same effect given its increasing popularity
- The experience of other EU jurisdictions also suggests that regulation of the online market and its subsequent growth does not cannibalise the offline (retail) sector in a material fashion

We conclude therefore that a tax on GGR is the most effective tax regime with which to regulate the online sports betting market in Germany, and the most likely to achieve desired policy outcomes. This conclusion is based on, amongst other things, extensive analysis of the gaming market in Germany, including the development of a detailed market model, analysis of the experiences from EU Member States that have already regulated online gaming, consideration of operator and customer incentives, and PwC’s experience based on our extensive work in this sector. We present a detailed consideration of the evidence, arguments, analysis and conclusions in the main body of this study.

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1 For games in which the operator accepts risk gross gaming revenue is defined as stakes less winnings; for games in which the operator accepts no risk gross gaming revenue is the revenue that accrues to the operator (e.g. commission).
2 Introduction

There is a wide range of approaches taken by regulators and fiscal authorities across the globe to taxing sports betting and other gaming activities. This comprises both what to tax, and the levels of tax to apply. Tax can be applied to the gaming industry in a number of different ways, the most common of which are:

- a tax on stakes, i.e. the total monies gambled
- a tax on gross gaming revenue (GGR), i.e. for games in which the operator accepts risk gross gaming revenue is defined as stakes less winnings; for games in which the operator accepts no risk gross gaming revenue is the revenue that accrues to the operator (e.g. commission)

Figure 2.1 demonstrates how gaming tax can be applied in different ways to an operator’s business, namely through a tax on stakes or a tax on GGR, which are the focus of this study:

Figure 2.1 – Tax on stakes vs tax on gross gaming revenue

In addition to these gaming specific taxes, there may also be sales or VAT taxes incurred and corporate taxes to be paid.

The tax level applied to gaming, and the basis on which taxes are assessed, influence both customer and operator behaviour, and therefore are important drivers of the total market size for gaming, as well as the proportion of the market which is locally licensed versus that which is operating in the unregulated market. Given that tax take, if based on a percentage rate rather than a fixed duty, is a product of the taxation rate and the locally regulated market size (typically either at a stakes or gross gaming revenue (GGR) level), the approach to taxing gaming is therefore both a direct and indirect driver of the tax take from gaming activity.

2.1 Purpose of this study

The background to this study is the ongoing trend towards country by country regulation of online sports betting and gaming activities across Europe, and the decisions that regulators and politicians are making on how to tax the online gaming industry as they regulate their market. In particular, they are typically choosing whether to adopt a tax on stakes or a tax on gross gaming revenue, as well as the level at which to set the tax.

Betfair Group plc has commissioned PwC to provide an independent, robust and quantified view of different approaches to taxing online sports betting in Germany. In particular, we consider the relative
merits of a tax on stakes and a tax on gross gaming revenue in terms of how these different tax regimes influence the locally regulated market size (and the size of the non-German regulated market), and therefore the tax revenue generated by the industry and the ability of regulators to protect customers.

The views expressed in this study are those of PricewaterhouseCoopers and not of Betfair Group plc.

2.2 Scope and approach

The approach taken in this study has been to carry out a range of analyses and benchmarking of Germany with other territories from which to draw conclusions. We have used case studies of how the online gaming markets have developed in Italy, France, UK and the Czech Republic post-liberalisation (understood as a loosening of restrictions on the supply of gaming services), and examined the impact this has had on other gaming products in these jurisdictions. We have conducted primary and third-party research and analysis, and drawn on experience from a significant amount of previous work in this sector, with operators, regulators and governments. The majority of our work was completed in September 2011; the data presented here attempts to be the latest at the time of writing, however, we cannot guarantee the completeness of the data at the time of publication.

Based on the research and analyses completed, we have modelled three different scenarios for Germany. The outputs of these scenarios are used to evaluate the potential impact on ‘absorption’ (the share of the market which is locally regulated versus that which is non-German regulated), the German regulated market size and therefore the tax take of introducing a tax on GGR versus a tax on stakes for online sports betting, if and when regulation is introduced. The three scenarios modelled are:

1. Online sports betting regulated with a 4% tax on stakes
2. Online sports betting regulated with a 8% tax on stakes
3. Online sports betting regulated with a 20% tax on GGR

The scope of this study focuses on online sports betting (including horse race betting) in Germany, and we have considered other online products such as casino and poker although these are not a focus of our modelling.

Online sports betting in Germany is estimated to be worth c. €290m in GGR terms, representing c.38% of German online gaming (see Figure 2.2).
We have not explicitly modelled the offline (retail) market in Germany under different scenarios, however, we have included considerations for the potential impact of a newly regulated online sports betting market on the offline market; this is based on detailed examination of experiences from other markets.

For modelling purposes, we have made the simplifying assumption that the new tax regimes detailed in the scenarios above are applied from 1st January 2012. With regards to regulation of the online sports betting market, we assume that it would not be possible for the regulator to entirely prevent unregulated online gaming, reflective of the situation in other regulated European online markets. The level of German regulated versus non-German regulated online gaming activity (i.e. the ‘absorption’ rate), and therefore the prevalence of unregulated gaming, is a factor of both the tax regime and extent to which the regulator is able to enforce / block illegal sites, hence the rate will differ between scenarios; we discuss this in detail in chapter 5.

We make a number of other key assumptions as follows in our scenario modelling:

- No restriction on the number of operator licenses
- Consistent regulation across all 16 federal states in Germany
- No stakes limits or deposit limits for customers
- ‘In-game’ / live betting is allowed
- Operators are able to advertise prior to launch on 1 January 2012 from which point they would be able to obtain licenses and therefore operate

We will also address (although not explicitly include in our scenario modelling) the potential implications of relaxing some of these assumptions in this study, including considerations of what the impact would be of:

- Applying a monthly stakes limit on customers
- Banning ‘in-game’ / live betting
Flexing the 20% GGR tax

Whilst the focus of our study is on evaluating the impact of different forms of taxation on ‘absorption’, regulated market size and tax take, we have also made a qualitative evaluation of non-tax factors that are pertinent to a consideration of online gaming regulation, i.e. other economic (e.g. advertising, sponsorship, jobs) and important non-economic issues such as ‘problem gambling’ and player protection.

Finally, our model includes gaming taxes (on stakes or GGR), but excludes VAT taxes incurred and corporation tax, as well as potential government revenue derived from licensing (including processing and application fees).

2.3 Terms of reference

In this study, we will use a number of terms for which the following definitions should be assumed:

<table>
<thead>
<tr>
<th>Term (or common variants)</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absorption:</td>
<td>The percentage of the online market in Germany that is German regulated (and therefore taxable)</td>
</tr>
<tr>
<td>Betting:</td>
<td>Placing money on the outcome of a sporting event or performance of a contestant</td>
</tr>
<tr>
<td>Cannibalisation:</td>
<td>The decrease in market growth in one gaming market as a result of the introduction or growth of another</td>
</tr>
<tr>
<td>Cash poker:</td>
<td>Non-tournament poker games where player stakes vary for every hand played</td>
</tr>
<tr>
<td>Gaming (or Gambling):</td>
<td>Placing money on the outcome of an uncertain event (includes sports betting and other gaming activities)</td>
</tr>
<tr>
<td>Gross gaming revenue - GGR (or Gross gaming yield or Gross win):</td>
<td>For games in which the operator accepts risk gross gaming revenue is defined as stakes less winnings; for games in which the operator accepts no risk gross gaming revenue is the revenue that accrues to the operator (e.g. commission)</td>
</tr>
<tr>
<td>Gross gaming revenue percentage - GGR % (or Gross win margin, or take-out rate):</td>
<td>Gross gaming revenue divided by stakes. This represents the ‘price’ of gaming to the customer</td>
</tr>
<tr>
<td>Liberalised:</td>
<td>Where the process of regulation has loosened the restrictions on the supply of gaming services</td>
</tr>
<tr>
<td>Locally regulated:</td>
<td>Online or offline gaming supplied by operators that are licensed to operate within Germany, or the relevant local jurisdiction. Often referred to as ‘onshore’ or ‘German regulated’</td>
</tr>
<tr>
<td>Non-German regulated:</td>
<td>Online or offline gaming activity supplied by operators not licensed within Germany (in the case of online, typically licensed in another jurisdiction in the EU). This is often referred to as unregulated or offshore</td>
</tr>
<tr>
<td>Offline:</td>
<td>Retail gaming activity in betting shops, casinos, gaming or bingo halls, lottery or other gaming outlets</td>
</tr>
<tr>
<td><strong>Online:</strong></td>
<td>Gaming activity through remote channels e.g. the internet and telephone</td>
</tr>
<tr>
<td><strong>Operator margin:</strong></td>
<td>Gross gaming revenue percentage less gaming taxes and fees</td>
</tr>
<tr>
<td><strong>Payout:</strong></td>
<td>The total amount (winnings) received by the customer in prizes from successful bets or gambling games</td>
</tr>
<tr>
<td><strong>Problem gambling:</strong></td>
<td>Gambling or gaming activity by customers which causes harmful consequences or which occurs despite their desire to stop</td>
</tr>
<tr>
<td><strong>Retail:</strong></td>
<td>See offline</td>
</tr>
<tr>
<td><strong>Sports betting:</strong></td>
<td>Placing money on the outcome of a sporting event (including horse racing) or performance of a contestant</td>
</tr>
<tr>
<td><strong>Stakes:</strong></td>
<td>Total (gross) amount of money spent by customers on gaming activities</td>
</tr>
<tr>
<td><strong>Tournament poker:</strong></td>
<td>Poker game where a customer pays a fee to enter a tournament with the prizes being allocated according to the final finishing position of that tournament</td>
</tr>
<tr>
<td><strong>Unregulated market:</strong></td>
<td>See ‘non-German regulated’</td>
</tr>
</tbody>
</table>
3 Different approaches to taxing gaming: considerations and example markets

There are a number of different choices available to, and indeed made by, fiscal authorities and regulators, in designing the gaming tax regime in a country. In this chapter we will provide an overview of the range of choices available both in terms of what is taxed, the level of tax (or taxes) and the base on which tax (or taxes) are applied before moving on to discuss at greater length the economic and social impact of different levels of tax and tax bases (focusing in particular on a comparison between a stakes and a gross gaming revenue tax base). We close this chapter by providing a brief overview of regulatory tax approaches taken in various countries.

Our analysis in this chapter leads to three main conclusions:

First, given a competitive, non-supply constrained market, a lower tax rate will likely be passed on by operators as lower prices to customers, and will therefore incentivise customers to use locally regulated operators, encouraging higher ‘absorption’ and higher growth of the regulated market, and minimising the size of the unregulated market. This is due to the fact that, according to empirical evidence, gaming activities are sensitive to changes in price.

Second, for similar reasons, a tax on GGR is likely to lead to higher ‘absorption’ and stronger market growth than a tax on stakes. This is because economic theory suggests that a tax on GGR will incentivise operators to pursue a low margin (i.e. low price), high turnover strategy (as this would lower the amount of tax paid as a proportion of stakes), whereas a tax on stakes would encourage operators to pursue a high margin (i.e. high price), low turnover strategy (in order to minimise the tax paid as a proportion of profit).

Finally, a tax on GGR offers a number of other advantages to a tax on stakes. The more attractive market economics of a tax on GGR encourage longer-term investment in infrastructure and the proposition to customers. The higher ‘absorption’ encouraged by a tax on GGR allows the regulator to better control potential ‘problem gambling’ (this will be discussed in more detail in chapter 6). Finally, a tax on GGR not only avoids restricting certain segments of the market today (unlike a tax on stakes, which cannot tax all products currently available in the sector, such as roulette, cash poker and blackjack), but also better future-proofs the tax regime to future innovations in gaming products.

3.1 Different types of taxes and range of approaches

A jurisdiction’s gaming tax regime is defined both by the level of the tax (or taxes), and the base on which the tax (or taxes) is assessed (e.g. 15% of gross gaming revenue). Customer and operator behaviours and actions are influenced, in part, by the tax regime, and consequently this has an important impact on the outputs of gaming activity in a particular jurisdiction: stakes, GGR, tax take, other economic considerations (e.g. job creation), and also non-economic considerations (e.g. ‘problem gambling’, player protection).

There is a wide range of approaches taken by regulators and fiscal authorities across the globe in terms of both what is taxed, and the levels of tax applied. Looking at the former point, tax can be applied to gaming in a number of different ways, the most common of which are:

- a tax on stakes, i.e. total monies gambled
a tax on gross gaming revenue (GGR), i.e. for games in which the operator accepts risk gross gaming revenue is defined as stakes less winnings; for games in which the operator accepts no risk gross gaming revenue is the revenue that accrues to the operator (e.g. commission)

Alternatively, tax can be applied on a fixed per unit basis, e.g. an annual fee per slot machine or per table. Tax can often also be generated through licensing and processing fees, e.g. a license to operate in a market. Combinations of the above taxes are frequently seen in global gaming markets, for example a gross gaming revenue tax and an annual license fee to operate.

In the remainder of this chapter we will consider at a conceptual level the relative merits of different gaming taxes, focusing on stakes taxes versus taxes on gross gaming revenue, and then summarise some of the markets where these taxes are currently seen. In chapter 4, we will then look at the experiences of some selected markets in more detail and the lessons that can be drawn for an evaluation of stakes versus GGR taxes, before considering this specifically in relation to Germany in chapter 5. Non-tax factors related to this evaluation (e.g. job creation, impact on 'problem gambling') will be considered in chapter 6.

3.2 Considerations for evaluating different regimes

The tax level, and the basis on which taxes are applied, influence both customer and operator behaviour, and therefore are important drivers of the total market size for gaming which is locally regulated in a jurisdiction, as opposed to the market operating from another regulated market or without any regulation. Given that tax take, if based on a percentage rate rather than a fixed duty, is a product of taxation rate and the locally regulated market size (typically either at a stakes or gross gaming revenue level), the approach to taxing gaming therefore, is both a direct and indirect driver of the tax take from gaming activity.

Additionally, a tax regime which promotes higher ‘absorption’ increases the proportion of consumers that the government and operators can seek to protect with socially responsible policies.

We will now examine some considerations of both the level at which tax is set, and the base on which tax is applied.

3.2.1 Level of taxation

If a higher level of tax on gaming activities is introduced, all other factors being equal, we would expect this to constrain growth in the market due to demand and supply-side effects. We will deal with these in turn.

The ‘price’ of gaming is the take-out rate or GGR% of gaming. The price paid by the customer consists of, in part, the level of tax, and therefore, as the tax rises this will put upwards pressure on the price in the market. As with most markets, as the price for gaming rises, this will reduce the quantity demanded, which in the case of gaming is represented by the stakes wagered. Numerous empirical studies have analysed the sensitivity of this relationship, i.e. the rate of change of quantity demanded (stakes) to the rate of change of price (take-out rate or GGR%). The balance of this evidence leads us to conclude that gaming is a price elastic market, or in other words, that the quantity demanded is sensitive to changes in price. Therefore, all other factors being equal, as price decreases, quantity
increases at a faster rate, and therefore, the market size (gross gaming revenue) increases. The opposite effect is expected as prices increase.

Table 3.2 – Sample of empirical studies of elasticities found in US horse racing

<table>
<thead>
<tr>
<th>Study</th>
<th>Years covered</th>
<th>Estimated elasticity³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ali and Thalheimer (2002)</td>
<td>1985</td>
<td>-2.10</td>
</tr>
<tr>
<td>Gruen (1976)</td>
<td>1940-1969</td>
<td>-1.57</td>
</tr>
<tr>
<td>Gulley and Scott (1989)</td>
<td>1976-1980</td>
<td>-0.38</td>
</tr>
<tr>
<td>Morgan and Vasche (1979)</td>
<td>1958-1978</td>
<td>-1.48</td>
</tr>
<tr>
<td>Simmons and Sharp (1987)</td>
<td>1982</td>
<td>-2.81, -3.90</td>
</tr>
<tr>
<td>Suits (1979)</td>
<td>1949-1971</td>
<td>-1.59</td>
</tr>
<tr>
<td>Thalheimer and Ali (1995a)</td>
<td>1960-1990</td>
<td>-1.76, -1.77</td>
</tr>
</tbody>
</table>

The degree to which the introduction of a higher tax will lead to a higher price depends not just on this demand mechanism, but also on the supply-side characteristics of the market. For example, reductions in tax may not be fully reflected in lower prices for customers, but instead be taken by operators as additional profit. In general, we would expect that the more competitive the market, the more reductions in tax will be passed on to customers as lower prices, and conversely, tax increases will be passed on as a higher prices. As such, whilst empirical studies suggest that lower prices will grow the overall size of the market (as measured by GGR), the extent to which tax increases /decreases impact the size of the market depends not only on the price elasticity of customers, but also on the competitiveness of suppliers operating in the market.

The level of tax also influences supplier incentives, as it directly influences the attractiveness of the market for the operator. For newly legalised or liberalised gaming markets, a higher tax level (or with significant market restrictions) can act as a barrier to entry, as it may make market entry appear unappealing relative to other market opportunities, or it may encourage operators to remain unregulated and operate outside of the scope of a particular jurisdiction’s regime (e.g. France). A higher tax level can also lead to lower investment in gaming due to the poorer return on investment for operators, and therefore reduce levels of gaming activity in the locally regulated market. Thus, the level of tax is a crucial factor in determining the expected level of ‘absorption’ in a market. Higher rates, in general, will encourage a lower rate of ‘absorption’ and a larger unregulated market, giving government, regulators and operators less opportunity to introduce socially responsible policies.

3.2.2 Type of taxation

As well as the effective tax rate, the tax base is an important determinant of overall market size. In this section, we will focus on the relative merits of taxes on stakes and taxes on gross gaming revenue.

³ Elasticity is measured as the percentage change in the stakes wagered (the quantity) divided by a percentage change in the take-out rate (the price). Elasticity is negative as a price increase typically results in a reduction in quantity demanded. Elasticity greater than 1 indicates that demand is ‘elastic’, i.e. quantity demanded changes at a faster rate than changes in price.
3.2.2.1 Tax on stakes and tax on gross gaming revenue

From an economic theory perspective, the comparison of stakes versus GGR tax is essentially one of commodity taxes (levied as a proportion of stakes, or quantity) and ad valorem taxes (levied as a proportion of the price charged to the customer). Academic literature, in general, concludes that an ad valorem tax (such as a tax on GGR) results in lower prices and higher demand than a commodity tax (such as a tax on stakes). This is the expected result in almost all markets where operators have greater than zero pricing power, i.e. they have some ability to set prices in the market. In the theoretical instance of perfect competition, commodity and ad valorem taxes result in the same equilibrium price and quantity demanded, however, this is more a theoretical result than a result likely to be observed in practice.

The intuition behind this result is that a gross gaming revenue tax encourages operators with a degree of price setting ability to pursue a low margin, high turnover strategy, as this lowers the amount of tax paid as a proportion of stakes. In contrast, a tax on stakes encourages operators to pursue a high margin, low turnover strategy, as operators with pricing power are unlikely to cut prices (reduce take-out percentage) because this increases tax as a proportion of the price paid by customers, and lowers the operator margin. Therefore, a tax on GGR more closely aligns the interests of government and operators.

If a tax on gross gaming revenue, all other things being equal, leads to lower prices in the market than a tax on stakes, we must also consider another indirect implication of this result, namely the effect on the non-German regulated market. German customers face a range of operators offering gaming products in a market, some of which are locally regulated, some of which are regulated in other jurisdictions, and some of which are not regulated at all. Prices offered by unregulated operators are typically more competitive than those of locally regulated suppliers since they are typically either licensed in jurisdictions with more advantageous tax regimes, or are not taxed at all (if unregulated). If the market is regulated with a GGR tax then we would expect prices, all other things being equal, to be lower than if the market was regulated with a stakes tax. These lower prices would mitigate the potential gap in prices between German regulated and non-German regulated operators. This narrower (or non-existent) gap in prices will constrain the growth of the non-German regulated market as customers will be offered competitive prices by gaming operators regulated in Germany. This is especially important in online markets, where the opportunity for customers to shop around is greater given the borderless nature of online markets. The effect of a tax on GGR, all other things being equal, in lowering prices, thus directly encourages locally regulated market growth, through the price-effect on demand, but also does so indirectly by making the regulated offering relatively more competitive than would be the case with a tax on stakes. As a result economic theory seems to suggest that a GGR tax would lead to higher ‘absorption’, stronger German regulated market growth and consequently to greater growth in the tax take and ability for government to protect players with socially responsible policies.

Looking at the situation in France, which has a high tax on stakes of 8.5%, and a low rate of ‘absorption’ relative to other jurisdictions, helps to illustrate the point that the tax regime is an important determinant of ‘absorption’ and the size of the not-locally regulated market: “…in France, on the sports betting side, we would believe that not more than 30% is run by French-facing business run by licence holders”.

In addition, maximising the size of the locally regulated market through a GGR tax base, gives authorities greater control to protect players, identify and help problem gamers and

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Bwin.party CEO, May 2011.
mitigate the threat of fraud and corruption. We will return to these important considerations in more detail in chapter 6.

Furthermore, a tax on GGR does not restrict the product range that can be offered by operators, unlike a tax on stakes. Applying a stakes tax on games with a high return to player, or low take-out percentage, dramatically decreases the operator margin. If the stakes tax is higher than take-out percentage (e.g. if a stakes tax of >2.7% is applied to a game of roulette) then the game, in its traditional form, becomes unprofitable for the operator, and it will not be offered. If, however, a tax on gross gaming revenue is applied, this is compatible with all types of games, irrespective of take-out percentage or format of game. A tax on gross gaming revenue not only avoids restricting certain segments of the market today, but it also future proofs the tax regime to future innovations in gaming products. For this reason, a stakes tax can lead to a much lower rate of ‘absorption’ than a tax on GGR for certain products, leading to a larger unregulated market (e.g. cash poker and traditional roulette cannot work with a tax on stakes).

3.2.2.2 Conclusion

Economic theory suggests that a tax on GGR incentivises operators to lower prices, with the opposite expected with a tax on stakes. This reduces incentives for customers to seek unregulated operators, as it minimises the potential price gap between regulated and unregulated offerings (relative to a tax on stakes), leading to better capture of the market for taxation (i.e. higher ‘absorption’), and greater control of potential ‘problem gambling’ and player protection. Given the empirical evidence that gaming activities are sensitive to changes in price, a tax on GGR which lowers the market price is therefore likely to lead to higher ‘absorption’ and a smaller unregulated market. A tax on GGR also allows for a wider choice of gaming products to be offered relative to a tax on stakes which further reinforces this relationship.

3.3 Examples seen in EU and other markets

Below (Table 3.3) we outline the range of ways these theoretical approaches to taxing gaming are practically applied to online sports betting in different markets. In the next chapter, we will investigate further some case studies of countries that have gone through a recent process of re-regulation, to examine lessons that can be learned, and how this can be applied to our evaluation of different ways of taxing gaming in Germany.

Table 3.3 – Current and proposed* tax systems for online sports betting

<table>
<thead>
<tr>
<th>Online Sports Betting Tax base</th>
<th>Online Sports Betting Tax rate</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>Stakes</td>
<td>8.5% stakes sports betting, 15.5% stakes horse race betting</td>
</tr>
<tr>
<td>UK</td>
<td>GGR</td>
<td>15%</td>
</tr>
<tr>
<td>Czech</td>
<td>GGR</td>
<td>6-20%</td>
</tr>
<tr>
<td>Republic</td>
<td>Taxation Method</td>
<td>Tax Rate</td>
</tr>
<tr>
<td>----------</td>
<td>----------------</td>
<td>----------</td>
</tr>
<tr>
<td>Belgium</td>
<td>GGR</td>
<td>11-15%</td>
</tr>
<tr>
<td>Italy</td>
<td>Mixed Stakes &amp; GGR*</td>
<td>2-5% stakes betting, 20% GGR* betting exchanges</td>
</tr>
<tr>
<td>Poland</td>
<td>Stakes*</td>
<td>12%* all betting, 2.5%* animal race betting</td>
</tr>
<tr>
<td>Slovakia</td>
<td>GGR</td>
<td>27%</td>
</tr>
<tr>
<td>Estonia</td>
<td>GGR</td>
<td>5%</td>
</tr>
<tr>
<td>Romania</td>
<td>Stakes</td>
<td>1-5-5%</td>
</tr>
<tr>
<td>Spain</td>
<td>GGR</td>
<td>25%</td>
</tr>
<tr>
<td>Greece</td>
<td>GGR</td>
<td>30%</td>
</tr>
<tr>
<td>Denmark</td>
<td>GGR*</td>
<td>20%*</td>
</tr>
</tbody>
</table>

*Note: * indicates that regulation has not yet come into effect, but has been suggested by the regulator.
Lessons from online regulation in other jurisdictions

Comparing the experience of other countries in regulating their online markets is a useful tool in evaluating the effectiveness of regulation. However, caution needs to be exercised in drawing conclusions from such comparisons as there are a number of other variables affecting the performance of gaming markets aside from regulatory changes. The effects of these other factors such as the macroeconomic environment, shifting customer demographics and attitudes, among others, cannot always be reliably stripped out in evaluating the impact of regulatory change. Bearing these difficulties in mind we can nonetheless try and learn as much as we can from the experience of other counties, and some important lessons emerge.

In what follows we principally lay out the experience of four countries. Overall, a couple of key points emerge from the experiences of Italy, France, the UK, the Czech Republic and other selected European jurisdictions.

Firstly, lower tax regimes such as those of Italy, the UK and the Czech Republic seem to encourage higher rates of ‘absorption’ (defined as the % of the online market which is locally regulated) and faster rates of regulated online gaming market growth. The high stakes-based tax regime in France appears to have limited growth in ‘absorption’ by making the locally regulated offering less attractive compared to that of unregulated competition, both from an operator and a customer perspective.

Secondly, there is no strong evidence for suggesting that the presence of a regulated online proposition has a material negative impact on retail (offline) growth. To put it differently, there is no strong evidence of online ‘cannibalising’ offline. An examination of the experience of the UK, Italy and France provides no evidence to suggest that online cannibalisation is a more significant, and thus material, influence on the growth of offline market GGR than the range of other factors which impact the growth of the offline gaming market such as economic growth and socio-economic shifts.

The conclusions above are arrived at by the following procedure: in each of the case studies we commence by providing an outline of the key online gaming regulatory changes in each of the countries under examination, we then highlight the impact of regulation in terms of online market growth and ‘absorption’. We then examine, where appropriate, the impact of opening the online gaming market on the offline market.

4.1 Italy

4.1.1. The regulatory background

The most important stage in the regulation of online gaming in Italy came with the Bersani law of 2006 which allowed for the first online sports betting licenses to be introduced (coming into effect in

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5 These countries have been selected as they are European countries that have recently regulated but which also provide sufficient post-regulation data so that learnings can be taken from their experiences and applied to Germany

6 It should be noted that online market values below exclude online lotteries in order to avoid introducing an artificially higher ‘absorption rate’. In addition note that estimates of the not-locally regulated online market generally represent gaming through operators licensed in other EU jurisdictions only.
2007). This was followed by the introduction of online horseracing (both fixed and pari-mutuel) in March 2008 and online poker in September 2008. The Communitaria law of 2008 and the Abruzzo Decree of 2009 also expanded the range of games to include new casino, bingo, and cash poker games. Online lottery games (superenalotto and superstar) were introduced in July 2009 and online bingo in December 2009. Although cash poker and casino games were initially expected at the end of 2010, legislation delayed this. These games were launched in July 2011.

4.1.2. Market impact of regulation

Liberalisation of the online gaming market has allowed it to maintain a high annualised historical growth rate, running at a rate of 38.9% (CAGR06-10) compared to the historical rate of 54.0% (CAGR03-06) whilst at the same time achieving high ‘absorption’ rates as operators became locally regulated. Specifically, ‘absorption’ rates are estimated to have increased from 0% prior to regulation in 2006 to c.42% in 2008 and to c.63% in 2010. The market is expected to be further boosted in 2011 by the introduction of the new casino and cash poker games. (Figure 4.1)

The experience of Italy therefore suggests that rapid growth of locally regulated GGR and high ‘absorption’ rates can be achieved when online regulation is introduced with an effective and competitive rate of tax, however, it also warns of the complexity of starting to regulate with a stakes tax that is unlikely to work for certain key market products (e.g. some casino games and cash poker), which when regulated later require a different tax regime.

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7 Fixed odds sports betting and horse race betting were also allowed prior to this in 2001 and 2002 respectively but they could only be provided by Italian Olympic Committee (CONI) and the National Horse Breeders enhancement society.

8 New games are expected to lead to an increase in tax revenue of c.€21m from the repatriation of business as well as to a €7m one-off fee from issuing new licenses allowing for the provision of new licenses.
4.1.3 Cannibalisation

It should be noted that the increase in the online gaming offer in Italy does not seem to have had an appreciable impact on the offline segments of the market. Tracking the growth (in terms of stakes) of locally regulated sports betting from the first year in which online betting was regulated (2007) does not seem to provide evidence for a significant cannibalisation effect (Figure 4.2).

Figure 4.2 – Growth in locally regulated sports betting online versus offline, 2003-10

As is evident from Figure 4.2, offline sports betting has continued to grow by 8.1% p.a. (2007-10), despite the introduction of online sports betting in 2007, suggesting that its introduction had no significant impact on offline betting stakes. Against this one could argue that the growth rate of the sector during 2003-07 was considerably higher at c.11.3% p.a. indicating that the introduction of online sports betting has led to a decline in offline market growth from the first year of liberalisation onwards. However, we believe this would be misleading. To begin with, it ignores that the sector was boosted between 2005 and 2007 by key structural changes including the introduction of betting shop licenses in 2005 which allowed betting shops to be operated as a hub for a network of internet terminals located in cafes and kiosks and by the introduction of a large number of sport-betting shop and corners licenses in 2006 (over 6,000 locations licensed). It is reasonable to expect that these changes would have increased the growth rate of the sector to a considerable degree and render the period from 2005-2007 inadequate as a comparison to the post-regulation growth rate of 2007-10. Looking at the growth rate for offline sports betting between 1999-2004 (prior to the opening up of the Italian gaming market) provides us with an annualised growth of offline sports betting of only 3.5%, below the Italian annualised GDP per capita growth of 4.0% (current prices) during the same period. Consequently it seems reasonable that, taking into account the annualised decline in Italian GDP per capita (0.6%) during 2007-2010, the relatively slower growth rate of 8.1% (in terms of stakes) can only be attributed to cannibalisation to a very small extent, if any.

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9 Where there have been discrepancies between H2GC data and AAMS available data we have used AAMS data.
10 IMF April 2011 World Economic Outlook report April 2011.
11 IMF April 2011 World Economic Outlook report April 2011.
The case of Italy thus teaches us some important lessons for our evaluation of the regulation of online gaming:

1. Liberalisation of online gaming with an effective GGR tax rate equivalent to that of Italy stimulates ‘absorption’

2. Cannibalisation does not have a material impact on offline market growth and does not appear to be more significant than other influences e.g. GDP growth. This view is also supported by statements by the chief of the American Gaming Association (AGA), Frank Fahrenkopf, who in the recent World Gaming Executive Summit 2011 commented that 90% of AGA members do not see online propositions as ‘cannibalistic’ to offline propositions. In addition, the CEO of Inspired Gaming, Luke Alvarez, suggested that online and offline gaming are complementary, with players coming to land based gaming establishments after initially being introduced to gaming online.\(^{12}\)

4.2 France

4.2.1 Regulatory background

France liberalised its online gaming market in June 2010 by licensing horse race betting, sports betting and cash and tournament poker.\(^{13}\) Prior to this, online gaming services were only provided by Pari Mutuel Urbain (PMU), the horse betting retail monopolist which retains its legally entrenched retail monopoly, and Francaise des Jeux (FDJ) the state lottery monopoly.\(^{14}\)

4.2.2 Market impact of regulation

The evolution of the French online gaming market has two distinct stages. The first stage, the period pre-regulation, was characterised by the declining dominance of PMU as unregulated competition provided gaming products of a more varied nature and at more attractive win rates. This led the online unregulated market sector to grow at an annualised rate of 47.2% (2003-09) compared to PMU’s online annualised GGR of 16.7% during the same period. This meant that potential government tax revenue was not captured. The second stage of evolution of the market occurred post the partial opening of 2010, leading the market to grow at 46.1%, mostly as a result of new entrants into the locally regulated market (see Figure 4.3).

\(^{12}\) In addition Franz Wohlfahrt, CEO of Novomatic holdings suggested, in the same conference, that he has as yet seen no evidence of cannibalisation effects of an online proposition on offline slot machines.

\(^{13}\) No other games were licensed.

\(^{14}\) FDJ started offering its lottery products online in 2001 and sports betting products in 2008.
Whilst regulation of certain online games in France has led to an increase in market growth and an increase in the estimated ‘absorption’ rate (with new entrants accounting for c.31% of estimated ‘absorption’ and incumbents accounting for c.23%, bringing the total to c.54%), this only represents an increase in ‘absorption’ of 25ppts, a smaller increase than that seen in Italy’s first equivalent year of 2008 (42ppts). However, the overall effectiveness of regulation in France in promoting online market growth and ‘absorption’ can only be fully assessed a few years post regulation. It is our belief that the positive impact from regulation on market growth and ‘absorption’ has been dampened by the use of a stakes tax at a relatively high rate. This is supported by a recent statement by the chairman of ARJEL: “Regarding taxes, we have now realised that the taxation model where a percentage of stakes is levied does not work”.

In addition to this, the reaction of market participants also suggests that the current system prevents them from participating in the market (See Table 4.1):

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**GC 28 July 2011, “Arjel concedes tax failings in France”** which reports that in an interview with Le Monde the chairman of ARJEL said: “Regarding taxes, we have now realised that the taxation model where a percentage of stakes is levied does not work”.
Table 4.1 – Market participants’ views of online regulation regime in France

<table>
<thead>
<tr>
<th>Market participant</th>
<th>Date</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remote Gaming Association – Chief Exec</td>
<td>November 2010</td>
<td>“French consumers have access to a limited online gambling marketplace, with very few new operators deciding to enter the French market due to the excessive fiscal burden on operators. This is especially true in relation to sports betting where conditions make it extremely difficult to operate a viable business. The RGA predicted in October 2009 that France’s proposed regulatory and taxation regime would be unattractive and that has unfortunately proved to be the case.”</td>
</tr>
<tr>
<td>Mr Hawkswood</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PokerStars – MD</td>
<td>June 2011</td>
<td>PokerStars France “will be forced to withdraw from the market” if the mode of taxation is not changed, claimed Alexandre Balkany, in the online gaming segment of the GESTE conference</td>
</tr>
<tr>
<td>Alexandre Balkany</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bwin.party – CEO</td>
<td>May 2011</td>
<td>Speaking at a bwin-party annual presentation Mr Teufelberger said he believed that only a third of online sports betting activity in France is locally regulated due to the high taxation levied by French authorities: “We don’t have any official numbers, but I would tend to believe that maybe 85-90% of business [in Italy] is done by regulated operators, whereas in France, on the sports betting side, we would believe [that] not more than 30% is run by French-facing business run by licence holders. French regulator ARJEL is aware of that.”</td>
</tr>
<tr>
<td>Norbert Teufelberger</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unibet – CEO</td>
<td>March 2011</td>
<td>“As we said in the communication around our Q4s in February, we apply for licences based on profitability, and France does not look good. We have many things we can put our resources into from a development point of view, and unless terms and conditions improve there, we can’t make any money. The opening is looking like a failure.”</td>
</tr>
<tr>
<td>Henrik Tjärnström</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Betclic – Vice Chairwoman</td>
<td>November 2010</td>
<td>In talking of the French sports betting right, Isabelle Parize, vice chairwoman of the sports betting and poker operator of Betclic Everest, told Gambling Compliance: “This tax comes on top of an already too heavy burden in terms of gaming taxes, leading us to non-profitable business in France.”</td>
</tr>
<tr>
<td>Ms Parize</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Betclic – Chairman</td>
<td>December 2010</td>
<td>Talking to the Figaro Mr Courbit said that France’s “absurd” execution of its liberalization scheme means that even a native French company like Betclic “cannot afford to live in its home market.” Operators are “overtaxed” and “the rate of return to players is too low.”</td>
</tr>
<tr>
<td>Mr Courbit</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.2.3 Cannibalisation

The French experience also supports the lessons learned in Italy regarding the effects of online gaming on the offline market. Considering the period 1999-2010, during which PMU offered both online and offline betting products, one would have expected, if there were a material cannibalisation impact, that PMU customers would switch from its offline offering to its on-line offering, and consequently that the size of its offline stakes and GGR would have been gradually eroded. However, evidence does not support such a claim (Figure 4.4).

16 Groupement des Editeurs de Services en Ligne (GESTE) conference held on the 29th of June 2011.
As is evident from the figure above, PMU’s offline betting stakes have continued to grow steadily since 1999, albeit not at the high rate of the new online products, which started from a lower base and are also supported by increases in online penetration (France has experienced a rapid increase in the percentage of individuals who state that they have made an online purchase in the last 12 months, from c.22% in 2006 to c.56% in 2010). This suggests that customers of PMU’s online products are largely different to the customers who purchase its offline products. This is also supported by European demographic trends, which suggest that a younger, better educated demographic is more likely to shop online, as well as anecdotal evidence from market participants suggesting that only a small percentage of high yield players (in terms of operator GGR) would typically be multi-channel. Therefore, the case of France, like Italy, provides no clear evidence that the emergence of online gaming has had a significant cannibalisation impact on the offline market.

The case of France thus teaches us some important lessons for our evaluation of the regulation of online gaming:

1. Liberalisation of online gaming coupled with a high stakes tax does not appear to stimulate high levels of ‘absorption’ or regulatory control of the market
2. Cannibalisation does not have a material impact on offline market growth and does not appear to be more significant than other influences e.g. GDP growth

4.3 UK

4.3.1 Regulatory background

The UK has been on the forefront of liberalisation of online gaming in Europe for over ten years. The most recent significant change to the UK gaming tax system has been the change of the betting tax

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17 Eurostat, 2010, percentage of individuals who have made a purchase online in the past 12 months.
18 Eurostat, 2010, percentage of individuals who have made a purchase online in the past 12 months by age and education level.
base in October 2001 from a 6.75% stakes tax base to a 15% GGR tax base. In addition to this, the remote gaming bill of 2007 introduced regulation for online casino gaming setting the same tax base and rate as that for betting (15% of GGR).

The UK currently operates a ‘white list’ allowing operators licensed in certain countries outside the UK to provide and advertise their services to UK citizens without being subject to the UK tax regime. In addition, a number of UK licensed operators offer their services not only to UK residents but to customers in other countries as well. As a result of this the locally regulated versus not-locally regulated split which has been used in the case of Italy and France, and which serves to illustrate the level of spending by Italian and French residents in operators either licensed locally or not, does not fully apply in the case of the UK where UK player spend cannot be directly derived from UK based operators’ online GGR (as this will include online GGR derived from customers in other countries as well). Nonetheless, focusing our attention on UK land based and online locally regulated operators and UK online player spend can help further our understanding provided we keep these caveats in mind.

We note that the UK has recently announced its intention to move to a licensing system where operators offering services to the residents of a country need to be licensed, and therefore be subject to tax in that jurisdiction. However the likely timing of when this legislation will come into force is currently uncertain (with estimates placing it in 2013-14).  

4.3.2 Market impact of regulation

The UK market has for some time been one of the most open online gaming markets across Europe and has experienced annual GGR growth of 80% (2002-08). However, this growth rate is complicated by the fact that after 2001 the tax base changed from a 6.75% stakes tax base to a 15% GGR tax base. The market is further complicated by the fact that under the current UK system operators licensed in certain countries outside the UK can provide and advertise their services to UK citizens without being subject to UK tax.

The relatively liberalised background to the UK market meant that online gaming developed in line with technology and the penetration of the internet, and did not have a defining moment when online gaming became regulated (as with Italy and France). Therefore it is difficult to take specific lessons from the market but we believe that the high overall online GGR growth since 2001 (see Figure 4.5) indicates that an effective online regulation process that opens the market and stimulates a high level of ‘absorption’ can minimise the size of the unregulated market.

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4.3.3 Cannibalisation

The UK experience also helps shed further light on the question of online cannibalisation of the offline market. As in the case of Italy and France, discussed above, the growth of UK online player activity does not seem to have had a significant impact on land based gaming (Figure 4.6).

Land based gaming has remained broadly stable during this period, growing by c.2% p.a. in the case of all land based gaming (and 0.4% p.a. when the effect of the introduction of a large number of FOBT (Fixed Odds Betting Terminals) is stripped out). As a result, this example provides no clear evidence of a material cannibalisation effect. This is also supported by the fact that all major UK betting operators

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20 UK player online gaming in Figure 4.7 includes online lottery.
with a land based presence (e.g. William Hill, Ladbrokes, Gala Coral, Betfred and Totesport) also provide an online offering, suggesting, as with the case of PMU in France, that an online betting offering enables them to access a different customer demographic. This view is supported by the comments made by the CEO of Ladbrokes (Richard Glynn) at the recent World Gaming Executive Summit 2011, where he stated that data from Ladbrokes’ loyalty scheme suggests that online and offline gaming may be complementary, rather than there being a cannibalisation effect.

Overall the case of UK illustrates the following:
1. Regulation of the online market in a way that opens the market and stimulates competition leads to high ‘absorption’
2. Cannibalisation does not have a material impact on offline market growth and does not appear to be more significant than other influences e.g. GDP growth

4.4 Selected other jurisdictions

4.4.1 The Czech Republic

Although online gaming is not expressly regulated in the Czech Republic, in January 2009 the Ministry of Finance granted permission to five major domestic operators to offer online sports betting (effective from the 1st of January 2009).\(^{21}\) On the basis of the current tax regime retail operators face the same rate of tax for their offline and online operations currently at 6-20% of GGR graduated depending on the level of GGR, leading to an effective GGR tax of c.15% across operators. The current experience of the Czech Republic can thus be used to add to the lessons learned from our investigation of France, Italy and the UK.

The licensing of five operators has led to an increase in the online market, the majority of which has been in the locally regulated market.\(^{22}\) Despite the high rates of growth experienced following the granting of five sports betting licenses the rate of online market growth has consequently slowed in 2009-2010 to 41% reflecting the restrictiveness of the Czech regime (which requires a land based presence for operators). This is also reflected in the estimated ‘absorption’ rate for 2010 which only appears to have increased by 5ppt since 2009 (See Figure 4.7).

\(^{21}\) The total number of licenses granted appears to be 8 but only 5 operators are active. There are reports that the government is considering the imposition of a high stakes tax of c.20% on online gaming though there is still a high level of regulatory uncertainty over the eventual gaming regulations which are expected to come in place in 2012-13.

\(^{22}\) Fortuna, one of the biggest operators recently reported (March 2011) that online GGR between 2009 and 2010 increased by c.53%. Sazka one of the other major operators, mainly focusing on lottery products, has recently gone into administration.
Despite this, the relatively lower GGR tax currently used in the Czech Republic has led to a greater increase in estimated ‘absorption’ than the case of France in its first year of liberalisation and to a greater first year increase in online market growth compared to pre-regulation growth than was the case in Italy and France.

The current Czech regulatory regime as a result provides us with two lessons:
1. A relatively lower GGR rate (e.g. relative to Italy and France) is likely to lead to a higher online market growth rate and initial rate of ‘absorption’
2. However, the longevity of this growth and the impact in terms of ‘absorption’ depends on the degree of liberalisation, in terms of the number of granted licenses and other requirements (e.g. land based presence)

4.4.3 Belgium and Estonia

The state of online regulation in other markets, for example in Belgium where regulation of online gaming is very recent and in Estonia where the first online betting license was only granted in April 2011, does not allow us to draw any firm conclusions from their experiences as market data is not yet available. However the case of Estonia indicates that a low degree of liberalisation is likely to impair market growth as is reflected by the low number of licenses granted to date. An announcement by the Estonian government in August 2011 suggests that it has recognised this issue, with the finance ministry revealing that it plans to remove the requirement to locate servers in the country, in order to introduce a more flexible approach to online gaming regulation. A number of other countries are in the process of regulating online gaming, and whilst their proposed reforms generally seem to suggest a general move towards taxation on the basis of GGR, no firm conclusions can as yet be drawn from their experiences.

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23 Belgium online gaming regulation has only come into effect in January with the first licenses granted, on a provisional basis, in March 2011, and even though Estonia opened up its market in 2010 the first online betting license was granted to Stanleybet in April 2011. This makes both these countries inappropriate examples for the purpose of this study.

24 Gambling compliance, 31st August 2011
4.4.4 Denmark and Spain

There have been recent regulatory changes across Europe with Spain and Denmark introducing licences to operate online gaming. The Danish Gambling Authority expects a new online gaming law to come into force in January 2012, introducing a licensed online gaming system with a tax rate of 20% on GGR. The Spanish congress has officially approved the new gambling law which will introduce a 25% tax on online gaming GGR when it is implemented in the fourth quarter of 2011, having previously been considering introducing a tax on stakes.
5 Modelling Germany’s online sports betting tax revenue in different tax scenarios

5.1 Overview of scenarios and modelling assumptions

We have built a model with scenarios to evaluate what the potential impact on ‘absorption’, regulated market size and therefore tax take, could be of different approaches to taxing a newly regulated online sports betting market in Germany (i.e. a tax on GGR versus a tax on stakes).

There are a number of assumptions that have been made across the scenarios in order to drive the model. Among these, the most sensitive are regarding:

- ‘Absorption’ rate of the online betting market post-regulation (i.e. the proportion of the online market which becomes regulated in Germany)
- Assumed market growth of online betting (and sensitivity of this to changes in tax)

The approach we have used to come up with our assumptions is broadly as follows:

- Analysis of any relevant historical data or trends from the German gaming market
- Use of case studies, where appropriate, with regards to how other European gaming markets have responded to different forms of regulation and taxation
- Qualitative information and opinions from trade associations and market participants
- Consideration of operator and customer incentives in different taxation environments
- A critical review of third party sources and academic publications
- Experience based on PwC’s extensive work in this sector
- Sense checks of implied metrics against other similar European jurisdictions (e.g. implied online GGR per capita, online GGR as % of total GGR)

We have modelled three scenarios of taxation:

1. Online sports betting regulated with a 4% tax on stakes
2. Online sports betting regulated with an 8% tax on stakes
3. Online sports betting regulated with a 20% tax on GGR

The scope of this study focuses on online sports betting (including horse race betting) in Germany, and we have considered other online products such as casino and poker although these are not a focus of our modelling. We have not conducted any modelling of offline (retail) gaming or other online products. In any case, as discussed in Chapter 4, we have concluded that there is limited evidence for material cannibalisation of the offline market from online growth. Therefore, for the purposes of this modelling exercise we will exclude the offline market from our analysis.

For modelling purposes, we have assumed that the new tax regimes are applied from 1st January 2012. With regards to regulation of the online sports betting market, we assume that it would not be possible for the regulator to entirely prevent unregulated online gaming, reflective of the situation in other regulated European online markets. The level of locally regulated versus non-Germany regulated online gaming activity (i.e. the ‘absorption’ rate), and therefore the prevalence of unregulated gaming, is a factor of both the tax regime and extent to which the regulator is able to enforce / block access or

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25Within ‘sports betting’, we including betting on horse racing
payment to unregulated sites, hence the rate will differ between scenarios; we discuss this in more detail later in this chapter.

We make a number of other key assumptions as follows:

- No restriction on the number of operator licenses
- Consistent regulation across the different Landers
- No stakes limits or deposit limits for customers
- ‘In-game’ / live betting is allowed
- Operators are able to advertise prior to launch on 1 January 2012 from which point they would be able to obtain licenses and therefore operate

We will address the potential implications of relaxing some of these assumptions at the end of this section, including considerations of what the impact would be of:

- Applying a monthly stakes limit on customers
- Banning ‘in-game’ / live betting
- Flexing the 20% GGR tax

We now discuss the key conclusions and underlying assumptions of the model, with discussion of the market, operator and customer dynamics that occur in each scenario.

5.2 Overview of model output

**Figure 5.1 – Scenarios of Germany online sports betting GGR and ‘absorption’, 2011-2016**

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Estimated ‘absorption’ *</th>
<th>Non-German regulated</th>
<th>Regulated in Germany</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scenario 1: 4% on stakes</td>
<td>0% 28% 34% 39% 45% 50%</td>
<td>292 274 231 217 240</td>
<td>658 697 737 767 807</td>
</tr>
<tr>
<td>Scenario 2: 8% on stakes</td>
<td>0% 15% 16% 17% 17% 18%</td>
<td>292 279 249 300 267 322</td>
<td>658 697 737 767 807</td>
</tr>
<tr>
<td>Scenario 3: 20% on GGR</td>
<td>0% 65% 69% 73% 76% 80%</td>
<td>292 166 141 157 129 137</td>
<td>308 310 413 413 548</td>
</tr>
</tbody>
</table>

*Source: PwC model*

Our model suggests that introducing a tax on GGR (i.e. Scenario 3) would deliver the highest ‘absorption’ and therefore the largest (and most sustainable) tax take from betting. The intuitive reason for this is that, as discussed previously in this study, a tax on GGR, as opposed to stakes,
provides the strongest incentive for operators to obtain licenses and become regulated in the German market, relative to stakes taxes that have a higher effective tax rate.

Driven primarily by the high rate of ‘absorption’ in Scenario 3, we expect that this scenario will deliver a higher tax take relative to other scenarios (see Figure 5.2).

**Figure 5.2 – Scenarios of Germany online sports betting tax take, 2011-2016**

![Figure 5.2 - Scenarios of Germany online sports betting tax take, 2011-2016](image)

*Source: PwC model*

In the sections that follow, we discuss the underlying rationale behind the output of each scenario, and the key assumptions we have made in each case.

5.3 Scenario 1: Online sports betting regulated with a 4% tax on stakes

5.3.1 Summary of Scenario 1

Due to the relative unattractiveness of the stakes tax regime, a number of operators choose not to apply for licenses and continue to operate in the offshore market, preventing ‘absorption’ levels from increasing significantly.

5.3.2 Discussion of Scenario 1

The expected tax take from the online betting market is dependent on two factors:

- ‘Absorption’ rate over time of online betting (proportion of online betting market that is regulated in Germany)
- Assumed market growth of online betting

In order to make reasoned assumptions regarding the above factors, one must consider operator and customer incentives (and therefore likely behaviours) resulting from this tax scenario. Looking at the factors on which these decisions are likely to be based, it becomes apparent that different tax regimes will result in different operator and customer behaviours; ultimately, this is the reason that market growth rates and ‘absorption’ rates will vary in different taxation scenarios.
From an operator perspective, the decision of whether to become locally regulated and operate legally, versus remaining unregulated, comes down to a number of factors, such as:

- Impact of the tax rate on prices (GGR %), and therefore operating margins
- Knock on impact of higher prices on relative competitiveness / market share
- Relative benefit of being seen as a locally regulated operator by German customers
- Expected benefit of being able to advertise within the limits of the law
- Ability of the regulator to prevent non-German regulated activity, and the ability of the regulator to enforce penalties on companies operating without a license

Assuming that a locally regulated operator would pass at least some of the tax cost onto customers, then from a customer perspective, the choice is essentially between using a regulated operator with potentially worse (higher) prices, and using an unregulated operator with potentially better (lower) prices. Clearly, the quantum of the price differential is an important factor, as is the ability of the customer to access those sites (i.e. how successful the regulator is at blocking); in addition, one must consider the likely consequences to the customer, if any, of being caught using unregulated sites.

In this scenario, where the effective rate of tax is relatively high, in order for a regulated operator to maintain the same profit margins post-regulation, its prices would have to be higher (and therefore less competitive) than those of non-German regulated operators. Operators would therefore have an incentive not to become regulated as they would either have to accept lower profit margins or be less competitive than non-German regulated operators (or a combination). Similarly, customers would be more likely in this scenario (relative to one with a lower rate of tax) to use non-German regulated operators, due to the better prices available. We would therefore expect to see a lower rate of ‘absorption’ relative to a scenario with a lower effective tax rate (e.g. Scenario 3).

With regards to the impact on growth of online betting post-regulation, there would likely be some positive impact from the operators which decide to come onshore and become regulated.

In order to assess the quantum of the impact on market growth of online betting, we have analysed the post versus pre-regulation online growth rates in Italy, France and the Czech Republic (in the case of the Czech Republic this was not an explicit case of re-regulation but 5 licenses were granted to major domestic land based operators and as such it is deemed relevant), to see how they were impacted by their respective effective tax rates. Based on the available evidence, we have concluded that in the first year post-regulation, this scenario would have a positive impact on market growth of 30ppts, before returning to a long term single digit growth rate (of c.6% p.a.).
We recognise that given the limited number of data points available, a statistical approach of this nature has some limitations. However, from our analysis we can conclude that the effective tax rate is a relatively good explanatory variable of changes in growth rates, pre and post-regulation.

We use a similar approach to estimate the initial (and ongoing) ‘absorption’ rate, again using evidence from Italy, France and the Czech Republic. We conclude that an initial ‘absorption’ rate of 28%, increasing to c.50% in 2016, would be a fair assumption based on the available data, and a consideration of potential operator activity.

A factor which will impact both operator and customer behaviour, and therefore market growth and ‘absorption’ rates, is the extent of successful enforcement by the regulator. By this, we mean both the ability / desire of the regulator to block non-German regulated operators (e.g. ISP blocking, payment blocking), and also the consequences for operators / customers of being caught breaking the law (e.g. fines, imprisonment). The stronger the level of enforcement (and the stricter the consequences of being caught), the less likely it is that operators will participate in the unregulated market (they will be more likely to become regulated, or simply not compete). However, based on the experience of other European jurisdictions (including Germany, where online sports betting is not regulated, although a large non-German regulated sports betting market still remains), it is unlikely that a regulator will be able to fully enforce regulation. Therefore we would always expect to see some unregulated activity, the level of which will be determined by the relative costs and benefits to operators (and customers) of operating (and using) regulated sites versus unregulated sites. In this scenario, the tax regime is such that the incentives for both operators and customers are weighted towards not operating (or using) regulated gaming sites, but rather towards operating (or using) non-German regulated sites.

In addition, a tax on stakes is not future proofed to potential regulation of additional products online. For example, cash poker would not be able to work economically under a stakes tax regime, as the operators’ profits are very low relative to the total value of all customer stakes. Meanwhile, casino table games such as roulette and blackjack have an inflexible gross profit margin, and are therefore not well suited to being taxed on a proportion on stakes.

A summary of the output from Scenario 1 is presented below (Figure 5.3):
Therefore, applying a tax on stakes, as modelled in this scenario, would result in a significant proportion of the online sports betting market remaining offshore for a number of years, and would therefore not be captured in the form of tax by the government.

5.4 Scenario 2: Online betting regulated with a 8% tax on stakes

5.4.1 Summary of Scenario 2

Regulation with a 8% tax on stakes would be a restrictive tax regime and would be likely to result in low levels of ‘absorption’. Tax take would therefore be relatively low compared to the alternative scenarios considered in this study and a large non-German regulated market would remain.

5.4.2 Discussion of Scenario 2

The discussion around the likely impact on the online betting market of a 8% tax on stakes is similar to that of Scenario 1 (a 4% tax on stakes), the key difference being that the effective tax rate in Scenario 2 is significantly higher. Therefore the arguments around customer and operator incentives discussed above in Scenario 1 can also be made here, except that they apply even more strongly.

Relative to Scenario 1, the difference in prices between regulated and non-German regulated operators would be expected to be even wider, thereby creating stronger incentives for customers to use non-German regulated operators in this scenario. Similarly, from an operator perspective, maintaining profits in this scenario is likely to be prohibitively challenging – as above, they face a trade off between eroding profit margins and remaining competitive, or maintaining margins but becoming less competitive. However, the quantum of the margins and prices in question are greater in this scenario,
which translates into stronger incentives for operators not to obtain a licence, and therefore offer their services without a license or not operate at all.

In terms of attempting to quantify the impact on market growth and ‘absorption’ of online betting, we have used the example of France, in which betting was regulated with a similar tax regime to this scenario (France applied a 8.5% tax on stakes), in order to estimate the likely impact of regulation on online betting in Germany.

The example of France indicates that under such a tax regime, a very low proportion of the unregulated market would come onshore (a 10% increase in ‘absorption’ of sports betting was seen in France in the first year post-regulation). This is supported by the fact that a number of market participants and observers have openly commented that the tax rate is too restrictive, and the current regime makes it difficult to operate a viable business (see quotes in Table 4.1). Such sentiment has led ARJEL (the regulator in France) to consider a change to the existing regime (in July 2011 the Chairman of ARJEL commented that “regarding taxes, we have now realised that the taxation model where a percentage of stakes is levied does not work”), indicating that it may have accepted that applying a high tax on stakes is not in the interests of operators, customers, and ultimately, the regulator / government.

A summary of the output from Scenario 2 is presented below (Figure 5.4):

Figure 5.4 – Scenario 2 Germany online sports betting GGR 2011-2016

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Market size (regulated)</td>
<td>-</td>
<td>49</td>
<td>47</td>
<td>59</td>
<td>56</td>
</tr>
<tr>
<td>Market size (non-German regulated)</td>
<td>292</td>
<td>279</td>
<td>249</td>
<td>300</td>
<td>267</td>
</tr>
</tbody>
</table>

Source: PwC model

It is worth noting that, based on conversations with market participants, the majority of the operators which obtained licenses to operate sports betting in the French market have lost money as a consequence of the high tax regime. This experience may make them less willing to apply for future licenses in other jurisdictions where a similar tax regime to that of France is proposed.
Therefore, applying a tax on stakes in this way, as modelled in this scenario, would result in a large non-German regulated online sports betting market in Germany and a limited flow of additional tax revenue from the online market.

As considered in Scenario 1, a tax on stakes here has the same problem in that it limits the potential to regulate further gaming products in the future under the same tax rules – cash poker and some traditional casino games (roulette and blackjack) would not be able to profitably operate with a tax on stakes.

5.5 Scenario 3: Online betting regulated with a 20% tax on GGR

5.5.1 Summary of Scenario 3

In this scenario, the tax take from online sports betting is expected to be higher relative to the other scenarios, driven by higher levels of ‘absorption’ as a result of the GGR tax regime in this scenario aligning customer and operator incentives (as discussed in Chapter 3). We expect that this scenario would result in the smallest unregulated market.

5.5.2 Discussion of Scenario 3

With regards to operator incentives, this scenario provides conditions in which operators will have stronger incentives than the alternative scenarios to participate in the locally regulated market: prices in this tax regime would likely be relatively more competitive versus the non-German regulated market, and when combined with marketing opportunities (not available to non-German regulated participants), and the advantages associated with being seen to be regulated, the conditions will be such that most large operators would see it in their interests to become regulated in Germany. At a tax rate of 20% on GGR (a higher rate than some other jurisdictions), it could still be the case that some operators decide not to compete, as a result of the relatively lower operating margins that would be achieved. However, based on our knowledge of operators’ margins and economics, we believe that this tax rate would be low enough to encourage significant market entry (into the regulated market), and therefore reduce the size of the unregulated market.

From a customer perspective, the decision is similar to that discussed in Scenario 2. However, in this scenario, the difference between the prices of regulated versus non-German regulated operators would likely be narrower (as due to the operator incentives associated with a tax on GGR, the tax would be less likely to be passed onto the consumer), and a more substantial amount of advertising would be expected (from a larger regulated market). Therefore we would assume that the customer incentives to participate in the regulated market would be higher in Scenario 3 versus alternative scenarios.

With regards to quantifying the impact of this tax scenario, using a similar approach to that in Scenario 1, we have taken case studies of experiences seen across Europe in order to make assumptions as to the levels of market growth of online gaming, and initial ‘absorption’ rates. Looking at the post versus pre-regulation online market growth rates in Italy, France and the Czech Republic, our analysis indicates that a post-regulation growth rate of 50ppt above the pre-regulation growth rate is reasonable in the first year post-regulation. This is consistent with the fact that the German market is more mature today than Italy was in 2006 (when sports betting was regulated), and hence we would expect to see a slightly lower increase in post-regulation growth rate versus Italy (online sports betting (excluding horses) in Italy increased by c.60ppt from 2006-07 relative to pre-
regulation growth rates). In order to estimate market growth rates in the outer years of the model, we assume that by 2016, Germany will achieve a similar online gaming penetration to Italy today (c.10%), implying a CAGR 2012-16 of c.10%p.a. (which is c.5ppts above our expected long-term growth rate if no regulatory change is made).

Using a similar approach to consider the impact on ‘absorption’, our analysis of Italy, France and the Czech Republic, and their respective ‘absorption’ rates post versus pre-regulation (relative to their effective tax rates), indicates that an initial ‘absorption’ of 65% would be reasonable. There are no case studies available to inform what level of ‘absorption’ will be reached 4-5 years post-regulation. However, looking at the trends of ‘absorption’ in Italy, we would assume that it would not be unreasonable for a level of 80% to be reached in Germany by 2016 in this scenario (online betting in Italy had an ‘absorption’ rate of 88% in 2010). The reason that Germany may not quite reach the same levels of ‘absorption’ as Italy is because of the fact that Italy’s retail betting market has a relatively stronger presence of large online operator brands relative to Germany. German customers are therefore less likely to be familiar with the large online operators which would be entering into the regulated online market, and it could therefore take longer for Germany to reach the very high levels of ‘absorption’ seen in Italy within 2-3 years of the market being regulated. Nonetheless, we expect that with a tax on GGR of 20%, the large online operators would enter the market and advertise heavily, and the unregulated market would be reduced to a small share (c.20% of the sports betting market by 2016).

A summary of the output from Scenario 3 is presented below (Figure 5.5):

**Figure 5.5 – Scenario 3 Germany online sports betting GGR 2011-2016**

![Figure 5.5](attachment:Figure55.png)

Source: PwC model
5.6 Conclusions from modelling and considerations of flexing assumptions

To conclude, based on our modelling exercise we believe that regulation of the online betting market with a tax on GGR will lead to higher ‘absorption’, and a higher tax take from online sports betting in Germany. We have analysed case studies from other European jurisdictions, considered economic theory, taken account of operator and customer incentives and conclude that a GGR tax will result in a higher ‘absorption’ rate and therefore generate higher tax revenues from betting. Higher ‘absorption’ is achieved in the first year of German regulation and in each year thereafter in our model. The benefits derived from the minimisation of the unregulated market are potentially significant, and will be explored further in chapter 6.

In addition, a tax on GGR is also compatible with all types of gaming products (unlike a tax on stakes), and therefore avoids restricting the supply of gaming products, future-proofing the tax regime to future innovations in gaming.

5.6.1 Impact of different rates of tax on GGR

Whilst this study suggests that a tax on GGR is the preferable form of taxation, another consideration is the rate at which to tax the market. For the purposes of our modelling, we have used a rate of 20%, as this is a rate at which, according to our analysis, both a high rate of ‘absorption’ and a high tax take can be achieved, at the same time as diminishing the size of the unregulated market. Regulators across the EU have imposed different rates of taxation on GGR; due to a relative lack of historical evidence, there is currently uncertainty regarding what the ‘optimum’ level of tax should be. However, what we are able to say with some degree of confidence based on the evidence and our analysis, is that there is likely to be a negative correlation between the rate of tax and the level of ‘absorption’; that is to say, the lower the rate of tax, the higher the rate of ‘absorption’ will be, and the smaller the size of the unregulated market. This is due to the fact that operators will typically only enter the regulated market if they can do so profitably (which is less likely at a higher rate of tax); it is interesting to note that operator EBITDA margins are typically in the region of 15-30%.

5.6.2 Impact of mandatory pre-set limits on customer stakes

There is a lack of clear evidence to conclude that mandating maximum spend levels on stakes, deposits or losses is effective as a customer protection method. Rather, the evidence points in favour of voluntary pre-commitment schemes where customers are obliged to set their own limits at the outset of gaming.

Mandated gambling limits may work in certain monopolistic terrestrial contexts where the gambling culture has been established around restricted choice and state restrictions, but appear incompatible with an expanded market offering more choice to customers.

If a regulator’s objective is to achieve a high ‘absorption’ rate, i.e. to get the highest degree of control and oversight of the market in a regulated environment, imposing limits on stakes could be a counterproductive measure. For example, from an anti-money laundering or taxation perspective, it is more desirable to allow high-rolling gamblers to place large stakes with regulated operators.

A large proportion of the revenues for online gaming operators is accounted for by customers staking over €1k / month (see Figure 5.6). Imposing limits on customer stakes is therefore likely to lead to a large shift of gaming activity into the unregulated market, due to the ease with which customers would be able to find unregulated operators willing to accept bets with higher stakes.
A more effective potential approach would therefore be to mandate player imposed limits as a form of pre-commitment. Australia has commissioned the only detailed policy examination of pre-commitment systems in any gaming jurisdiction. This was mainly a consideration of electronic gaming machines rather than sports betting. The main policy report concluded that pre-commitment choice should be available to all players, accompanied by community education and the promotion of it being a tool for all players. It suggested that pre-commitment may assist players to better monitor spending and keep to limits (including higher-risk players), and that pre-commitment works more effectively when customers take it up without any coaching or direct incentive to do so (i.e. they want to use such tools rather than being forced to use them).

Informed choice has been the overarching principle of responsible gambling initiatives in most jurisdictions which have an informed public health approach to gambling harm minimisation. It is deemed important that players are given the information they need to decide on their own limits and to use the player protection functionality available on the sites of legal, locally regulated and socially responsible operators. Such functionality can be made a condition of the holding of a licence to operate.

5.6.3 Impact of bans on live (‘in-play’ / ‘in-game’) betting

There is no clear empirical evidence to suggest that live in-play betting is any more dangerous from a customer protection perspective than pre-event (i.e. non-live) betting. In fact the studies done to date, notably LaBrie et al 2007 have shown that this form of gambling is conducted responsibly by the majority of gamblers.

There appears to be significant and increasing demand for live ‘in-play’ betting opportunities by customers (an estimated c.50% of sports bets across European operators are ‘in-play’ bets, a proportion that has grown significantly over the last few years (see Figure 5.7)). If customers find that

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32 Supporting Customer Commitment, Fourth Progress Report to the Minister for Gambling by the Responsible Gambling Working Party government of South Australia, August 2010
34 Xuan & Shaffer, How do gamblers end gambling, Journal of Gambling Studies 2009 25: 239-252
they will have their bets restricted or are unable to place bets on live action sports on licensed German websites, a number are likely to seek to find non-Germany regulated operators who will provide such betting opportunities. This could be expected to result in a shift of gaming activity into the unregulated market, reducing the ‘absorption’ rate and thereby making ‘problem gambling’ more difficult for the regulator to monitor or control, and player protection measures more difficult to enforce.

**Figure 5.7 - Germany online sports betting (GGR) accounted for by ‘in-game’ / live betting**

![Bar chart showing the proportion of online sports betting accounted for by 'in-game' / live betting.]

We estimate that 45-60% of the online sports betting market (€130 - €180m) is accounted for by ‘in-game’ / live betting. This proportion has increased significantly in the last few years.

*Source: PwC analysis, company accounts, conversations with operators*

### 5.6.4 Impact of limiting the number of licenses

Another driver of the ‘absorption’ rate is likely to be the number of licenses that are granted to operators. In a restrictive regime, where only a small number of licenses are granted, the choice available to customers will be more constrained than a regime where a larger number of licenses are available. Therefore, in general, we would expect a smaller number of licenses to be associated with a lower rate of ‘absorption’ in the online sports betting market.
6 Other considerations

In this chapter, we look at some of the important non-economic factors that should be considered when evaluating the impact of regulating online gaming and the most effective approach to tax the locally regulated market. We consider the ability of the regulator to enforce the conditions of regulation, economic considerations beyond government tax revenue, ‘problem gambling’ and player protection.

Regulating online in a way that encourages ‘absorption’ has the beneficial impact of better supporting ‘problem gambling’ and player protection issues. Imposing restrictions on gaming, such as mandatory limits on stakes or banning ‘in-game’ betting, are unlikely to be effective means of preventing ‘problem gambling’; rather, the primary impact is likely to be a significant shift of such gaming activity into the unregulated market where customers are not protected by German regulatory measures. Regulating online gaming may also generate significant tax revenue, as well as stimulate further economic benefits such as job creation and advertising revenues.

6.1 Enforcement of gaming regulation

In order for the government to successfully regulate online gaming, it needs to embed regulatory enforcement measures to provide an incentive to the operators to become regulated in Germany and operate legally, and also prevent customers from accessing those operators that choose not to become regulated. The reason that the unregulated gaming market has grown in the last ten years has been partly due to the fact that technology that allowed governments to ring-fence their gaming revenues developed, (or in some cases, was implemented) at a slower pace than the technology that allowed customers to access gaming products outside their own country.

The main methods that have been used to restrict unregulated gaming activity are blocking of payment mechanisms, ISP blocking, or a combination of both. Blocking payments requires the gaming regulation to prevent financial institutions and other payment providers, such as PayPal or Skrill (Moneybookers), from processing payments from unlicensed operators. The second option places the responsibility onto the ISPs to block a list of illegal websites, and makes them responsible for any content that is available from the unregulated market. Although these have been adopted by certain other European countries and the US, there are legal, practical and technical limitations to both these approaches which have resulted in a large variation in effectiveness. Blocking bank accounts of illegal operators as well as limiting / blocking transactions to illegal operators proactively is not feasible. The objections from ISPs in France, the Czech Republic and Germany, and the payment blocking experiences of Turkey, the US and Norway have highlighted that there are no effective measures. In addition, the rapid growth of gaming via mobile phones adds further complexity and challenge to blocking unregulated gaming activity. Our conclusion is that the most effective way to increase the rate of ‘absorption’ post-regulation is to combine a strong attempt at enforcement, including advertising bans for unregulated operators, with a fair and efficient tax system based on GGR, thereby minimising the incentives to operate in the unregulated market.

35 American Gaming Association (May 2011): “Online Gambling Five Years after UIGEA”
6.2 Other economic considerations

Other economic factors to consider are, for example, job creation, sponsorship and advertising. Assuming that the regulation of the domestic online market is accompanied by rules allowing for advertising of the product, we would expect there to be a significant uplift in advertising spend in the domestic market, particularly around the period of change (as was seen in France).

6.3 ‘Problem gambling’ and player protection

Policymakers, as well as society at large, are often concerned with the incidence and impact of ‘problem gambling’. We do not propose to review the extensive literature on ‘problem gambling’ here, however, it is important to note that in this area, regulations and taxes are likely to have some impact on ‘problem gambling’, although this is not always obvious. Public policy needs to be based on a rigorous understanding of the dimensions and effects of ‘problem gambling’ rather than often inaccurate ‘conventional wisdom’. As yet there is a marked lack of rigorous measurement and statistical analysis to support good public policy and regulation. Most population studies do not typically track the incidence of ‘problem gambling’ over long periods of time, but rather simply capture the prevalence of ‘problem gambling’ at a point in time. In addition studies performed in different jurisdictions often use different definitions of ‘problem gambling’ and different statistical methods for compiling their data, making inter-jurisdiction comparisons over time difficult. However, there is broad consensus amongst researchers that ‘problem gambling’ typically affects approximately 1% of populations worldwide.37 A recent study in Germany (and consistent with studies in the UK) estimates pathological gambling to affect 0.9% of Germany’s population between 16 and 64.38

The European Commission workshops on online gaming concluded that “the regulatory system in place in a Member State, be it a licensing system or a monopoly, does not seem to have a significant impact on the degree of ‘problem gambling’ or gambling addiction.”39 Whilst establishing a correlation between changes in regulation and the incidence of ‘problem gambling’ is difficult, we would expect there to be an indirect relationship between regulation of the online market, and the incidence and nature of some of the unintended ‘problem’ consequences. The reason for this is that as discussed in previous chapters, online regulation affects both the ‘absorption’ rate and the size of the unregulated market (including operators not licensed to operate in any jurisdiction). A high ‘absorption’ rate (and in particular a relatively small unregulated market) has a number of potential benefits both in terms of ‘problem gambling’ control and in terms of player protection. “Online gambling provides good opportunities for close monitoring of individual gambling behaviour and early detection of problem development”.40 Operators licensed in EU jurisdictions are typically required by law (e.g. in France, Italy and the UK) to take a number of steps to ensure player protection and to address ‘problem gambling’. Firstly, they are required to prevent minors from gaming. Secondly, operators are required

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38 Deutsche Hauptstelle fuer Suchtfragen e.V. (2011): “Ergebnisse des Projektes Pathologisches Glücksspielen und Epidemiologie”
to guarantee the safety of player funds and personal information to guard against money laundering and corrupt practices, as well as to provide facilities which allow players to either limit the amounts they bet or to self-exclude themselves from gaming. Lastly, licensed operators are required to provide advice on ‘problem gambling’ on their websites and to direct players to sources of further information and assistance. These are all requirements that locally regulated operators are legally subject to and can be fined, or face various penalties including, in some cases, the loss of their license, if these requirements are not met. The recent issues regarding online poker in the U.S. (where Full Tilt customers have been unable to gain access to their funds, and Absolute Poker has been found to be involved in fraudulent activity) highlights the importance of having such measures in place, and minimising the unregulated market in order to protect players.

The German states have proposed a centralised blocking system for problem gamblers in the draft state treaty. This could be an important part of a socially responsible German gambling regime. However, this proposal will only be most effective from the perspective of social responsibility if there is a high rate of ‘absorption’ of the regulated market which will ensure that more customers are subject to the regulated regime. Again, the tax base plays a key role here as a tax on GGR results in a higher level of ‘absorption’ of the market than a stakes tax, at the expense of non-German regulated operators. We expect that the more of the German market that is captured, the more effective social responsibility initiatives such as player blocking will be. In addition EU licensed private operators have developed highly effective methods of preventing underage gambling through comprehensive ID verification processes. Such methods can also play an effective part of social responsibility measures in a future German gambling regime. As concluded above, the tax base is therefore a key tool in ensuring that the German federal states deliver one of the key aims of the state treaty, this being effective measures to deal with gambling addiction and also the prevention of underage gambling. Thus, a GGR tax is complementary to the objectives of a socially responsible online sports betting market.

6.4 Impact of imposing betting restrictions

As previously discussed in Chapter 5, imposing restrictions on betting, such as imposing mandatory limits on customer stakes, or prohibiting live / ‘in-game’ betting, are unlikely to be effective means of addressing ‘problem gambling’ or increasing player protection. The likely consequences of such restrictions are likely to be a significant shift of such gaming activity into the non-German regulated market, where ‘problem gambling’ is much more difficult to monitor or control, and player protection measures are more difficult to enforce.
Conclusions

The purpose of this study is to provide an independent, robust and quantified view of different approaches to taxing online sports betting in Germany. In particular, we consider the relative merits of a tax on stakes and a tax on gross gaming revenue in terms of how these different tax regimes influence ‘absorption’ (and therefore the size of the unregulated market), the regulated German market size, and therefore the tax revenue generated by the industry. Other taxes, including per unit taxes, licenses and more general taxes such as VAT taxes incurred, are not included in the focus of this study.

To evaluate the relative merits of a tax on stakes and a tax on gross gaming revenue we examine, in the first instance, economic theory. Overall, economic theory suggests that a GGR tax base incentivises operators to lower prices, with the opposite expected with a tax on stakes. Given the empirical evidence that gaming activities are sensitive to changes in price, a tax on GGR which lowers the market price, is likely to drive volume in the market at a faster rate than prices decrease, and therefore drive market growth and in consequence tax revenues from gaming. Economic theory thus seems to suggest that a GGR tax base will lead to faster regulated market growth and consequently to higher tax revenues than an equivalent stakes tax base.

In addition to economic theory we also compare the experience of other countries in regulating their online markets. Caution, however needs to be exercised in drawing conclusions regarding the effectiveness of different tax regimes from such comparisons as there are a number of other variables affecting the performance of gaming markets aside from regulatory and tax changes. Bearing these caveats in mind we can nonetheless try and learn as much as we can from the experience of other counties. In this study, we draw on the experiences of Italy, France, the UK and the Czech Republic, and two key lessons emerge:

1. First, tax regimes with a GGR tax base such as those of the UK and the Czech Republic seem to encourage higher rates of ‘absorption’ (% of online market which is locally regulated). The stakes based tax regime in France on the other hand appears to limit growth in ‘absorption’ by making the locally regulated offering less attractive compared to that of non-German regulated competition, both from an operator and a customer perspective.

2. Second, there is no strong evidence for suggesting that the presence of a regulated online proposition has a material negative impact on retail (offline) growth. To put it differently there is no strong evidence of online “cannibalising” offline. An examination of the experience of the UK, Italy and France provides no evidence to suggest that online cannibalisation is a more significant, and thus material, influence on the growth of offline market GGR than the range of other factors which impact the growth of the offline gaming market such as economic growth and socio-economic shifts.

In order to evaluate the potential impact on market size and tax take of different approaches to regulation, we have modelled three scenarios:

1. Online sports betting regulated with a 4% tax on stakes
2. Online sports betting regulated with a 8% tax on stakes
3. Online sports betting regulated with a 20% tax on GGR

The most important assumptions driving the output of the model across the scenarios are:

- Assumed market growth of online sports betting (and sensitivity to changes in tax)
- ‘Absorption’ rate of the online sports betting market post-regulation
We have based our assumptions on case studies (with regards to how other European markets have responded to different forms of regulation), considered operator and customer incentives in different taxation scenarios, reviewed 3rd party sources and academic publications, spoken to trade associations and market participants, and sense checked implied metrics (e.g. online sports betting GGR as % of total sports betting GGR) against other European jurisdictions.

Based on our assumptions, scenario 3 (20% tax on GGR) delivers the highest 'absorption' (and therefore smallest unregulated market), the highest growth of the regulated market in Germany, and the highest tax revenues. This is due to strong incentives both for operators to become locally regulated and for customers to gamble with locally regulated operators (due to relatively competitive prices).

This outcome is consistent with the experiences seen in other European jurisdictions. The French market has not performed in line with expectations due to a high effective tax rate based on stakes, while the Italian market has grown strongly with high 'absorption' rates in a lower tax rate environment. France is now considering changing its tax regime away from a stakes tax, and other markets have recently decided to pursue a GGR tax when online gaming regulation is introduced (e.g. Denmark, Hungary, Greece, Spain).

Whilst we have not explicitly modelled the impact on the sports betting market of regulating with different rates of GGR, our analysis and the evidence suggests that there is likely to be a negative correlation between the rate of tax and the level of 'absorption'; that is to say, the lower the rate of tax, the higher the rate of 'absorption' will be, and the smaller the size of the unregulated market.

We believe that betting restrictions such as customer stakes limits or banning 'in-game' betting will significantly shift gaming from the regulated market to the non-German regulated market given the share of the market accounted for by 'in-game' betting and players stakes greater than €1000 / month. Such restrictions are designed to protect players but we believe this would drive activity away from the locally regulated market, where operators are not required protect players with measures such as under age controls and activity monitoring.

From an enforcement perspective, we conclude that measures such as payment blocking and ISP blocking are never wholly effective, therefore a tax rate which incentivises operators to become locally regulated is an important complementary aspect of limiting the size of the unregulated market, as well as these enforcement measures.

A smaller non-German regulated market and larger regulated market in Germany is expected to support greater 'player protection' and allow authorities to monitor and limit the extent of 'problem gambling'. Thus, a tax such as 20% on GGR which incentivises operators (and customers) to be locally-regulated (and use locally regulated operators) may be able to better support the control of 'problem gambling' and increased player protection than stakes taxes which can dis-incentivise operators seeking a local license.

Looking ahead, a tax on GGR is also compatible with all types of gaming products (unlike a tax on stakes which does not work with e.g. cash poker and traditional forms of some casino games), and therefore avoids restricting the supply of gaming products which may be regulated online in the future. This also future-proofs the tax regime to future innovations in gaming.

Our evaluation of the relative merits of a tax on gross gaming revenue and a tax on stakes for the potential regulation of online sports betting concludes that regulating the online sports betting market in Germany with a tax on GGR, and with no limits on customer stakes or prohibition of 'in-game' betting, makes the most economic and social sense for the regulator, operators, and customers.
Taxation and online sports betting in Germany: considering the relative merits of a tax on gross gaming revenue and a tax on stakes for the potential regulation of online sports betting