

# Economic impact assessment of the proposed European General Data Protection Regulation

Final Report



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# Executive summary

The European Commission has proposed a new regulation (“the Proposed Regulation”) to strengthen and harmonise data protection and privacy across the European Union.<sup>1</sup> It is currently being debated in the European Parliament and the Council. To analyse the potential economic consequences of the restrictions considered in the debate, this study has examined how the Proposed Regulation would impact upon the operations of four sectors of the European economy.

<sup>1</sup> The Regulation is entitled ‘Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the protection of individuals with regard to the processing of personal data and on the free movement of such data (General Data Protection Regulation)’. The original proposal may be found at [http://ec.europa.eu/justice/data-protection/document/review2012/com\\_2012\\_11\\_en.pdf](http://ec.europa.eu/justice/data-protection/document/review2012/com_2012_11_en.pdf). These proposals have subsequently been updated and the approach to addressing this is discussed later in the report

<sup>2</sup> Deloitte (2012), ‘Data Nation 2012, our lives in data’

<sup>3</sup> McKinsey & Company, 2011. “Big data: The next frontier for innovation, competition, and productivity”

<sup>4</sup> Ibid

<sup>5</sup> Ibid

<sup>6</sup> See for example WARC (2013), ‘Consumers show mixed views on data’

<sup>7</sup> European Commission (1995), ‘DIRECTIVE 95/46/EC on the protection of individuals with regard to the processing of personal data and on the free movement of such data’

<sup>8</sup> European Commission (2012), ‘Commission proposes a comprehensive reform of the data protection rules’, January 25

<sup>9</sup> European Commission (2012), ‘How will the EU’s data protection reform benefit European businesses?’

These sectors were selected as being representative of the wider group of European sectors that make use of personal data in their operations. The direct impact upon business performance is then analysed in terms of impact on the European economy.

This study finds evidence of serious potential economic harm from the Proposed Regulation should it be implemented in the form currently being proposed and discussed. These findings suggest that significant further revisions are required to the proposal in order to more appropriately balance the economic wellbeing of European citizens with the legitimate aims of data protection and privacy.

## Background and context

Data is transforming the world economy and its analysis represents the next frontier in economic value generation. The amount of data produced across the globe is estimated to be growing at 40% per year and, as far back as 2008, 9.57 zettabytes of data were processed by enterprise servers across the globe. This is equivalent to 6 gigabytes of data for each person on the planet every single day.<sup>2</sup>

In the commercial field, applying data analysis to understand the way consumers use their products is helping businesses achieve more insight than ever before into the attributes of products that consumers value. This allows companies to invest in the most valuable attributes and eliminate features that are under-used. Some estimates suggest this could help to reduce the R&D costs for manufacturing by up to 50%.<sup>3</sup> Similarly in healthcare, new applications of data could enhance the quality of care offered through improved clinical effectiveness research, patient monitoring and clinical decision support systems.<sup>4</sup>

These benefits are also already being felt in the public sector and estimates suggest that big data could save European governments as much as €300bn through increased operational efficiency, fraud reductions and enhanced tax collection.<sup>5</sup>

However, developments on this scale inevitably create tensions and repeated studies have found concerns by consumers over their ability to understand what information is held about them and to control the way it is used.<sup>6</sup>

In 2012 the European Commission issued a proposal to revise the current legal framework for data protection in the European Union by replacing the current Directive (which dates from 1995)<sup>7</sup> with a new General Data Protection Regulation (the Proposed Regulation). The stated objective of the Proposed Regulation is to ‘strengthen online privacy rights and boost Europe’s digital economy.’<sup>8</sup> The Commission estimates that the Proposed Regulation will help to harmonise and simplify regulation for businesses, leading to administrative savings of €2.3bn for the European economy.<sup>9</sup>

However, concerns have been raised that the Proposed Regulation would effectively prevent the use of data for many important activities, with damaging consequences for medical and academic research, as well as a range of commercial applications.<sup>10</sup>

Deloitte has been commissioned by the Data Industry Platform, an alliance of firms and associations, to provide an assessment of the economic impact of the Proposed Regulation in the EU. To help inform the policy debate, this study examines the role of data in the European economy in specific sectors, considering how the use of data could be curtailed by the Proposed Regulation and what effect this could have on economic activity.

### Scope of this study

This study examines the potential impact of the Proposed Regulation by considering its effect on the following sectors of the European economy.<sup>11,12</sup>

- Direct Marketing.
- Online Behavioural Advertising (OBA).
- Web Analytics.
- Credit Information.

These sectors were chosen because they encompass different uses of data, reflect online and offline activities and range from established sectors to emerging technologies. Through its analysis of the impact of the Proposed Regulation in these four sectors, this study is designed to help stimulate debate over the appropriate balance between protective regulation and economic growth.

The Proposed Regulation and associated proposed amendments are wide-ranging in nature and have the potential to impact each of the four sectors, as well as businesses that are dependent on these sectors, in a variety of ways. Legal advice on how the Proposed Regulation and its potential amendments should be interpreted was provided to Deloitte by Latham & Watkins LLP and this advice informs the economic analysis of the study.<sup>13</sup>

In addition to this advice, the analysis draws on a combination of published industry data and a series of major pieces of research designed to enable consideration of this issue:

- A survey of 750 businesses in the three major markets in Europe – UK, France and Germany (the “Deloitte Business Survey”). This survey asked businesses about their use of and interaction with the services provided by these four sectors.
- A series of in-depth interviews with businesses provided further understanding of the ways in which businesses have increasingly begun to rely upon these sectors.
- A survey of 6,000 consumers across the same markets that explored their attitudes to data usage and their potential reaction to the implementation of the Proposed Regulation (the “Deloitte Consumer Survey”).

### Results of analysis

The results of this analysis were striking. The Deloitte Consumer Survey suggests the Proposed Regulation could result in a major obstacle for European businesses to use Direct Marketing, Web Analytics and OBA. While businesses are able to offset some of this by reconfiguring their operations and redirecting some affected spend to other channels, European businesses are still expected to lose a total of €66 billion in sales.<sup>14</sup>

The expected loss of sales was largest amongst businesses that rely on Direct Marketing, reflecting the high level of reliance that many European businesses currently place on that channel. However, the Proposed Regulation also appears likely to have a profound effect on the emerging technologies of Web Analytics and OBA. While spend (and therefore economic losses) from these sectors is lower than Direct Marketing they demonstrate the characteristics critical to the growth of the European economy – a high skilled workforce, technology leadership and rapid growth.

A series of complex interactions between the behaviour of consumers and suppliers of credit make the effect of the Proposed Regulation somewhat harder to quantify definitively for Credit Information. However, the findings raise significant concerns over whether the sector would be able to continue to effectively assess credit risk. If it could not then consumer credit could fall by as much as 19%.

The combination of reduced credit availability and sales losses across the whole economy generated by damage to the other three sectors would have serious economic consequences. This study estimates that the combined effect from these four sectors alone could **reduce GDP by €173 billion** (1.34% of GDP in the EU-27) leading to a **loss of 2.8 million jobs** (1.30% of jobs in the EU-27).<sup>15,16</sup>

10 For example, in the area of medical and academic research: <http://www.esrc.ac.uk/about-esrc/information/eu-data-protection.aspx>, <http://rd-connect.eu/news/2013-02-25-data-protection-regulation-concerns/>

11 The study covers the EU-27 as the bulk of the analysis was conducted prior to the accession of Croatia on 1st July 2013. Throughout the report, references to the European Economy are for the EU-27

12 Definitions of each sector provided in the glossary as well as in relevant sections of the report

13 The interpretation of the Proposed Regulation highlights amongst other things concerns over changes to the legal basis for the processing of data, changes to the purpose limitations related to data processing and stricter provisions around the provision of consent

14 This estimate assumes that total marketing budgets remain unchanged and are just reallocated to other channels. This is arguably a conservative assumption as marketing budgets may fall in practice if they do not deliver adequate revenue for business

15 These effects should be considered as annual, medium term effects. The long run effects are not captured in our analysis but that is standard practice for impact assessments of this sort, not least because of the uncertainty associated with modelling them

16 Here and throughout the report, the term EU-27 is used to refer to the area of the former EU-27

### Conclusions and implications

The growth of data and its fundamental role in the present and future of the European economy and the lives of its citizens are both profound and undeniable.

An effective regulatory framework will be important to make the most of the socioeconomic opportunities afforded by these technological developments, however developing such a framework is challenging and governments across the globe are grappling with similar issues.

Whilst there is a need to recognise (and address) the concerns of citizens over the use of their data, and the level of control they have over it, this needs to be balanced with the impact of placing too many restrictions on the use of data. The danger, as demonstrated in this report, is choking off a source of economic growth and placing firms in the European economy at a competitive disadvantage.

This report represents an attempt to assess and quantify the economic impact of the Proposed Regulation. While there are many uncertainties about the outcome of the current political debate and the practical implementation of the Proposed Regulation, the scale of the economic damage estimated in this report suggests there are compelling arguments against introducing the Proposed Regulation without substantial adjustments to the proposed restrictions.

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# 1. Introduction

Data is fundamental in driving the ways in which businesses and governments communicate with consumers and consumers choose goods and services. However, concerns have been expressed over the implications of these developments for privacy and, in 2012, the European Commission issued a proposed regulation (“the Proposed Regulation”) aimed at revising the current legal framework for data protection across the European Union. The European Parliament has proposed a number of amendments by a vote of the LIBE Committee of the European Parliament in October 2013.<sup>17</sup> In parallel the European Council is discussing changes to the Proposed Regulation. As discussed in each of chapters of this report, Deloitte has been advised by Latham & Watkins LLP that some of these subsequent amendments provide for more flexibility for businesses, while others introduce additional restrictions compared to the original Proposed Regulation. Overall the proposed amendments do not affect the key aspects of the regulations relevant for this study.

This Proposed Regulation has been the subject of much debate with organisations ranging from businesses that use data, to academic organisations and medical research bodies expressing concern over potential adverse and unintended consequences.

To help further inform this debate, Deloitte has been commissioned by the Data Industry Platform, a group of firms and associations from across Europe, to analyse and quantify the economic consequences of the proposal.<sup>18</sup>

This assessment, which draws on new evidence from 6,000 consumers and 750 businesses, analyses the consequences of the Proposed Regulation for the European economy across four representative sectors which make use of individual data (Direct Marketing, Online Behavioural Advertising (OBA) and Credit Information).

The study considers the impact of the Proposed Regulation on the operation of these sectors and the revenue they create for the businesses that rely on them. The analysis is performed on a ‘net’ basis, allowing for the potential that businesses will transfer their expenditure on these sectors to alternative forms of marketing. This impact is then analysed in terms of economic impact (GDP contribution and employment) for the European economy using standard economic analysis, data and tools.

The considerations to be taken into account in striking the right balance in the Proposed Regulation are necessarily complex. This report aims to help inform the debate by providing a quantified assessment of the economic consequences of the Proposed Regulation to enable all sides in the debate to better assess the available options.

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This Proposed Regulation has been the subject of much debate with organisations ranging from businesses that use data, to academic organisations and medical research bodies expressing concern over potential adverse and unintended consequences.

<sup>17</sup> Details of the proposed amendments may be found at: [http://www.europarl.europa.eu/meetdocs/2009\\_2014/organes/libe/libe\\_20131021\\_1830.htm](http://www.europarl.europa.eu/meetdocs/2009_2014/organes/libe/libe_20131021_1830.htm)

<sup>18</sup> The study is conducted for the EU-27 as the bulk of the analysis was completed before the recent accession of Croatia

## 2. Direct Marketing

Direct Marketing is a vital source of communication between businesses and their consumers. The ability to target messages at small groups of consumers who find it most relevant is a key differentiator for the industry from other forms of marketing.

### 2.1 What is Direct Marketing and why is it important?

Direct Marketing uses a variety of marketing channels, such as traditional mail, email and telephone, to match customers with product and service offerings that are customised to the interests of a target group.<sup>19</sup> It represents a valuable tool with which organisations of different sizes across business, NGO and government sectors can communicate with customers and prospective customers and a cost effective way for them to market their products.<sup>20</sup> While it is used by a wide range of businesses, Direct Marketing is a particularly important marketing concept for new, niche or innovative products where it is essential to be able to target messages at a selected number of potential customers.<sup>21</sup> It is also particularly helpful for small businesses, which depend on cost effective marketing solutions.

Direct Marketing encompasses many channels and some require more intensive use of data than others. As these data-intensive channels are likely to be most affected by the Proposed Regulation, the term Direct Marketing will be used to refer to these channels alone for the rest of this report. These channels are: direct mail, email marketing, telemarketing and mobile marketing (SMS).<sup>22</sup>

Direct Marketing is one of the most diverse and important marketing subsectors in Europe:

- In 2012 an estimated €47 billion was spent on direct mail, email marketing, telemarketing and mobile advertising across the area of the former EU-27.
- Over half of this expenditure was spent by businesses in the UK, France and Germany.
- Direct Marketing accounts for a large proportion of total advertising spend. For example in 2012 it accounted for 18% of advertising spend in Germany.<sup>23</sup>
- A large proportion of the sales of European businesses are thought to be attributable to Direct Marketing – in the UK, for example, the Direct Marketing Association (DMA) estimate that 23% of total sales in 2011 were generated by Direct Marketing.<sup>24</sup>
- The digital channels of Direct Marketing are growing rapidly while the traditional channels of Direct Marketing appear to be in decline. Other trends include a move towards more integrated service provision as businesses offer services that span a range of channels.<sup>25</sup>

<sup>19</sup> Direct marketing is defined by the Direct Marketing Association as: “An interactive system which uses one or more advertising media to effect a measurable response and/or transaction at any location, with this activity stored on a database”

<sup>20</sup> For example, see: <http://www.business.qld.gov.au/business/running/marketing/direct-marketing/using-direct-marketing/benefits-direct-marketing>

<sup>21</sup> See for example: <http://www.marketingdonut.co.uk/marketing/direct-marketing>

<sup>22</sup> Definitions of these channels can be found in Appendix A.1. Channels that are commonly included in definitions of direct marketing, but rely less on data include untargeted mail, company websites and internet banners. A list of the channels that are excluded from the standard definitions of direct marketing in the UK, France and Germany is presented in Table 1 in Appendix A.1

<sup>23</sup> Calculation based on an estimate of total advertising spend of €75.6 billion reported in Dialog Marketing Monitor 2012

<sup>24</sup> DMA, 2012. Putting a price on direct marketing

<sup>25</sup> eConsultancy (2013), ‘Search Engine benchmark report’



### How Direct Marketing works

Definitions and categorizations of Direct Marketing differ from country to country and they generally cover a range of activities across postal, telephone, internet and, in some countries, broadcasting media. However, Direct Marketing activities typically share the following characteristics. They are:

- customised: the recipients of the marketing materials are selected because they are likely to find the materials relevant; and
- relationship-focused: the marketing material encourages recipients to initiate a dialogue with the company.

The success of Direct Marketing campaigns relies heavily on the ability to effectively target a particular segment of the population. For example, a campaign selling a new form of racing bike might be targeted at individuals who previously purchased sports equipment, or who read sports and health magazines. In the Deloitte Business Survey, 81% of firms reported that the ability to target specific types of potential customers was important for their Direct Marketing campaigns to succeed. Part of the reason for this is cost. Direct Mail campaigns in particular can be very expensive, so ensuring that the message is relayed to the right people is crucial in ensuring the marketing campaign is cost-effective.

Many Direct Marketing campaigns aim to develop long term relationships between businesses and their customers. Depending on who they would like to target, a business may require either first party data (i.e. data about individuals that is collected and stored by the company itself) or third party data (i.e. data about individuals that is held by other businesses) to achieve this.

The core aims of Direct Marketing are:<sup>26</sup>

- fostering long-term relationships with existing customers;
- widening the basis of relationships with existing customers; and
- engaging with potential new customers.

The importance of third party data increases along this spectrum.<sup>27</sup>

Such third party data can be obtained in a number of ways, including being rented from another firm, for example, from publishers, or being exchanged between firms as part of a mutual sharing agreement.

Many businesses employ Lettershops to ensure that the promoting company does not have direct access to the address data of an established customer base. Lettershops are third parties that match unaddressed marketing material of advertising companies with relevant addresses provided by another company before sending the material out.

The diversity of Direct Marketing is reflected in recent industry trends. Traditional channels, such as direct mail and telemarketing, have been in decline in recent years as the main users of direct mail have moved towards digital channels. In the UK expenditure on direct mail fell by 24% year on year between 2007 and 2010, while the email marketing sector expanded rapidly, with email expenditure expected to have grown by 11.9% between 2011 and 2012 alone.<sup>28</sup>

Expenditure on Direct Marketing differs greatly between the European markets. It is estimated that the UK, France and Germany account for over half of all expenditure on Direct Marketing in Europe, while the only other country in the former EU-27 that has a comparable level of expenditure is Italy.<sup>29</sup>

**In 2012, an estimated €47bn was spent on direct mail, email marketing, telemarketing and mobile advertising across the area of the former EU-27.**

<sup>26</sup> For the purposes of this report, these activities are referred to as customer retention, cross-selling and customer acquisition respectively

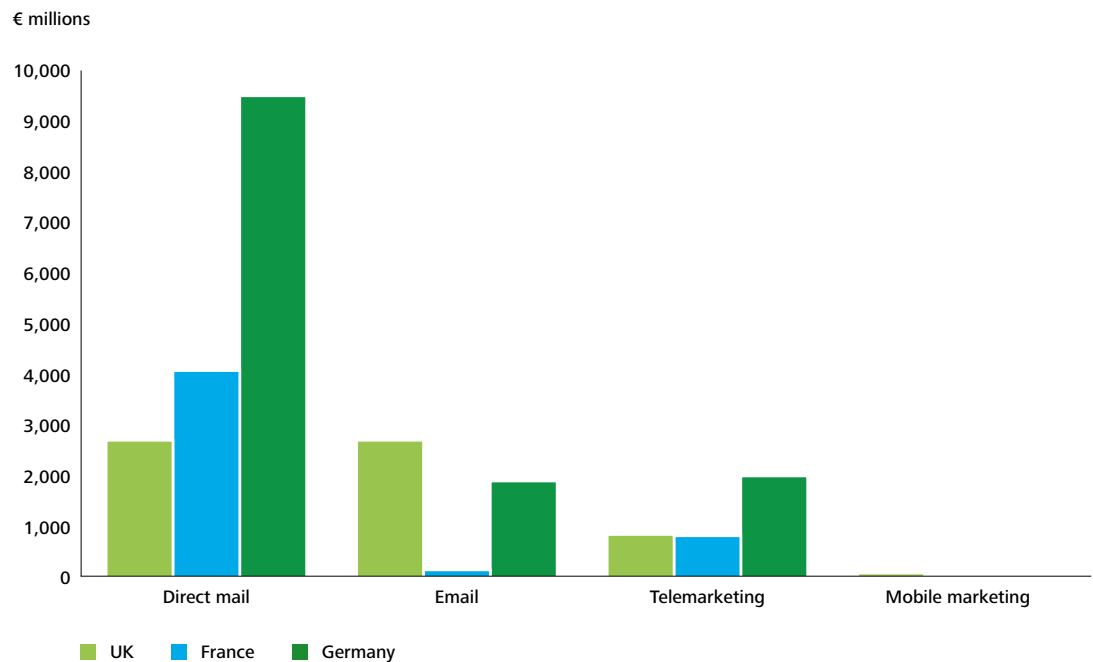
<sup>27</sup> Findings from industry interviews

<sup>28</sup> DMA, 2012. "Putting a price on Direct Marketing"

<sup>29</sup> Deloitte analysis

The characteristics of the Direct Marketing industry also vary across Europe, as Figure 1 illustrates. For example, in Germany direct mail still accounts for by far the largest proportion of Direct Marketing spend (expenditure on direct mail in Germany is five times the value of expenditure on email marketing), while in the UK email marketing has become more important and is now on par with direct mail.<sup>30</sup>

**Figure 1. The estimated mix of Direct Marketing expenditure by channel in the UK, France and Germany in 2012**



Source: Deloitte analysis

While Direct Marketing is important to businesses across a number of sectors, some sectors are particularly dependent on it. For example, the results of the Deloitte Business Survey indicate that the use of Direct Marketing for customer acquisition is particularly important for businesses in the real estate and mail order sectors and that the automobile manufacturing and travel sectors are particularly reliant on Direct Marketing for customer retention.

The providers of services within the Direct Marketing sector also vary considerably according to channel. For example, the provision of direct mail is dominated by incumbent postal providers and the courier service providers, whilst, as illustrated in Section 3, digital media services are provided by a far more varied and specialist set of providers. Indeed a recent study estimated that 52% of agencies now offer a full range of digital marketing services.<sup>31</sup>

The industry is, however, increasingly focused on providing their customers with an integrated set of services across a wide range of channels. In the UK for example, national players (e.g. Royal Mail), global players (e.g. WPP) and local agencies and consultancies now provide services that span from planning and creative services, through print and distribution to response evaluation. This development appears to be relevant to businesses of all sizes and it is in part due to changing consumer attitudes as well as the growth of the digital channels of marketing.

### 2.1.1 The importance of Direct Marketing

For over fifty years Direct Marketing has been a valuable part of the way European businesses communicate with their customers. The level of matching achieved by Direct Marketing means that customers who receive Direct Marketing material customised to their interests are provided with increased choice and greater affordability.<sup>32</sup>

Direct Marketing also allows businesses to engage with, and strengthen their relationship with their existing customer base. Critically, businesses are able to attract and engage new customers in a cost-effective and selective manner.

<sup>30</sup> Differences in the expenditure between the channels may reflect differences in a number of variables, such as cost as well, rather than necessarily reflecting differences in the value of these channels

<sup>31</sup> eConsultancy (2013), 'Search Engine benchmark report'

<sup>32</sup> For example, a specialist equipment manufacturer might use Direct Marketing to engage with its existing and potential customers in a cost-effective way. The manufacturer is provided with the necessary assurances about the marketability of the product to develop its product (more choice) and as the cost of communication is low, the manufacturer is able to sell at a reduced cost

The strengthening and development of customer relationships generates clear benefits for businesses in terms of:

- Increased sales, particularly for providers of innovations or products with smaller markets, the predominant source of which is from smaller firms.
- Optimised marketing campaigns facilitated by the ability to respond to consumer engagement with campaign messaging.

The success of Direct Marketing in achieving increased sales is reflected in the high ROIs it generates, relative to other forms of marketing. According to some studies, on average each euro spent on Direct Marketing generates in the region of €8-21 worth of additional sales.<sup>33</sup>

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#### Case study: Get Ahead of the Games<sup>34</sup>

Over 12 million people use the Transport for London (TfL) public transport network every day. In 2012 London hosted the Olympic Games, which added another one million passengers to the network each day. It was estimated that 30% of Londoners, over two million people, would have to change their regular travel behaviour for the network to be able to support the increased number of passengers.

Part of TfL's "Get Ahead of the Games" campaign was a Direct Marketing communication strategy. TfL categorised its customers according to their travel patterns, which it had stored on its customer database, and then used this profiling to send over 33 million targeted emails encouraging passengers to plan ahead and avoid the busiest times and places.

These emails helped TfL manage the increased strain on the network: 35% of Londoners made changes to their travel plans and traffic in London was down by 15% during the Games. TfL would not have been able to achieve such accurate targeting if it had not been able to make use of the personal data stored on its database.

In a tracking study of TfL passengers, almost 75% reported that the emails were relevant to them.

## 2.2 What impact will the Proposed Regulation have on how Direct Marketing works?

To support the analysis Deloitte was provided with external legal assessment of the implications of the proposed regulation by Latham & Watkins LLP:

*"The Proposed Regulation and the amendments considered by the Parliament and the Counsel will potentially limit the ability of companies to use personal data for Direct Marketing campaigns. Whilst the general opt-out principle remains in the Proposed Regulation, a number of modifications in comparison to the existing Directive make it much more difficult to rely on it. Changes to the purpose limitation and the balance of interest clause require businesses more often to secure consent from consumers to the use or sharing of their data. This holds true especially with regards to the use or sharing of selection criteria, even if they are not sensitive. Without such criteria Direct Marketing would be limited to mass distribution campaigns to unselected recipients. At the same time, more stringent conditions to gain consent will make it more difficult to gain and rely on it. Furthermore, extended notification requirements would cause practical obstacles for the use of data for direct marketing purposes.*

*If the Proposed Regulation will require companies to more often gain consent from the data subjects the Direct Marketing channels considered here would be unable to operate in the manner described above, effectively removing the ability of businesses to use them to distribute marketing material to selected potential consumers.*

*The impact of these restrictions will depend on the current data protection regimes in place in each member state. In practice, this differs substantially by country, channel and target audience (i.e. consumers or businesses). Some countries may have implemented strict consent requirements in certain areas, but allow to rely on opt-out in others. The Proposed Regulation does not distinguish between channels or types of recipients. The restrictions would always apply across the board."*

While the debate has evolved since the original proposal, Deloitte has been advised by Latham & Watkins LLP that the key characteristics of the Proposed Regulation that affect this study remain substantively unchanged. Whilst the European Parliament and Council are considering providing more flexibility for Direct Marketing in some areas, they are also considering tightening the requirements in others, and the general issues remain overall.

<sup>33</sup> DMA, 2012 "The Power of Direct Marketing"

<sup>34</sup> Source: DMA awards

## The impact of these restrictions will depend on the current data protection regimes in place in each member state.

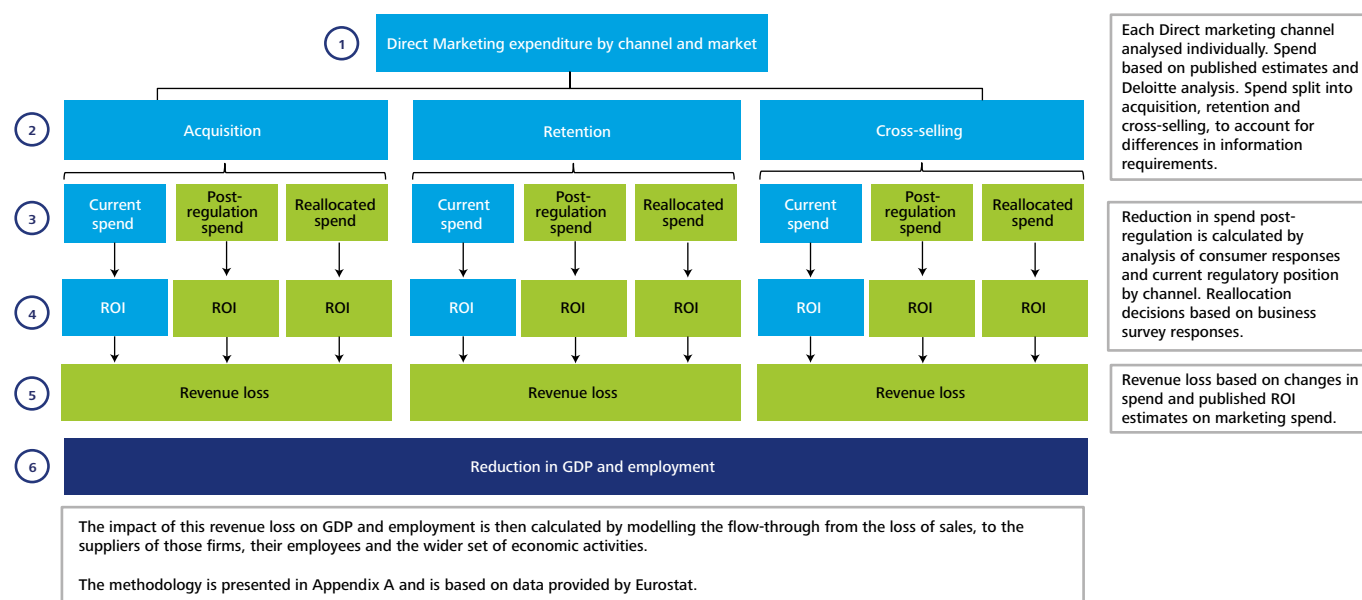
Based on this advice, it is clear that the Proposed Regulation could impact on businesses in the national different markets of the EU27 in a variety of ways. Given the complexity of this scenario-based analysis, it has been necessary to make a number of assumptions to guide the analysis of how the Proposed Regulation would affect business. These assumptions are as follows:

- Businesses would be required to obtain explicit and specific consent from consumers before they can use their information for the purposes of Direct Marketing.
- Some businesses already require consumers to agree before their data is used (the form of this varies considerably across the different markets, channels and businesses). It is assumed that these businesses would not be affected by the Proposed Regulation. Note that this is a conservative assumption because in most markets the requirements for consent will be significantly tightened under the Proposed Regulation.
- In circumstances where businesses currently rely on a balance of interest based justification or implied consent (such as where a consumer must opt-out of receiving material), businesses would in the future be required to achieve that opt-in basis. For the purposes of the analysis, these businesses are the only ones assumed to be affected by the Proposed Regulation.

### 2.3 Modelling the economic impact of the Proposed Regulation

Figure 2 provides an outline of the flow of the modelling conducted with a discussion of the key parameters required.

Figure 2. Modelling schematic for Direct Marketing



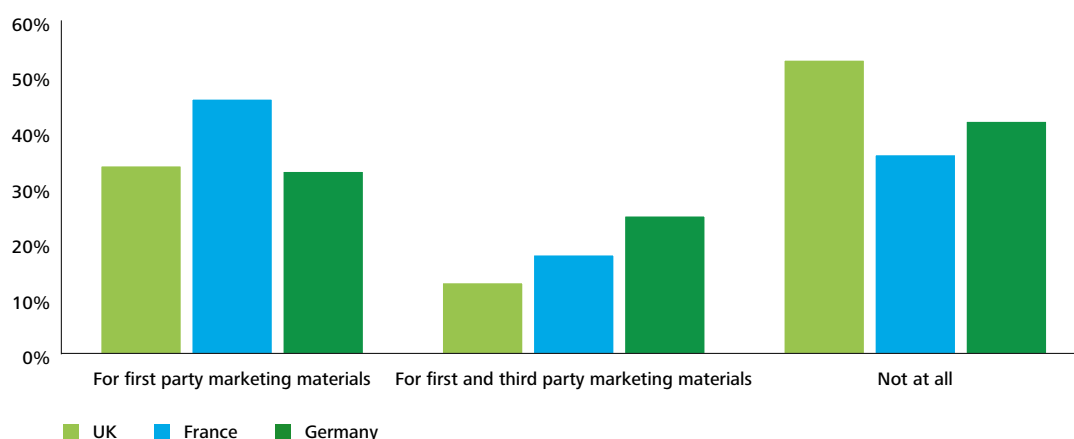
A fuller description of the methodology applied is presented in Annex A, but the following broad steps, which are referred to in Figure 2, were followed to model the economic impact of the Proposed Regulation:

1. The total expenditure by businesses, governments and NGOs on Direct Marketing was estimated across the area of the former EU-27 for direct mail, email marketing, telemarketing and mobile marketing using published data.
2. This expenditure was allocated to a tactical business purpose (acquisition, retention or cross-selling) using findings from the Deloitte Business Survey.
3. The willingness of consumers to consent to receive Direct Marketing was then estimated using the results of the Deloitte Consumer Survey. Where consumers do not consent to being profiled or withdraw their consent to be contacted they cannot be targeted using Direct Marketing. Any Direct Marketing expenditure related to these consumers is therefore reallocated to another channel.
4. ROIs for each of the channels were estimated using published data. As the alternative channels do not have the capacity to target consumers as efficiently, their ROI is lower.

5. The loss of incremental revenue was calculated, with the steps that businesses could take to mitigate the losses (i.e. reallocation of the marketing budget) taken into account.<sup>35</sup>
6. Using widely recognised economic impact techniques, the loss of GDP was calculated by applying multipliers derived from Eurostat data to the loss of incremental revenue.

A key driver of the likely economic impact of the Proposed Regulation is the number of consumers who would consent to having their data used for the purpose of Direct Marketing. The results of the Deloitte Consumer Survey suggest that only around half of all consumers would provide such consent. In addition, it suggests that most of those who would allow the initial company to use their data would oppose having their data shared with other companies.

**Figure 3. Proportion of consumers who would consent to having their data used for the purposes of direct marketing**

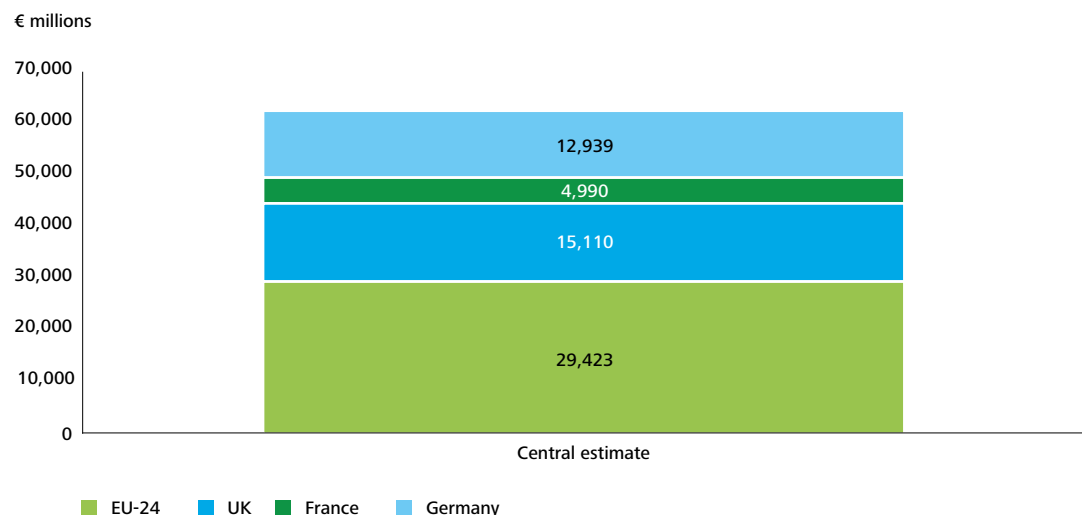


Source: Deloitte Consumer Survey

These results suggest that the Proposed Regulation would lead to a major reduction in the targeting power of European businesses, governments and NGOs in their Direct Marketing activities and consequently reduce expenditure on the sector by 34%, or €18 billion. In practice, this would lead to an increase in expenditure on other marketing channels, such as newspapers, TV and radio, but reallocating the spend can be expected to reduce the ROI achieved. The Deloitte Business Survey was used to understand the implications for companies of this expenditure reallocation and hence allow an estimate to be made of the net revenue impact of the Proposed Regulation.

Accounting for the potential reallocation of marketing funds to other channels, the result of this calculation is that €62 billion of sales would be lost from the European economy.<sup>36</sup> The breakdown of this sales loss by market is illustrated in Figure 4. It is likely that at least some businesses would lower their total marketing expenditure in response to the Proposed Regulation and if this happened the sales loss would be even greater.

**Figure 4. Estimated sales loss for users of Direct Marketing**



Note: The loss of sales is also estimated under an alternative allocation scenario (see Appendix A).  
Source: Deloitte analysis

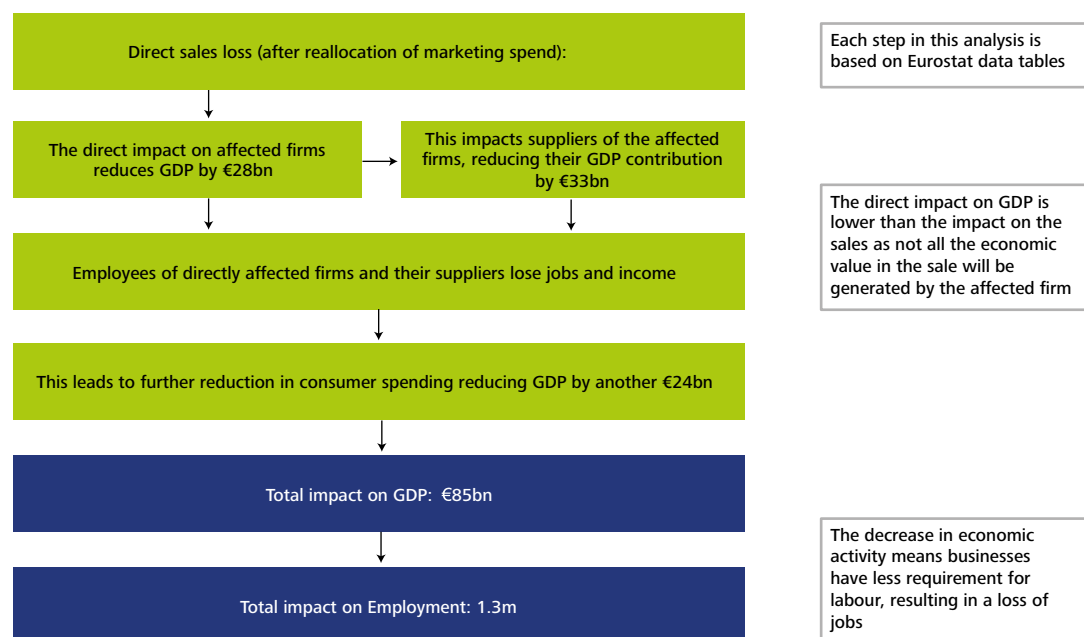
<sup>35</sup> As will be explained, this is a conservative assumption because in practice it is likely that some companies would reduce their marketing expenditure rather than simply reallocating it

<sup>36</sup> This calculation can be summarised as:  
Change in sales  
= Direct Marketing spend  
x (Post-regulation average ROI – Pre-regulation average ROI)  
= €47bn x (11.94 – 13.62)  
= -€62bn  
where the average post-regulation ROI takes into account the reallocation to alternative channels with lower ROIs

These results suggest that the Proposed Regulation would lead to a major reduction in the targeting power of European businesses, governments and NGOs in their Direct Marketing activities and consequently reduce expenditure on the sector by 34%, or €18 billion.

The loss in sales can be converted into an economic impact in terms of GDP by taking into account the wider impact of these sales on the employees of the affected firms, as well as their suppliers and the employees of their suppliers. These wider economic effects can be calculated based on Eurostat data as illustrated by Figure 5.

Figure 5. Estimating the economic impact from the loss in sales



Based on data provided by Eurostat, the result of this calculation is that **GDP would fall by €85 billion and the potential loss of jobs would be 1.3 million.**<sup>37</sup>



37 The system of calculations for the loss of GDP can be summarised as follows:  
 Direct GDP impact  
 = Proportion of sales that is value added x Value of sales loss = 44% x -€62bn = -€28bn  
 Total GDP impact  
 = Direct GDP impact x DM expenditure weighted multiplier = -€28bn x 3.05 = -€85bn  
 Employment impact  
 = Value of sales change (€m) x DM expenditure weighted employment multiplier = -62,000 x 20.62 = -1.3m



# 3. Online Behavioural Advertising

Online Behavioural Advertising (OBA) relies on online usage data to match the interests of users with specific advertisements. The revenue this generates helps to ensure many websites are free to use whilst also benefiting businesses by increasing their returns to marketing.

## 3.1 What is OBA and why is it important?

OBA is a form of advertising that matches the online behaviour of users with relevant advertisements. It is a young and rapidly growing industry that allows businesses to target their customers more accurately. In 2012 European businesses spent an estimated €1.3 billion on OBA, of which over half was spent by businesses in the UK, France and Germany. This total spend represents an increase of 19% since 2011 and an increase of 140% since 2008.

OBA offers advertisers an opportunity to eliminate “ad-blindness” by delivering adverts that are relevant to the user. As a consequence OBA adverts typically present businesses with twice the value of regular (untargeted) display adverts.

### How OBA works

OBA is characterised by a series of different business models. In summary, there are three main, overlapping components to the industry:

- Software that allows only behavioural analysis and targeting.
- Software that ensures the relevant advert is served.
- Advertising networks, exchanges or media agencies linking advertisers and publishers.

The implementation of OBA can vary considerably. For example:

- A major website publisher may choose to provide its own behavioural software/ad-serving software and negotiate with advertisers directly over the sale of the space.
- Lower value advertising space or advertising space for smaller publishers is more typically sold through bundled services such as Google’s AdSense or the newer Yahoo! Ad Network.

Some well-known players in this sector include Google, Yahoo!, AOL Advertising, Audience Science, nugg.ad and Facebook. They are joined by a strong competitive fringe of smaller operators, which provide advert aggregation services and competing software solutions to target users and serve adverts. While detailed figures on the European market are not available, eMarketer estimates that Google achieved 32% share of the *overall* online advertising market (including non-behavioural) in 2013, but that over 50% of the market was accounted for by small players with a less than 0.1% market share.

The revenues that websites earn from ad publishing enable the provision of a wide range of high quality content which consumers can access without having to pay for it.

### 3.1.1 The importance of OBA

The high value of behavioural adverts is reflected in the price that host websites can charge advertisers for them. For websites that have limited space to sell for ad publishing, OBA therefore offers an opportunity to supplement their revenues. Many internet based businesses, in particular providers of free content and services, rely on ad publishing revenues to run their businesses.

Businesses that run behaviourally targeted adverts can also use them to gauge consumer sentiment and to measure market trends, as the adverts allow businesses to monitor responses from specific market segments in real time.

OBA also provides many advantages to consumers. The revenues that websites earn from ad publishing enable the provision of a wide range of high quality content which consumers can access without having to pay for it. Furthermore, as the advertising materials are targeted to the users' interests, they may be considerably less disruptive to the user experience than the less targeted alternatives.

#### Case study: The Guardian and BP<sup>38</sup>

The Guardian has been using space on its website for OBA since 2005 and in that time it has sold over half a billion advert impressions for more than 150 brands. According to the IAB Europe OBA accounts for between 10% and 20% of the Guardian's annual display revenue.

The Guardian creates customer segments and allocates users to these segments based on the users' browsing behaviour. These segments are often tailored to a client's needs. For example the Guardian built a segment of ethically minded people for BP and used information on users' search behaviour (such as whether they looked for "climate change") and the type of content they accessed (such as certain parts of the Environment channel). Users who fitted the criteria would then see a relevant advert from BP. BP found that the conversion rate on these adverts was significantly higher.

### 3.2 What impact will the Proposed Regulation have on how OBA works?

To support the analysis Deloitte was provided with external legal assessment of the implications of the proposed regulation by Latham & Watkins LLP:

*"Most OBA methods rely on anonymous data and do not fall under the scope of the existing Directive. The Proposed Regulation and some of the amendments considered by the European Parliament and the Council aim to extend its scope by using a broader definition of personal data. If the data processing for OBA would be considered processing of personal data the obligation to gain consent or the limitations for profiling could apply. However, they would not work in practice. In addition, the Proposed Regulation causes substantial uncertainties on the future application of the European ePrivacy Directive and its relationship with the Proposed Regulation, for example with respect to consent requirements for cookies."*

While the debate has evolved since the original proposal, Deloitte has been advised by Latham & Watkins LLP that the key characteristics of the Proposed Regulation that affect this study remain substantively unchanged.

Based on this advice, the following assumptions were made to inform the approach to the economic analysis of the potential effects of the Proposed Regulation:

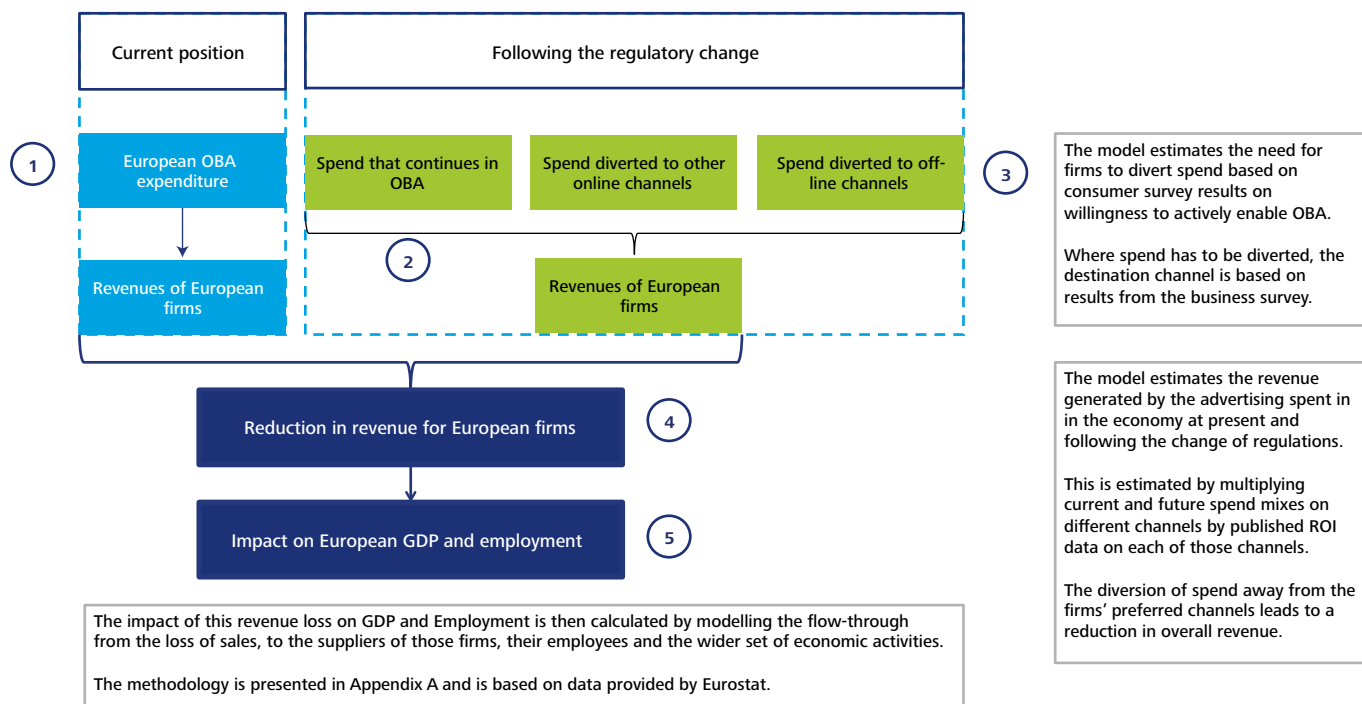
- Businesses would have to obtain the explicit consent of users before they could use their behavioural data.
- Where users actively provide consent then, for that user, OBA would operate in the way described above.
- Where users decline to give their consent, or do not respond to requests for consent, that user would be excluded from OBA. Businesses would have to use alternative channels if they wish to reach that group of consumers.

<sup>38</sup> Source: IAB "A guide to online behavioural advertising"

### 3.3 Modelling the economic impact of the Proposed Regulation

Figure 6 provides an outline of the flow of the modelling conducted with a discussion of the key parameters required.

**Figure 6. Modelling schematic for OBA**



Source: Deloitte Analysis

A fuller description of the methodology applied is presented in Annex A, but the following broad steps, which are referred to in Figure 6, were followed to model the economic impact of the Proposed Regulation:

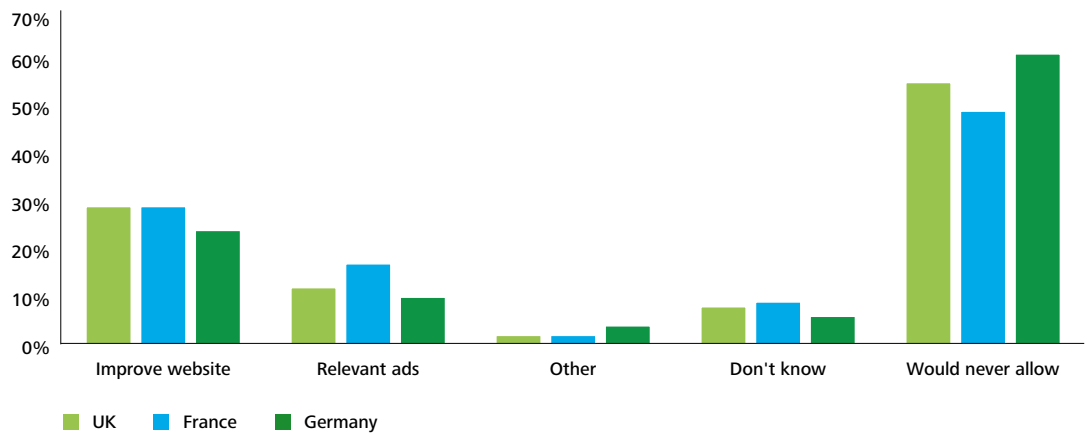
1. The total expenditure on OBA was estimated across Europe using published data.
2. The willingness of consumers to enable OBA and the implications this would have for OBA expenditure was estimated based on the results of the Deloitte Consumer Survey. A reduction in the ability to use OBA was then estimated by comparing these results to evidence on the proportion of users who currently disable third party cookies.
3. The ability of businesses to address these challenges by reallocating marketing spend is estimated based on findings from the Deloitte Business Survey.
4. The overall impact on incremental revenues was calculated, taking into account businesses' marketing budget response.
5. The loss of incremental revenue was applied to multipliers calculated from Eurostat data to generate estimates of the GDP and employment loss.

The results of the Deloitte Consumer Survey suggest that only a small minority of consumers would actively provide their consent to be shown customised ads (see Figure 7 below and Annex B). Currently, some users would already be excluded from OBA because their web browsers would disable the cookies necessary to show the targeted adverts. However, even accounting for this, the findings imply that the Proposed Regulation could reduce the ability of firms to target consumers through OBA by 85%.<sup>39</sup>

<sup>39</sup> Based on estimates of the proportion of site visits in which cookies are blocked, it is assumed that OBA is currently enabled for 88% of users. Based on the results of the Deloitte Consumer Survey, it is estimated that only 13% of users would give explicit and specific consent to have their data used under the new regulation. This implies an 85% reduction in the number of users for whom OBA is enabled

**The results of the Deloitte Consumer Survey suggest that only a small minority of consumers would actively provide their consent to be shown customised ads.**

**Figure 7. Proportion of consumers who provide consent to their data being used**

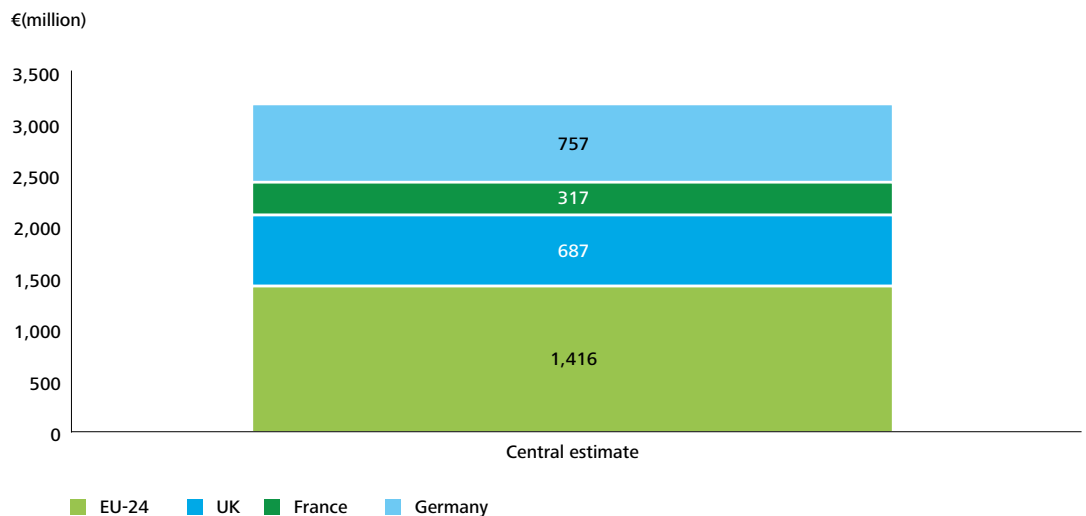


Source: Deloitte Consumer Survey

If this reduction in the use of OBA were to occur businesses would need to reallocate a large amount of marketing expenditure from OBA to other online channels. The Deloitte Business Survey suggests that, on average, the ROI that businesses would expect to receive from other channels would decrease by 27%. This reduction reflects the particularly high ROI on OBA compared to other online forms of advertising, such as search and social.

The effect of this ROI reduction is estimated to reduce sales by €3.2 billion for European businesses.<sup>40</sup> If businesses were to respond to the Proposed Regulation by reallocating some of their expenditure to offline channels or by lowering their total marketing expenditure then the loss in sales would be even higher.

**Figure 8. Impact of OBA damage on European sales**

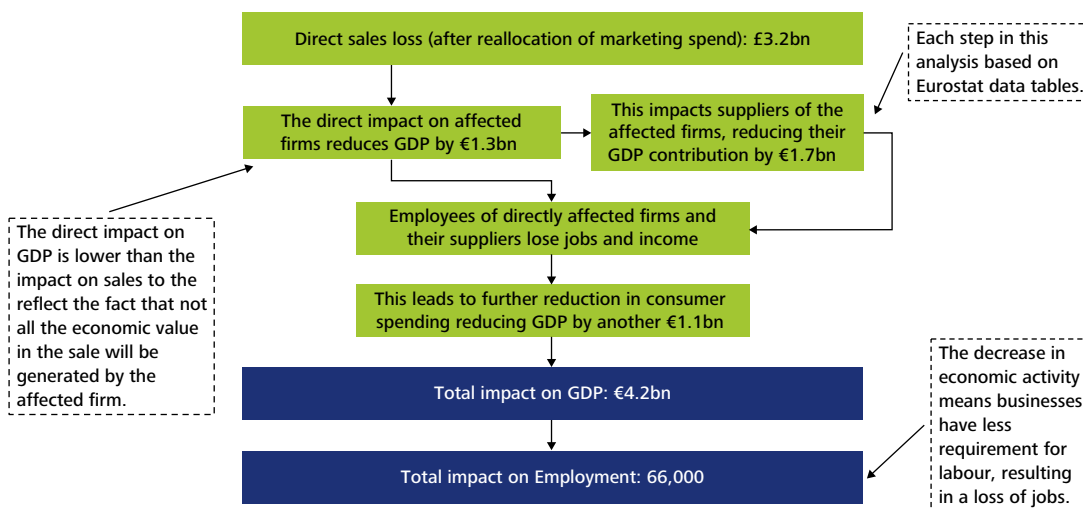


Source: Deloitte analysis

This loss in sales can be converted into an economic impact on the European economy, in terms of GDP, by taking into account the wider impact of these sales on the employees of the affected firms, as well as their suppliers and the employees of their suppliers. These wider economic effects can be calculated based on Eurostat data as illustrated by Figure 9.

<sup>40</sup> The calculation of this result can be summarised as:  
Change in sales  
= OBA spend x (Post-regulation average ROI – Pre-regulation average ROI)  
= €1,138m x (19.54 – 22.38) = -€3,178  
where the post-regulation average ROI takes into account the reallocation of original OBA expenditure

Figure 9. Estimating the economic impact from the loss in sales



Note: Eurostat input output tables used to estimate the impact of a loss of sales in one sector on economic value add in that sector, its supply chain and the wider economy.

Source: Deloitte analysis based on Eurostat data.

Based on data provided by Eurostat, the result of this calculation is that **GDP would fall by €4.2 billion and the potential loss of jobs would be 66,000.**<sup>41</sup>

The majority of spend on OBA is currently located in the UK, France and Germany, so these countries can be expected to be the most exposed to the short-term harm from the Proposed Regulation. However as OBA is expected to grow rapidly across Europe, the longer-term harm is likely to be felt across all member states.

The overall consequences could be significantly greater than the estimate above. The introduction of the Proposed Regulation could pose a challenge to the future development of the advertising industry as a whole. OBA is a major growth channel and, in the context of an increasingly fragmented television and internet landscape, it offers an efficient way to relay businesses' messages to consumers in a way that other forms of advertising cannot. At worst, the results of the Deloitte Consumer Survey suggest that the Proposed Regulation could even cause businesses to abandon OBA altogether.

Based on data provided by Eurostat, GDP would fall by €4.2 billion and the potential loss of jobs would be 66,000.<sup>41</sup>



41 The system of calculations for the loss of GDP can be summarised as follows:  
 Direct GDP impact  
 = Proportion of sales that is value added x Value of sales loss = 42% x -€3.2bn = -€1.3bn  
 Total GDP impact  
 = Direct GDP impact x OBA expenditure weighted multiplier = -€1.3bn x 3.11 = -€4.2bn  
 Employment impact  
 = Value of sales change (€m) x OBA expenditure weighted employment multiplier  
 = -3,178 x 20.62  
 = -66,000

# 4. Web Analytics

Web Analytics helps businesses to provide consumers with a better quality and more relevant service.

Businesses now have more ways than ever to interact with their customers both online and offline, ironically making it more difficult for businesses to know their customers, anticipate their needs and respond to their wishes.

## 4.1 What is Web Analytics and why is it important?

It is becoming harder for businesses to rely on traditional means to understand their customers. Gone is the model of the local store, whose owner would know its customers and offer them services that are specific to their interests. Businesses now have more ways than ever to interact with their customers both online and offline, ironically making it more difficult for businesses to know their customers, anticipate their needs and respond to their wishes.

Web Analytics offers an important new way for firms to address this challenge by helping them to better understand what their customers want, how best to reach out to them online and offline, and how to tailor their offering in a way that is most likely to appeal to them.

### How Web Analytics works as an enabler of business decisions

Web Analytics is a broad term for the collection and analysis of individual website usage data and other generic user information. It allows businesses to make site improvements and to customise their content in real time.

Using information about a user's browsing activity on a particular website, along with other basic user information, such as the type of device that is being used or the webpage that was visited immediately prior to the current webpage, businesses can learn about the preferences of a particular user.

This information enables businesses to undertake a variety of different actions to better serve their customers. Common examples include simple improvements to the function, layout and content of the site. More advanced and increasingly popular services extend this to providing users content that is tailored to their specific needs. This could include articles that they might want to read, information that they might be looking for, or details of products that they are likely to be interested in.

A major growth area, and perhaps the one that is most exposed to the Proposed Regulation, is the use of Web Analytics to enable real time customisation of content. An example is Amazon recommending products for users based on their individual browsing history. Real time customisation allows businesses to offer a user experience that is tailored to the customer in a way that would not be possible without the use of personal data.



#### 4.1.1 The importance of Web Analytics

As a result of the technology consumers benefit from a more enjoyable web experience. They can view the content that they want to see, navigate around websites more easily and make transactions with minimal effort. Businesses also benefit as a result of this enhanced user experience. The ease with which customers can use a website means it is easier for them to make a purchase, while it is also easier for businesses to:<sup>42</sup>

- Strengthen their brand image and hence encourage repeat business. The strengthening of brand image and increased engagement with the customer makes it more likely that the customer would make a purchase (and perhaps repeated purchases) both online and offline.
- Rely more on their online presence. Web Analytics can lead to efficiency savings, as businesses may be able to reduce or eliminate their expenditure on real estate or any other costs involved with having a physical commercial presence.
- Display their content clearly. As the application of Web Analytics can help to ensure visitors to a website to find the information they are looking for, it can reduce the need for help-lines and call centres to deal with customers' issues.

The technology is driving increased value in a range of new and existing business models. Spotify, for example, recently started to use analytics on its customers' usage patterns to make recommendations on music that might interest them. This is designed to both improve the service that Spotify offers its customers and to improve its understanding of how they respond to changing promotions and service developments.

##### **Case study: ING uses web analytics to improve customer engagement**

ING Direct is a branchless direct bank that relies on its website to acquire many of its customers. ING Direct uses Web Analytics as a tool to help define user segments and to test content and layout so that it can continually refine users' experiences on their website.

This has increased conversion rates for existing consumers by 20-45%. It has also increased prospect landing page conversions by 25%. Furthermore by improving site navigation and the user experience, the company has been able to reduce the number of customer calls for some customer segments by 30%.

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Consumers benefit from a more enjoyable web experience. They can view the content that they want to see, navigate around websites more easily and make transactions with minimal effort.

Other areas of Web Analytics help to enable important benefits to firms and consumers but are less exposed to the Proposed Regulation as they are less dependent on detailed user data. Examples of these areas include:

- Data on users' browsing being used to select and record relevant content. For example, the BBC news site displays the most popular news articles on their website.
- Improved navigation and site design based on analysis of site usage patterns.
- Rapid identification of broken site links and other performance issues.

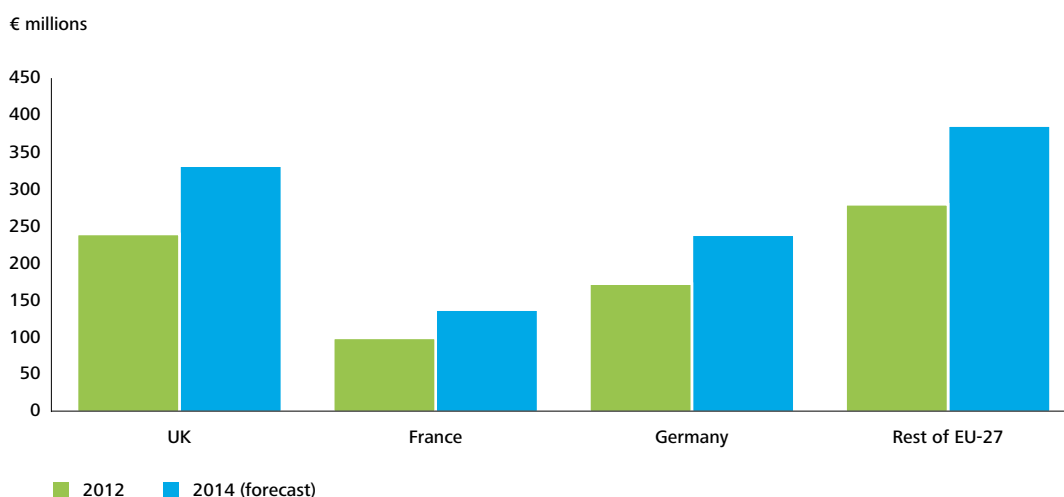
The role of Web Analytics in business has rapidly expanded in recent years and it is expected to continue to do so. In 2012 European businesses spent an estimated €800 million on Web Analytics and by 2014 this figure is forecasted to increase to over €1,100m.<sup>43</sup> The majority of this growth is forecasted to be in real time customisation, rather than in more general site improvements.

<sup>42</sup> Forrester, 2008  
"Measuring the total economic impact of customer engagement"

<sup>43</sup> Deloitte analysis

In 2012 European businesses spent an estimated €800 million on Web Analytics. By 2014 this figure is forecasted to increase to over €1,100m

Figure 10. Expenditure on Web Analytics in Europe



Source: Deloitte Analysis

This investment is spread across a wide variety of providers. Analytics technologies are provided by a number of larger firms such as Adobe, Google, IBM and Oracle, and both paid-for and free services are available. However there is also a strong competitive fringe of smaller alternative providers, such as AT Internet, which report a client base covering half of the companies listed on France's CAC 40 stock exchange and eTracker, a Hamburg based analytics firm.<sup>44</sup>

Finally it is important to remember that the implementation of Web Analytics drives the need for investment in:

- Additional hardware infrastructure to allow firms to trial layouts and services with different groups of consumers;
- Consultancy support and advice to interpret and act upon the insights from Web Analytics; and
- Advanced software to allow real time adaption of web services.

#### 4.2 What impact will the Proposed Regulation have on how Web Analytics works?

To support the analysis Deloitte was provided with external legal assessment of the implications of the proposed regulation by Latham & Watkins LLP:

*"The availability of the data needed to provide Web Analytics could be impacted by any number of changes to the current law caused by the Proposed Regulation and some of the amendments considered by the European Parliament and the Council. These mechanisms, some of which were foreseen under the Proposed Regulation and some of which have been suggested during the legislative process, could impact currently legitimate business models and include:*

- *Any restriction on the ability of controllers to process analytics data on the legitimate interests legal basis, with a corresponding shift to consent-based mechanisms.*
- *Restrictions to the "purpose limitation" principle, which would prevent businesses re-using data they have collected without seeking additional user consent.*
- *Stricter provisions around consent, which would invalidate processing based on implied or contextual consent.*
- *Inclusion of Web Analytics within the "significant effect" threshold of the new provisions on profiling, requiring processors to seek user consent.*
- *Broadening of the definition of identifiability to include the concept of "singling out", and equating singling out with a form of indirect identification (thus making more data "personal" data than at present).*

*While it is not yet clear which of these scenarios will come into effect – some of them would be legally binding, others would be a matter of interpretation and enforcement by data protection authorities – they all represent potential outcomes of the current discussions. They also all reflect a trend towards a consent-based Regulatory model."*

<sup>44</sup> <http://www.xiti.com/en/>  
<https://www.etracker.com/en/etracker-real-time-web-analytics-online-market-research.html>

While the debate has evolved since the original proposal, Deloitte has been advised by Latham & Watkins LLP that the key characteristics of the Proposed Regulation that affect this study remain substantively unchanged.

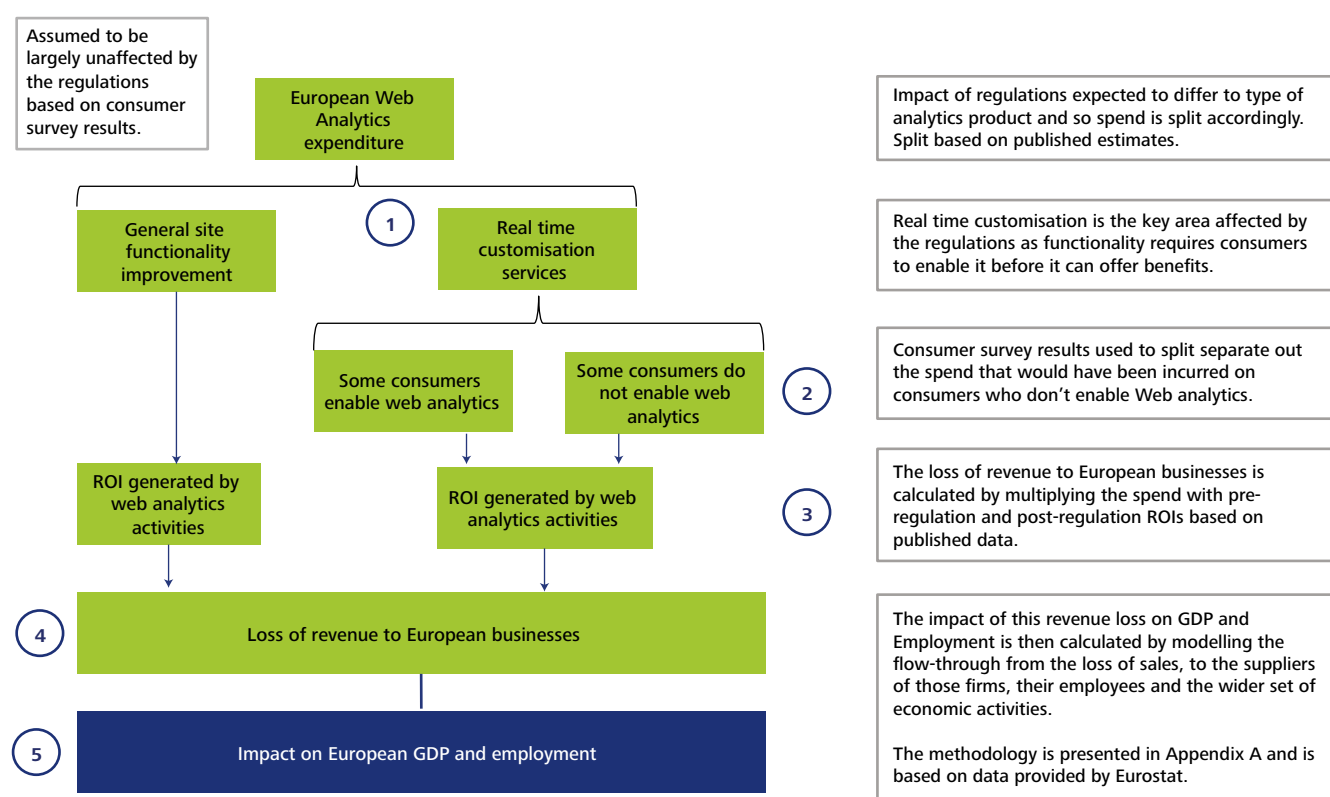
Based on this advice, the potential impact of the Proposed Regulation is examined using the following assumptions:

- Consumers would have to actively enable Web Analytics technology on each site they visit in order to benefit from any customised services that are offered.
- All other services that Web Analytics enable (e.g. improvements of site layout and content) would be unaffected. This is because all users of the site would benefit from these services. This is arguably a conservative assumption as, if large numbers of consumers do not actively provide their consent, the content, layout and design of sites could be unduly focused on the interests of a small proportion of the user population.

### 4.3 Modelling the economic impact of the Proposed Regulation

Figure 11 provides an outline of the flow of the modelling conducted with a discussion of the key parameters required.

**Figure 11. Modelling schematic for Web Analytics**



A fuller description of the methodology applied is presented in Annex A, but the following broad steps, which are referred to in Figure 11, were followed to model the economic impact of the Proposed Regulation:

1. The total expenditure on Web Analytics and the breakdown of this expenditure by service was estimated across Europe using published market data, cross-referenced with confidential industry estimates.
2. The willingness of consumers to actively consent to having their data used for Web Analytics was estimated based on findings from the Deloitte Consumer Survey.
3. The effect of the change in consent on Web Analytics ROIs was estimated using published data on the impact of Web Analytics on firm revenues.
4. The overall impact of this change in the effectiveness of Web Analytics on business revenues was calculated.
5. The loss of incremental revenue was applied to multipliers calculated from Eurostat data to generate estimates of the GDP and employment loss.

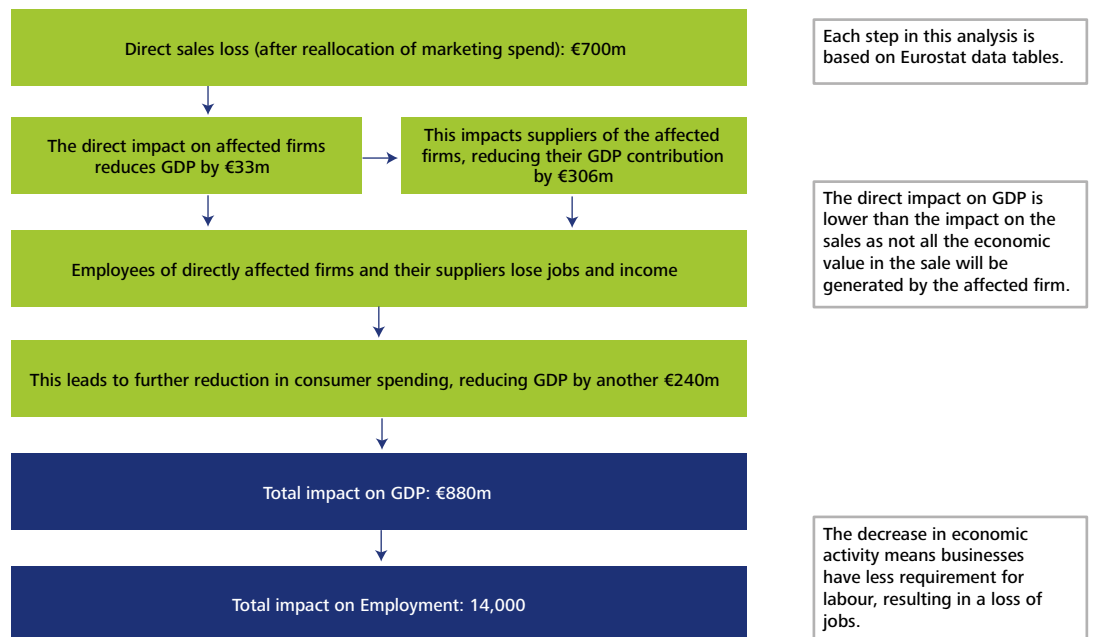
The Deloitte Consumer Survey suggests that only a minority of consumers would actively give consent to having their data used for site improvements (see Figure 7). Under the current regulatory framework some users would already be excluded from these services because their web browsers would disable the cookies necessary to show the targeted content. Based on an estimate of the proportion of site visits in which third party cookies are blocked, it is assumed that 12% of users are currently excluded.<sup>45</sup> However, even accounting for this, the findings imply that the number of users who have real time customisation technology enabled would fall by 69%. This is because it is estimated that only 27% of users in the former EU-27 would consent to having their data used for the purposes of Web Analytics.

Given the important role of Web Analytics in building engagement with customers and supporting sales, the Proposed Regulation are estimated to cost European businesses approximately €700 million based on 2012 estimates of expenditure, rising to €3 billion in 2014.<sup>46</sup> However this is likely to be a conservative estimate of the long run effect. These estimates are based on the latest available data rather than on longer term projected growth rates, implying that these estimates do not capture the full loss of economic potential from the industry.

This loss of sales for companies can be converted into an economic impact on the European economy, in terms of GDP, by taking into account the wider impact of these sales on the employees of the affected firms, as well as their suppliers and the employees of their suppliers.

## The results of the Deloitte Consumer Survey suggest that only a minority of consumers would actively give consent to having their data used for site improvements.

Figure 12. Estimating the economic impact from the loss in sales



45 It could be argued that this is a conservative estimate as in practice web analytics use a mix of first and third party cookies and users are generally more likely to block third party cookies. On the other hand a small proportion of websites currently require consent before they allow the user to access content and this may not be fully reflected in the figure

46 The calculation of the 2012 result can be summarised as:  
 Change in sales  
 = WA spend x (Post-regulation average ROI – Pre-regulation average ROI)  
 = €1.1bn x (4.19 – 4.82)  
 = -€703m

Note: Eurostat input output tables used to estimate the impact of a loss of sales in one sector on economic value add in that sector, its supply chain and the wider economy.

Source: Deloitte analysis based on Eurostat data.

Based on 2012 figures, along with data provided by Eurostat on the sectoral break-down of the European economy, the result of this calculation is that **GDP would fall by €880 million and the potential loss of jobs would be 14,000.**<sup>47</sup> Based on the forecasted growth of the sector, the impact on GDP is estimated to be to €3.8 billion in 2014, with 59,000 potential jobs forgone.

Once more the long-term impact could be worse than this. The Proposed Regulation threatens to harm an industry that is growing rapidly and that enables businesses to develop more efficiently. As the use of Web Analytics becomes more innovative and pervasive in businesses around the world, the risk that European businesses could fall behind their international rivals is likely to grow ever more real.

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Based on the forecasted growth of the sector, the impact on GDP is estimated to be to €3.8 billion in 2014, with 59,000 potential jobs forgone.



<sup>47</sup> The system of calculations for the loss of GDP in 2012 can be summarised as follows:  
Direct GDP impact  
= % sales that is value added x Value of sales loss  
= 47% x -€703m  
= -€333m  
Total GDP impact  
= Direct GDP impact x DM expenditure weighted multiplier  
= -€333m x 2.64 = -€880m  
Employment impact  
= Value of sales change (€m) x DM expenditure weighted employment multiplier  
= -703 x 19.97 = -14,000

# 5. Credit Information

Credit Information is a vital enabler of the European economy. By providing businesses with a tool to assess the risk of default, it helps to reduce the cost of goods to consumers and makes it easier to purchase products online. It also plays a vital role in many financial products ranging from mortgages to insurance.

## 5.1 What is Credit Information and why is it important?

Credit plays a role in the lives of almost all citizens of the European Union. Very few people have never had, or have never depended on someone who has had, some form of credit agreement, whether it be an overdraft, a payment on account, a credit card, a mortgage, a mobile phone or a student loan.

As a market economy, Europe is highly dependent on the healthy provision of credit. In the years following the financial crisis the availability of credit has been significantly restricted and across Europe a wide range of policy measures have been introduced to address this issue as part of measures aimed at fostering the economic recovery.<sup>48</sup>

Inherent to credit markets is the problem of asymmetric information. When a lender receives an application for credit, it cannot easily tell if the applicant is going to be able to pay back the debt and, as it is usually in the interest of all applicants to claim that they could, it is generally not possible for lenders to determine the creditworthiness of applicants based only on the information the applicants provide themselves. Without further information, therefore, lenders are generally reluctant to grant credit. Credit reference agencies (CRAs) provide lenders with the additional information that is required to rebalance this asymmetry.

<sup>48</sup> For example, the European Commission itself has actively pursued schemes to improve SME access to finance (<http://ec.europa.eu/enterprise/policies/finance/>), and some European governments have engaged in quantitative easing, and there have been calls for the European Central Bank to adopt a similar policy (<http://www.bloomberg.com/news/2013-05-21/fed-s-bullard-says-ecb-needs-aggressive-qe-to-avoid-japan-fate.html>)

<sup>49</sup> Finding based on industry interviews

<sup>50</sup> See for example <http://www.experian.co.uk/downloads/consumer/creditRefAgencyExplained.pdf>

<sup>51</sup> <http://www.experian.co.uk/downloads/newCompliance/reciprocityDataSharing/qAndAIssuedByScor18042006.pdf>

### How Credit Information works

When consumers and businesses apply for credit they are asked to provide details about themselves and their financial situation. The lender then obtains additional information about the applicant from a CRA and makes its lending decision using all the information it has acquired.

CRAs are able to provide relevant information about credit applicants because major lenders and many other firms have agreed to share information with the CRAs in return for being able to access the information CRAs hold on other potential customers.<sup>49</sup> As such CRAs act as independent intermediaries in the information sharing process.

CRAs do not store personal information about people such as race, religion, sexuality, how much they earn or any criminal record they may have (Association of Consumer Credit Information Suppliers). Nor do they tell businesses whether or not they should extend credit to applicants.<sup>50</sup> They simply hold a database of both positive and negative data (depending on the legal environment in which the CRAs operate), which they update as more information is shared with them.

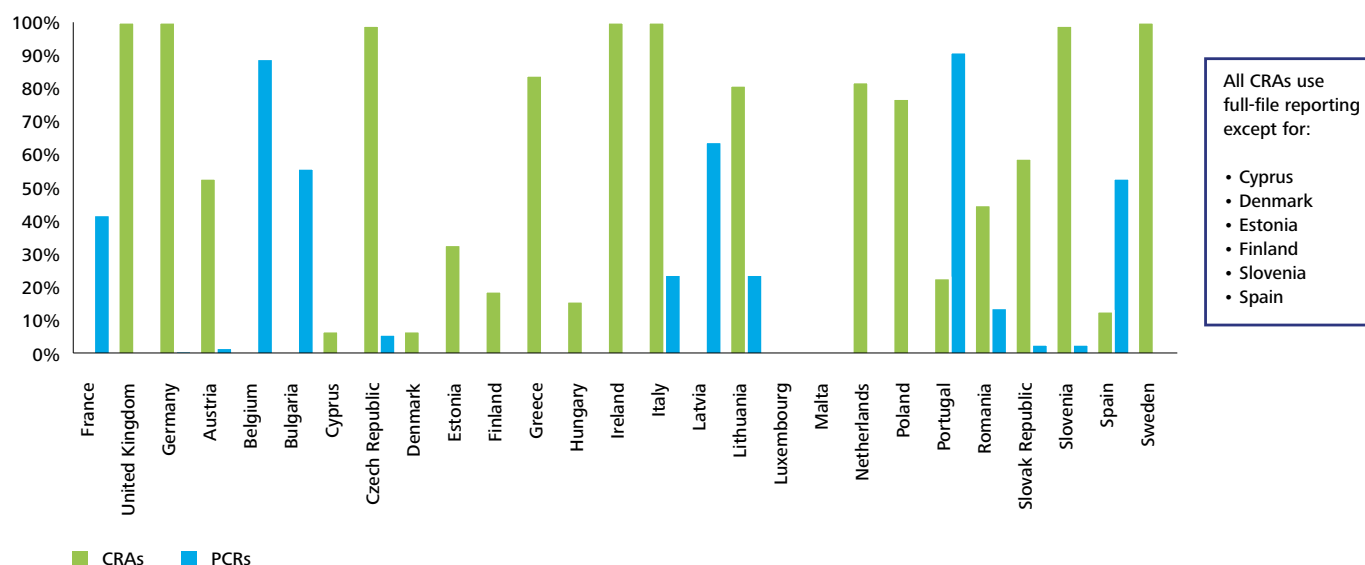
Examples of positive Credit Information include data on outstanding and settled credit agreements and whether the customer has a credit card. Examples of negative Credit Information include the late or non-payment of invoices and bankruptcies.

Businesses that have access to this information are bound by strict rules about what they can do with it. For example, in the UK the "Principles of Reciprocity" agreement lays out a number of rules, including the prohibition of companies using credit account information to target another member's customers for marketing purposes.<sup>51</sup>



While the main source for Credit Information in Europe is CRAs (21 countries of the former EU-27 have CRAs), in some markets Credit Information can also be obtained from public credit registry (PCRs).<sup>52</sup> Unlike CRAs, PCRs are not-for-profit organisations, usually run by national central banks. The coverage of CRAs and PCRs varies widely by country in Europe. As Figure 13 shows, low CRA coverage is normally found in markets where a PCR is present.

**Figure 13. Coverage rates in Europe: the proportion of adults whose credit information is held by CRAs and PCRs**



Source: IFC and World Bank (2012)<sup>53</sup>

The type of Credit Information that CRAs collect and distribute also differs by country. Some CRAs collect and distribute only negative data, but most (15 out of 21 in the former EU-27) collect and distribute both negative and positive data (this is known as full-file reporting). Similarly, some CRAs collect and distribute information only from financial institutions, while others also collect and distribute information from retailers, trade creditors and utility companies.

In general, coverage – defined as the proportion of adults about whom Credit Information is held – is higher for CRAs that use full-file reporting: the average coverage rate for CRAs that use full-file reporting is 74% of adults while the average for CRAs that use only negative information is 30%. This reflects the fact that most Credit Information that is held is positive information and negative information is held about relatively few people (see Figure 13).

As well as differences in the roles of CRAs, there are also differences in the role of credit between the different European markets. The total value of outstanding credit to households in the area of the former EU-27 is approximately €7.6 trillion.<sup>54</sup> Of this, consumer credit accounts for €822 billion, while lending for mortgages accounts for €5.8 trillion.<sup>55</sup> There is considerable heterogeneity in both the reasons for which credit is used and the modes by which households in Europe access credit. For example:

- In Denmark consumer credit accounts for only 4% of all household lending while lending for mortgages accounts for 89%. On the other hand, in Sweden consumer credit accounts for 6% of household lending while lending for mortgages accounts for 80%.
- In Spain 7.3% of households hold credit card debt, while in Italy only 1.4% of households do.
- In Belgium the value of credit card debt is approximately 60% of outstanding balances on credit lines and overdrafts, while in Austria it is only 5% (see Figure 13).

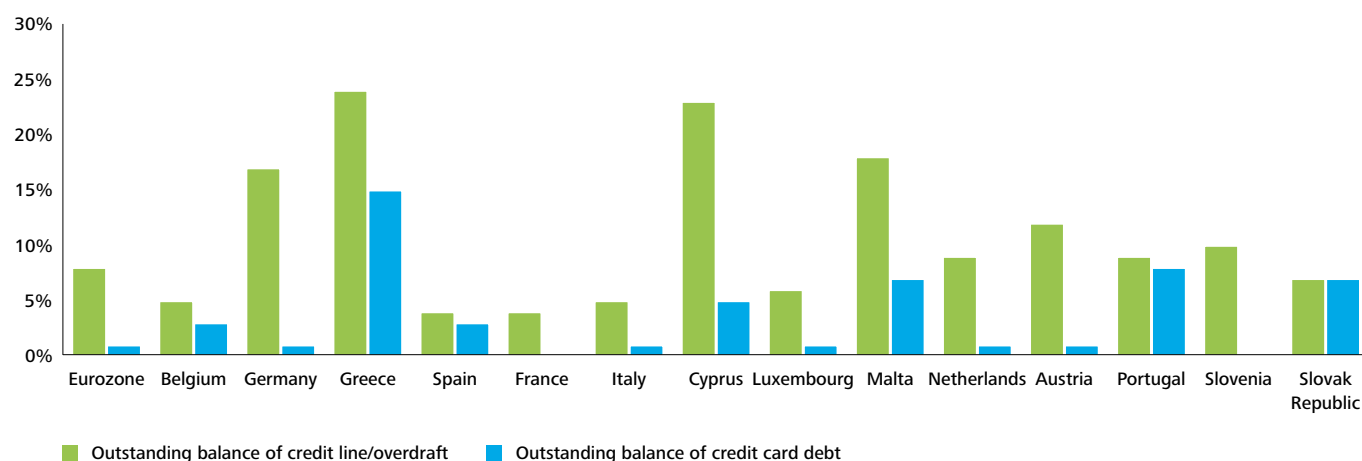
<sup>52</sup> PCRs are present in 14 countries of the EU-27

<sup>53</sup> <http://www.doingbusiness.org/data/exploretopics/getting-credit>

<sup>54</sup> ECB statistics

<sup>55</sup> Loans to businesses in Europe account for a further €5.6 trillion and there is similar heterogeneity in their use across the EU-27. For example, the value of business loans as a proportion of GDP is 28% in the UK and 63% in the Netherlands (the average is 43%)

Figure 14. Share of non-mortgage household debt accounted for by credit lines/overdrafts and credit cards (the remainder is accounted for by non-mortgage loans)<sup>56</sup>



Source: ECB Eurosystem household finance and consumption survey, July 2013  
Data missing for Finland. Data on credit card use missing for France and Slovenia

### 5.1.1 The importance of Credit Information

Credit Information is clearly important to major lenders, such as banks, building societies and mortgage providers. But it is also important to businesses in a wide range of industries in the 'real' economy. The results of the Deloitte Business Survey indicate that businesses in a broad range of industries in Europe rely heavily on Credit Information when dealing with their customers, both B2C and B2B. For example, 54% of automobile manufacturers, 49% of wholesalers and 33% of real estate companies report using CRAs when dealing with their customers. The survey also identified a range of reasons for why businesses use credit reporting agencies. The most important reasons cited were:

- It helps to minimise the risk of taking on customers that end up not paying for the goods they purchase (57% of businesses agreed with this statement).
- It enables businesses to take credit risks, such as lending, allowing customers to pay on account on invoice or with instalments (41% of businesses agreed with this statement).

Among other things, Credit Information allows businesses to extend trade credit and consumer credit and to set up rental agreements.

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**Businesses in a broad range of industries in Europe rely heavily on Credit Information when dealing with their customers.**

<sup>56</sup> Note, the vast majority of non-mortgage debt is accounted for by non-mortgage loans (90% in the Eurozone)

#### Case study: The importance of Credit Information to the mail order sector

The mail order sector provides a powerful insight into the importance of the Credit Information sector.

The remote purchase and delivery of the product means that consumers need a mechanism to transfer funds to the vendor. Where the consumer uses a debit or credit card, they will have been credit checked when applying for the account either by the banks themselves and/or through banks using CRAs.

Where the mail order company offers credit directly, either in the form of delayed payment or a formal credit agreement, the companies will frequently use CRAs such as *Callcredit* to assess the risk associated with the transaction.<sup>57</sup> This is particularly important in countries such as Germany where the popularity of payment by invoice has been identified as a major factor behind the growth of ecommerce, and a key risk issue for businesses to manage.<sup>58</sup>

These CRA checks help to reduce the exposure of mail order companies to bad debt, but the agencies also play a wider role in preventing and detecting fraudulent behaviour. For example, one large online retailer uses a variety of agencies, including CRAs, to validate the payment details and address provided for all new purchases.<sup>59</sup>

Fraud prevention is important to mail order companies because in many cases they may be liable for payment reclaims. A recent ECB research paper reports that in France merchants bore 53.5% of fraud losses in 2009 and that they were held liable mainly for fraudulent internet transactions.<sup>60</sup> Ultimately these costs are reflected in the prices faced by consumers.<sup>61</sup>

By helping businesses accurately assess the risk associated with mail order purchases, CRAs reduce prices for consumers and increase the range of payment options available.

The access to credit that is facilitated by reliable Credit Information is crucial for businesses to operate and to expand.

The reduction in the risk associated with credit decisions also benefits consumers and businesses that rely on credit because it means credit can be offered at a lower cost to the borrower. Because CRAs are able to collect a wide range of Credit Information and share it with lenders, borrowers are able to obtain credit from banks or other businesses with which they have no existing relationship without incurring high costs. This makes mobile phone contracts, car purchases and other large item purchases cheaper than they otherwise would be.

The access to credit that is facilitated by reliable Credit Information is crucial for businesses to operate and to expand. This is particularly important for SMEs, many of which rely on payment of account to manage their cash flows and bank loans to fund investments and the development of new products.



57 <http://www.callcredit.co.uk/markets-served/mail-order-and-home-shopping/credit-referencing>

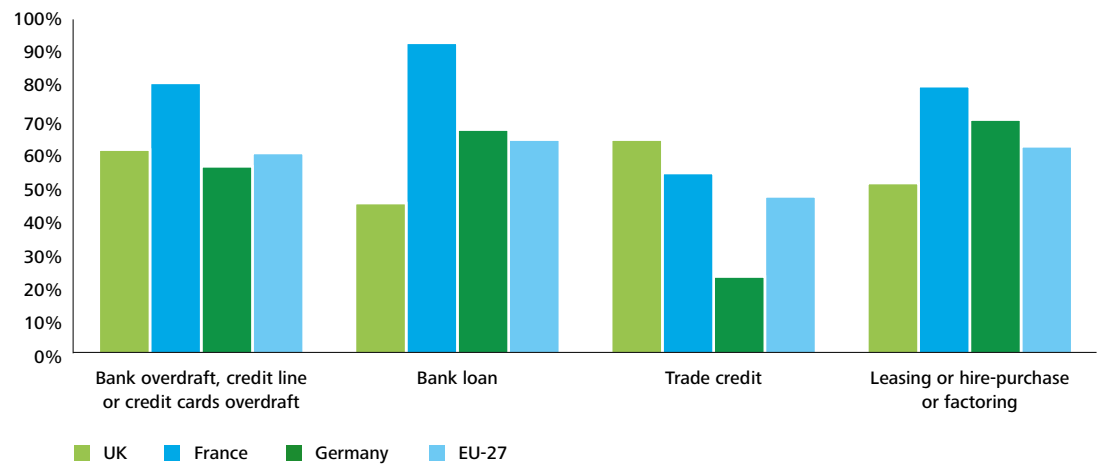
58 See for example The Paypers, 'Cross-border Ecommerce Report Germany'

59 <http://www.littlewoods.com/help/en/privacy-terms.page>

60 Creti and Verdier, 2011. "Fraud, investments and liability regimes in payment platforms." ECB Working Paper 1390

61 See for example, Telegraph (2013), 'Cost of car insurance falls following fraud crackdown'

Figure 15. Percentage of SMEs that have used external finance in the past by finance category



Source: Eurostat 2011

The sharing of Credit Information also helps to prevent consumers from becoming over-indebted. Many lending decisions are made on the basis of whether the credit repayments would place too much stress on the applicant's finances. If it is thought that they would, then applications may be rejected. The sharing of Credit Information therefore provides a helpful counterbalance to the tendency to prioritise today's consumption over their long term financial health.<sup>62</sup>

## 5.2 What impact will the Proposed Regulation have on how Credit Information works?

To support the analysis Deloitte was provided with external legal assessment of the implications of the proposed regulation by Latham & Watkins LLP:

*"Under the existing Directive, the collection of Credit Information is mainly based on the balance of interest clause. On this basis, businesses can report payment defaults to Credit Information bureaus, even if the data has not been originally collected for such purposes. Furthermore, the legitimate interest of third parties who access such data from credit bureaus overwrite the legitimate interests of the defaulting data subject. The Proposed Regulation and some of the amendments considered by the European Parliament and the Council hinder the collection and retention of reliable Credit Information because of the purpose limitation and the limited scope of the balance of interest clause. Furthermore, the limited scope of the balance of interest clause impedes the transfer of Credit Information from the CRA to their clients. It will also provide the data subjects with greater powers to block negative Credit Information from being used. Furthermore, additional limitations of so-called "profiling" would potentially apply."*

This advice indicates that, while it may not have been the intention of the European Commission for Credit Information to be affected by the Proposed Regulation, under the current drafting it would be almost impossible, especially under the amendments considered by the European Parliament.

In addition interviews with European CRAs highlighted:

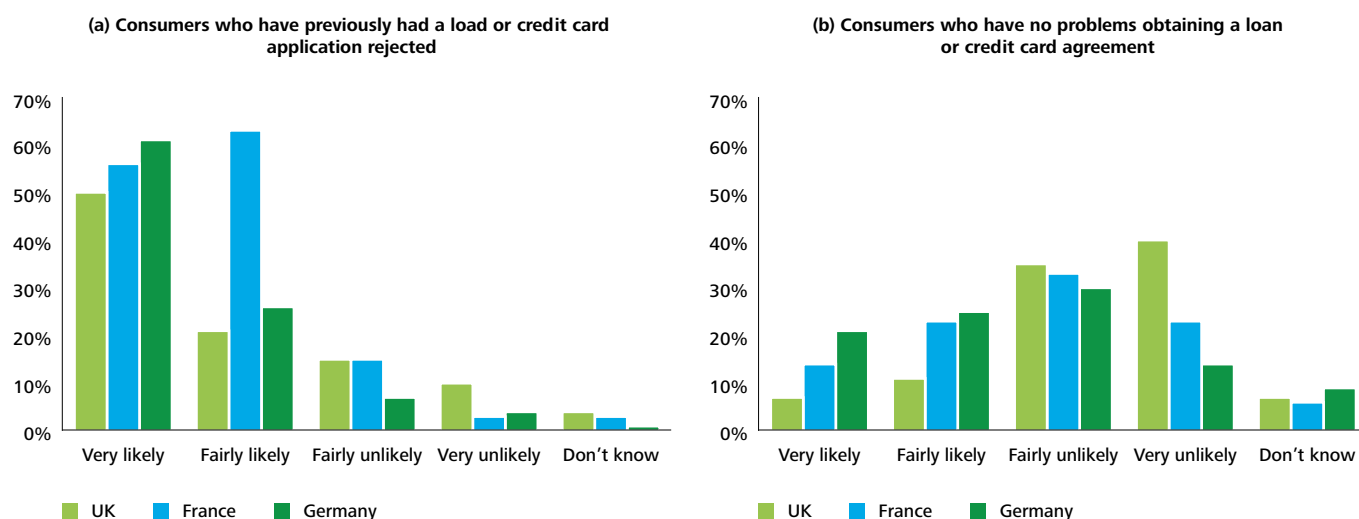
- Concerns that their businesses would fall within the scope of the Proposed Regulation but that because the wording was designed for internet operators, implementing the Proposed Regulation would be impractical and highly expensive.
- The risk that the current drafting of the Proposed Regulation, if applied to CRAs, could fundamentally undermine the reliability of credit records.
- Concerns that by introducing a "right to be forgotten", defaulted consumers could erase their credit records. While the response to this is likely to vary from customer to customer, the following figure shows the reported willingness to cancel their credit history based on the results of the Deloitte consumer survey.<sup>63,64</sup>

62 For example, see Soman and Cheema, 2002. "The Effect of Credit on Spending Decisions: The Role of Credit Limit and Credibility." *Marketing Science*; Erasmus and Lebani, 2008. "Store Cards: Is It a Matter of Convenience or is the Facility Used to Sustain Lavish C-onsumption?" *International Journal of Consumer Studies*; Saulnier, 2008. "Payday Loans: A Financial Product with Broader Implications for Vulnerable Consumers." *Canadian Centre for Policy Alternatives*

63 While this likely overstates the response rate in practice, it nevertheless supports the concerns raised about the impact of the regulation on the completeness and accuracy of the credit records

64 Interestingly these results suggest that even a significant proportion of people who have not previously had any difficulty would choose to cancel their history

Figure 16. Consumers who report that they would cancel their credit history



Source: Deloitte Consumer survey

Assessment of credit risk is a complex task but even under a conservative interpretation of the Proposed Regulation it appears there is the danger that this would generate adverse economic effects through a degradation of the quality of Credit Information in Europe.

If lenders could no longer rely on Credit Information then they would lose an essential tool for the determination of customers' creditworthiness. They would no longer be able to accurately distinguish between those who can afford to make their repayments and those who cannot and, as a result, there would be a general tightening of credit as lenders seek to avoid high risk borrowers.<sup>65</sup>

Existing businesses would have to change the way they manage their cash flows and reconsider plans to innovate and expand, which rely on external finances. SMEs would be particularly badly affected as they are the businesses that rely on external finance the most and they already have difficulties accessing it. Barriers to starting up a new company would be pushed up, weakening incentives for entrepreneurs and damaging the growth of new businesses which could have added significant value to the European economy.

Consumers would be affected both directly and indirectly from the degradation of Credit Information. The direct effect is that consumers would find it more difficult to make large purchases, such as houses, cars or even mobile phones. The cost in terms of both interest repayments and added paperwork and face-to-face meetings with lenders has the potential to be significant. Consumers would also suffer indirectly through the effect on business. As businesses become more credit constrained, their costs of doing business would rise and this could be passed on to consumers in the form of higher prices. Consumers would suffer from having less choice, as the development of new products and improvement of existing ones would be constrained by the difficulties that businesses would have accessing credit.

Consumers would be affected both directly and indirectly from the degradation of Credit Information. The direct effect is that consumers would find it more difficult to make large purchases, such as houses, cars or even mobile phones.

<sup>65</sup> See the seminal work by Stiglitz and Weiss, 1981. "Credit rationing in markets with imperfect information." *American Economic Review*; as well as Petersen and Rajan, 1995. "The Effect of credit market competition on lending relationships". *Quarterly Journal of Economics*; De Mesa and Webb, 1992. "Efficient credit rationing." *European Economic Review*

### 5.3 Modelling the economic impact of the Proposed Regulation

Creditors are likely to respond to a deterioration in the quality of Credit Information in two possible ways:

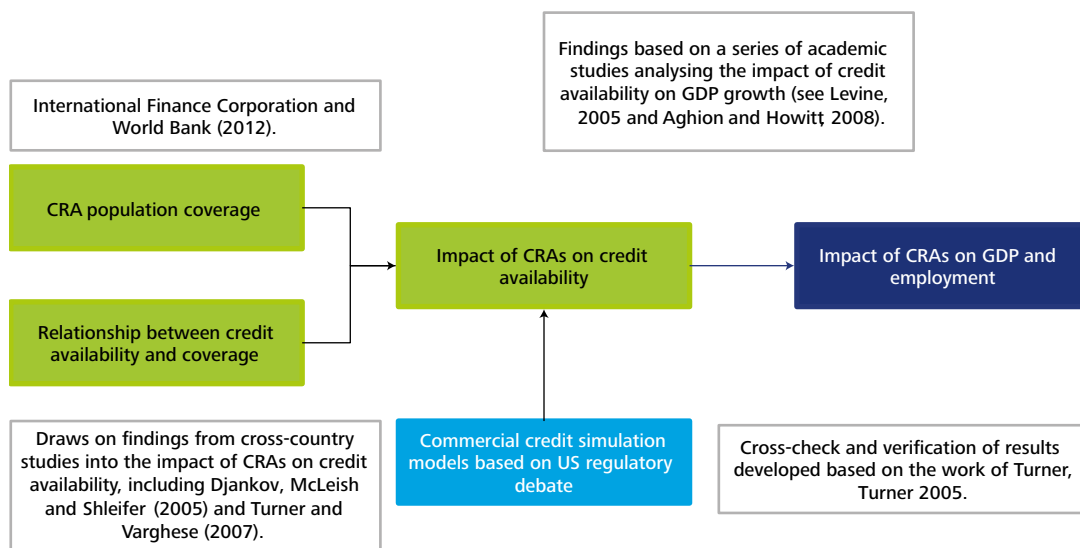
- by reducing the amount of credit that they make available to borrowers (credit rationing); or
- by raising the interest rate on the credit that they extend.

As is the case in most markets, a rise in the price is likely to lead to a reduction in the value of credit that is extended. However, unlike most markets, creditors have to account for the selection considerations that arise from the informational asymmetry in the market. In particular, raising the interest rate to clear the market may not be the appropriate response because it may lead to an adverse selection problem in which only high risk borrowers are willing to accept the credit terms.<sup>66</sup> Evidence from a number of studies on the market for loans to small businesses<sup>67</sup> and the market for consumer credit cards<sup>68</sup> suggests that credit rationing may be a more likely response than interest rate adjustment. The modelling in this section therefore focuses on how the level of credit is likely to change in response to the Proposed Regulation. It does not preclude the possibility that interest rates may rise, however.

The following broad steps were followed to model the economic impact of the Proposed Regulation on Credit Information:

- The impact of the proposals on CRAs and the effect that this would have on credit availability was estimated.
- The impact of changing credit availability on wider economic activity and GDP in Europe was estimated.

**Figure 17. Summary of modelling framework for Credit Information**



Source: Deloitte analysis

The first step is to analyse the impact of CRAs on credit availability. This issue has been studied in a number of academic papers where statistical analysis is used to explain the role of CRAs in influencing differences in credit availability over time and across countries.<sup>69</sup> A recent study, which considers how differences in the extent of CRA coverage influence credit conditions, found that full population coverage of full-file CRAs increased the ratio of credit availability to GDP by 47.5% compared to a situation without any CRA presence in the country.<sup>70</sup> This relationship provides the basis for the assessment of the potential effect of the Proposed Regulation on credit availability in Europe.

Using this study means the analysis in this report captures important differences in the role of Credit Information between the different European markets (see Figure 13). Furthermore, as it considers only the impact of the Proposed Regulation on full-file CRAs, it does not capture the potential impact on markets that rely on PCRs or CRAs that use only negative information. In practice there would likely be some impact on these markets so, in this sense, the modelling approach is conservative, especially if consumer would have the right to object to the legitimate storage of negative data.

The impact on credit availability was calculated by applying this relationship to data on the coverage of CRAs in Europe. The impacts vary considerably across the different European markets in line with their variations in CRA population coverage. Countries with full population coverage such as Italy, Sweden and Ireland can expect to receive the largest impact and hence be the most exposed to the Proposed Regulation, whereas, countries which have either no CRA (e.g. France) or CRAs that use only negative information (e.g. Denmark) are estimated to receive no impact.<sup>71</sup>

<sup>66</sup> Stiglitz and Weiss, 1981. "Credit rationing in markets with imperfect information." *American Economic Review*

<sup>67</sup> See, for example: Shen, 2002. "Credit rationing for bad companies in bad years: evidence from bank loan transaction data." *International Journal of Finance and Economics*; Fraser, 2009. "Is there Ethnic Discrimination in the UK Market for Small Business Credit?" *International Small Business Journal*; Cowling et al, 2012. "Small Business Financing in the UK Before and During the Current Financial Crisis." *International Small Business Journal*

<sup>68</sup> See, for example: Brito and Hartley, 1995. "Consumer rationality and credit cards." *Journal of Political Economy*; Calem and Mester, 1995. "Consumer behaviour and the stickiness of credit-card interest rates". *American Economic Review*

<sup>69</sup> For example, Pagano and Jappelli (1993), Jappelli and Pagano (2000, 2002), Sapienza (2002), Djankov, McLeish and Shleifer (2005) and Turner and Varghese (2007)

<sup>70</sup> Turner and Varghese, 2007. "Economic impacts of payment reporting participation in Latin America." PERC

<sup>71</sup> Again, in practice these countries are likely to be impacted by the Proposed Regulation and this point highlights the conservative nature of the approach



Based on these findings it is estimated that, were the Proposed Regulation to fundamentally undermine the value of CRAs across Europe, there would be a reduction in credit availability of 19%, which is equal to €2,556 billion.<sup>72</sup> As explained, this reduction would not be spread evenly across the countries of the former EU-27. Instead, lending is estimated to fall the most in markets that rely most heavily on full-file CRAs.<sup>73</sup>

The final step in the analysis is to estimate the impact of changing credit availability on GDP and growth. Drawing on findings from the academic literature on the relationship between private credit provision and GDP growth, **it is estimated that a reduction in consumer credit of 19% could reduce the annual growth rate of GDP by 0.65 percentage points (equivalent to €83 billion after one year)<sup>74</sup> and lead to 1.4 million job losses.<sup>75</sup>** Given the weak state of current credit markets and the challenging economic conditions, an impact of this magnitude would be a matter of serious concern.

In addition to this economic impact the Proposed Regulation is likely to cause economic harm to consumers. As a result of the deterioration of Credit Information, consumers will find it harder to access credit, reducing their choice over payment methods and their ability to smooth consumption.

It appears unlikely that it was the intention of policy makers to impact Credit Information in the Proposed Regulation, however these results highlight the importance of clear parameters around the scope of the policy.

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**It is estimated that a reduction in consumer credit of 19% could reduce the annual growth rate of GDP by 0.65 percentage points (equivalent to €83 billion after one year)<sup>74</sup> and lead to 1.4 million job losses.**



<sup>72</sup> This figure was reached by calculating the impact in each country and adding up each of the results. Given that the credit to GDP ratio in an economy is estimated to increase by 47.5% with the introduction of a full coverage, full-file CRA, removing the full-coverage, full-file CRA is estimated to reduce the ratio by 32.2%. The effect of the Proposed Regulation on a country is estimated by weighting this figure by the level of coverage in that country. So for example, if a country were to have a full-file CRA coverage of 80% of the adult population, then its credit to GDP ratio would decrease by  $80\% \times 32.2\% = 26\%$

<sup>73</sup> Some recent work in the US offers some further insights into the plausibility of this result. A series of studies have explored the effects of restricting use and sharing of data by CRAs. While these studies focus on restricting the use of only a sub-set of the information available to CRAs they imply that when applied to Europe, lending could fall by as much as 11%

<sup>74</sup> The seminal work by King and Levine (1993) estimates that an increase in private sector lending of 10% of GDP would lead to an increase in GDP growth of 0.3% per annum. This finding is supported by a body of academic literature that has investigated the relationship, such as Beck, Levine and Loayza, 2000, Aghion and Howitt 2008 and Beck and Demirguc-Kunt, 2009

<sup>75</sup> The impact on employment is estimated with the following calculation:  

$$\text{Change in employment} = \text{Change in GDP (€m)} \times \text{No. of jobs per €m of GDP} = 83,209 \times 16.75 = 1.4\text{m}$$

## 6. Summary of findings

The growth of data and its fundamental part in the present and future of the European economy and the lives of its citizens are both profound and undeniable. This has, almost inevitably, created some tensions, as the regulatory framework governing the use of personal data has struggled to keep pace with the way in which data is now used.

At present, data protection legislation varies considerably across countries, sectors and situations. The European Commission has sought to address this situation by harmonising data protection across member states via the Proposed Regulation. This is a goal which should be applauded.

In justifying the Proposed Regulation the European Commission conducted a regulator impact assessment RIA. Unfortunately, the RIA was limited in its scope and failed to adequately consider the economic impacts of the Proposed Regulation as currently proposed. This is perhaps unsurprising given the scope and complexity of data usage.

In order to, at least in part, address this issue, this report has modelled the impact of the Proposed Regulation on four sectors which reflect different aspects of the complex use of data in today's economy.

The analysis in this report suggests that the Proposed Regulation could have a major impact on the ability of the four sectors to function effectively. The users enabling OBA and Web Analytics are expected to fall by 85% and 69% respectively. While the impact on the ability of businesses to use Direct Marketing is somewhat more modest (34% on average) the large number of European businesses that rely on the sector, means the economic consequences are still considerable.

The impact of the Proposed Regulation on the credit information industry was also examined. While the impact on this sector is somewhat harder to predict, the analysis highlighted real concerns over whether the sector would be able to continue to effectively assess credit risk. Were this to happen, the analysis suggests consumer credit could fall by as much as 19%.

While businesses will be able to offset some of these effects by reallocating spend and reconfiguring their operations, the analysis in this report shows there will still be large negative effects.

This report estimates that the combined impact of these four sectors alone could **reduce GDP by €173 billion** leading to a **loss of 2.8 million jobs**.

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The analysis in this report suggests that the Proposed Regulation could have a major impact on the ability of the four sectors to function effectively.

# Appendix A: Detailed modelling approach

## A.1 Direct Marketing

The estimate of the impact of the Proposed Regulation through the effect it has on businesses' ability to conduct Direct Marketing campaigns focuses on the four most data-intensive channels of Direct Marketing. These are:<sup>76</sup>

- Direct mail: A form of Direct Marketing that includes all trackable advertising communications delivered by mail, including postcards, letters, self-mailers, brochures, pamphlets, flyers and promotional materials. It also includes catalogues which are designed to immediately sell a product or a service, identify a lead, generate a retail purchase or solicit contributions.
- Email marketing: A form of Direct Marketing that includes all trackable advertising communications delivered to an email address, which are designed to immediately sell a product or service, identify a lead, generate a retail purchase, or solicit contributions.
- Telemarketing: A form of Direct Marketing that includes all outbound calls designed to immediately sell a product or service, identify a lead, generate a retail purchase, or solicit contributions.
- Mobile marketing: A form of Direct Marketing that includes all (addressed) advertising messages directed to a mobile phone or smartphone designed to immediately sell a product or service, identify a lead, generate a retail purchase, or solicit contributions.

Apart from these examples there are a number of channels that are included in some categorisations of Direct Marketing but which do not rely as much on personal data and are excluded from the current analysis. These channels are presented by market in Table 1.

**Table 1. Channels categorised as Direct Marketing but excluded from the analysis**

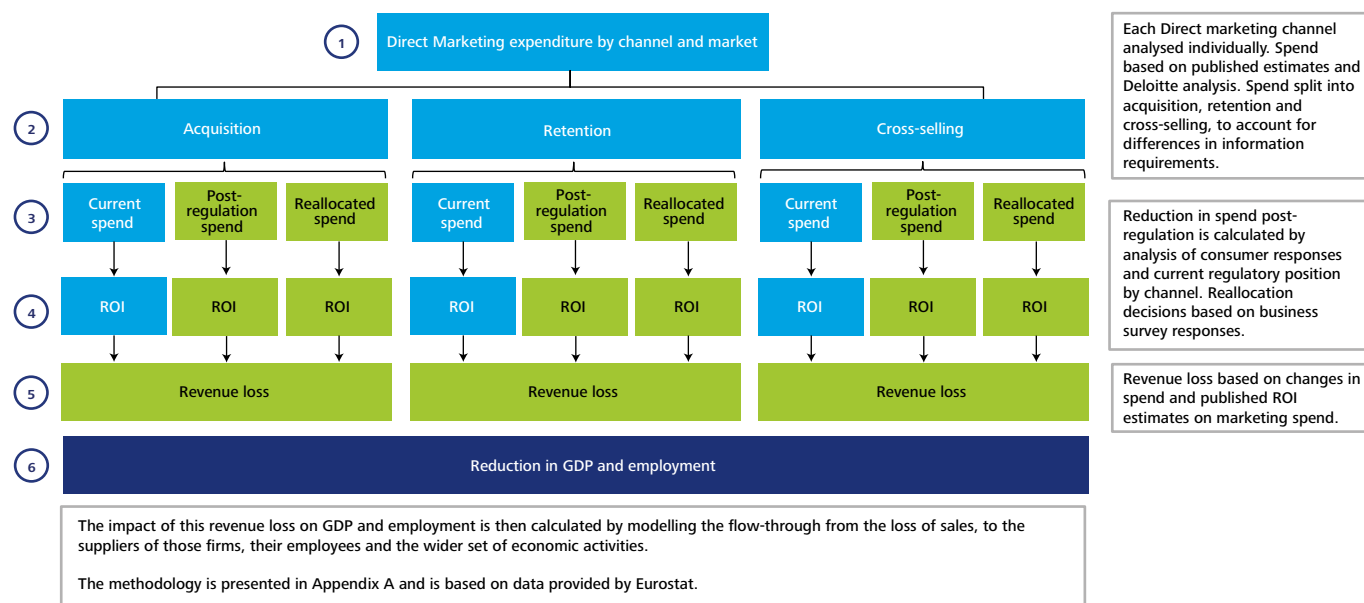
Country	Channels categorised as Direct Marketing
UK	Press, Internet search, Social media, Outdoor, Experiential, Internet banner, Freepost, Interactive TV.
France	Display, Internet search, Press, Outdoor, Unaddressed mail.
Germany	Unaddressed mail, Own website, External online marketing, Inbound calls.

Source: DMA UK, IREP, Deutsche Post

<sup>76</sup> Definitions are taken from DMA, 2010. "The power of direct marketing"

Figure 18 illustrates the approach that is taken to model the potential impact of the Proposed Regulation on Direct Marketing in Europe.

**Figure 18. The modelling approach for Direct Marketing (replicated from Section 2)**



As discussed in the main body of the report, the following broad logical steps, which are referred to in Figure 18, were followed to model the economic impact of the Proposed Regulation:

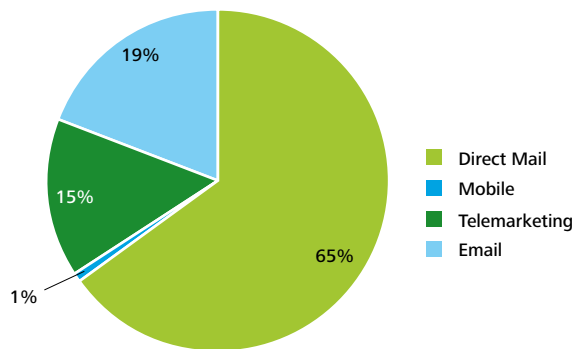
1. The total expenditure on Direct Marketing was estimated across Europe for direct mail, email marketing, telemarketing and mobile using published data.
2. This expenditure was allocated to each campaign using findings from the Deloitte Business Survey.
3. The willingness of consumers to consent to receive Direct Marketing was estimated using the results of the Deloitte Consumer Survey. Where consumers do not consent to being profiled or withdraw their consent to be contacted they cannot be targeted using Direct Marketing. Any Direct Marketing expenditure related to these consumers is therefore reallocated to another channel.
4. Current and post-regulation ROIs for each of the channels were estimated using published data.
5. The loss of incremental revenue was calculated, with the steps that businesses could take to mitigate the losses (i.e. reallocation of the marketing budget) taken into account.
6. Using the widely recognised Economic Impact Assessment approach, the loss of GDP was calculated by applying multipliers derived from Eurostat data to the loss of incremental revenue.

The total expenditure on the direct mail, email marketing, telemarketing and mobile channels of Direct Marketing in Europe was estimated to be €47 billion in 2012.<sup>77</sup> Figure 19 describes the expenditure split and the ROIs associated with each channel. It shows that, at 65%, Direct Mail still accounts for the majority of all Direct Marketing expenditure in the countries of the former EU-27, which in part reflects the cost of running Direct Mail campaigns. The estimates of the pre-regulation ROIs for the personalised channels of Direct Marketing range from 8.3 for Telemarketing to 21.1 for email marketing, with an average of 13.6 when weighted by current expenditure in Europe. These differences reflect various differences in the cost structure of channels and the way they are used by businesses. As they represent the average additional sales that are generated for each euro of marketing spend, they take into account any possible cannibalisation between products.

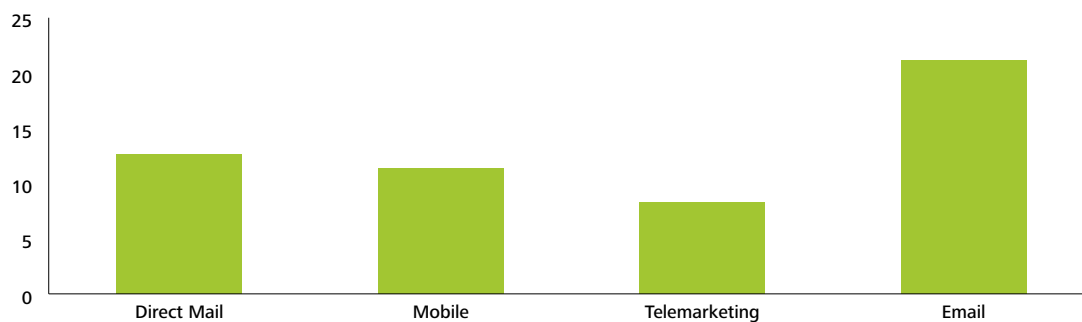
<sup>77</sup> These estimates are based on data from the DMA UK, IREP, Deutsche Post and DHL

**Figure 19. Expenditure and ROIs on Direct Marketing in the area of the former EU-27**

Expenditure as a % of total Direct Marketing expenditure



ROI: Total value of additional sales per Euro of Direct Marketing spend (€)



Source: Deloitte analysis based on DMA and other sources

### A.1.1 Estimating the impact on Direct Marketing

To estimate the potential impact of the Proposed Regulation it is necessary to first understand what proportion of consumers currently consents to having their personal data used for the purposes of Direct Marketing.

Part of this task involves understanding how businesses currently collect consent. In practice, this may differ by country, channel and target audience (i.e. consumers or businesses) depending on:

- What legal data protection frameworks are currently in effect. For example, in the UK an email address that is obtained in the course of negotiating the sale of a product can be used for a Direct Marketing campaign, unless the customer subsequently opts out, whereas in Spain an existing and proven contractual relationship is required.<sup>78</sup>
- How these laws are interpreted and enforced: For example, France is commonly regarded as an “opt-in” country for email marketing but the French data protection authority currently does not interpret the rule as applying to emails sent to professionals on topics relating to their work.
- How widespread the adoption of industry best practices is: Some businesses may choose to go beyond the minimum requirements set out by Proposed Regulation, others may choose not to.

Modelling the way consent is collected is therefore a complex task and one that is limited by the availability of data on how businesses actually behave. One recent study does examine the issue in detail and looks at actual business behaviour as well as the actual consumer responses to these choices. The results of this study, presented in Table 2, are used to approximate the method of consent collection across Europe. While these figures are necessarily an approximation they are based on actual business and consumer behaviour and represent the best current available information. The figures suggest wide variety in the current use of opt-in consent collection between the different markets. While it is estimated that 66% of Email marketing campaigns are based on an opt-in consent collection system, only 21% of Direct Mail campaigns use the opt-in system.

<sup>78</sup> [https://www.privacyassociation.org/publications/2009\\_08\\_opt\\_in\\_or\\_opt\\_out\\_for\\_global\\_direct\\_marketing](https://www.privacyassociation.org/publications/2009_08_opt_in_or_opt_out_for_global_direct_marketing)

**Table 2. Proportion of businesses currently using opt-in consent collection by channel**

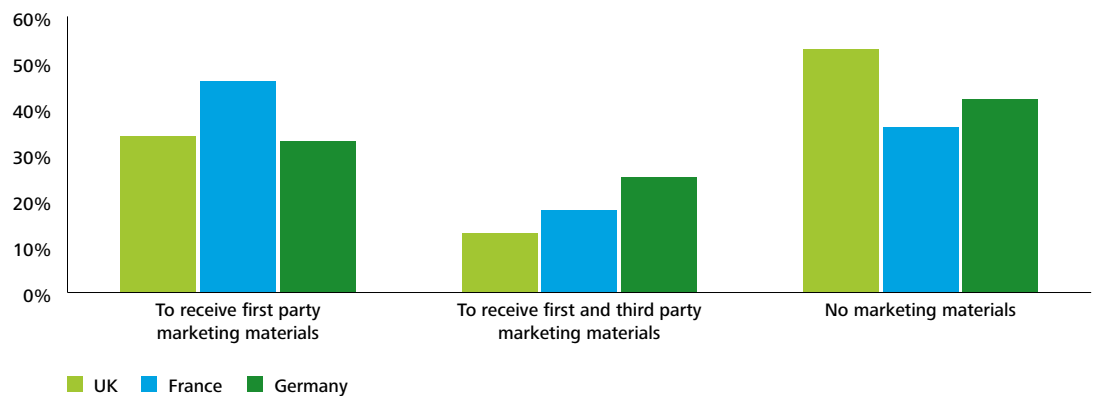
Channel	Opt-in regime
Direct mail	21%
Email marketing	66%
Telemarketing	33%
Mobile marketing	57%

Source: Royal Mail

For businesses that operate under an opt-in basis, it is likely that if consumers have opted-in in the past they will continue to opt-in were the Proposed Regulation introduced. Thus it is assumed that the Proposed Regulation would not affect the consent rates for those businesses that currently operate on an opt-in basis. Note that this is a conservative assumption as there are still likely to be impacts brought about by greater penalties and stricter enforcements.

For businesses that operate on an opt-out basis, consent rates are likely to be affected by the Proposed Regulation. A recent study on consent rates for Direct Marketing found that approximately 30% of customers of businesses that operate on an opt-out basis choose to opt-out.<sup>79</sup>

The estimate of the post-regulation consent rates are derived from the results of the Deloitte Consumer Survey. These results indicate that consumers are likely to be reluctant to consent to their data being used for Direct Marketing, particularly if this involves their data being shared with third parties (see Figure 20). For example, in the UK more than half of consumers surveyed reported that they would not consent to having their data used for any form of Direct Marketing. In France 64% of consumers reported that they would be willing to have their data used for some form of Direct Marketing, but only a third of these consumers reported that they would be willing to allow companies to share their data with third parties.

**Figure 20. Reported consent rates for Direct Marketing (replicated from the main report)**

Source: Deloitte Consumer Survey

This tiering of consent means that for the 77% of business that operate on an opt-out basis, the different Direct Marketing activities are likely to be affected in different ways. The effects on Direct Marketing expenditure and ROIs are estimated as follows:

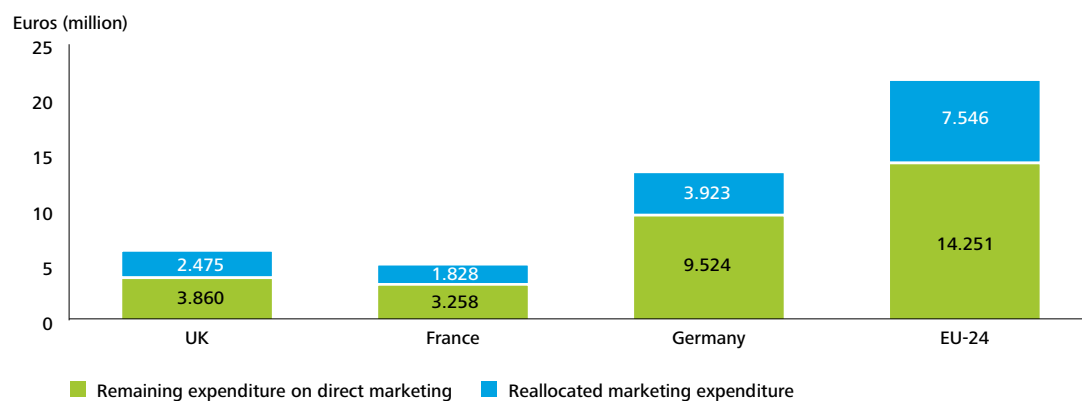
- A decrease in the expenditure on customer acquisition: As third party data would be particularly difficult to obtain, customer acquisition is likely to be heavily affected. It is assumed that expenditure on customer acquisition will fall proportionally with the change in third party consent, while the ROI on the expenditure that is targeted is not affected.
- A decrease in the expenditure on customer retention: It is assumed that expenditure on customer retention will fall proportionally with the change in first party consent. As this is much smaller than the expected change in third party consent, expenditure on customer retention is not expected to fall by as much as expenditure on customer acquisition. The ROI on customer retention is not affected.

<sup>79</sup> Royal Mail, 2011.  
"Permission Please:  
Trends in marketing  
consent"

- A decrease in the expenditure and ROI on cross selling: Cross-selling uses first party data to identify customers for ads and third party data to improve the targeting of these ads. It is assumed that expenditure on cross-selling will fall proportionally with the change in first party consent and that the targeting of the ads, as measured by the ROI they achieve, will fall in line with the fall in third party consent.

Figure 21 describes the estimates of maintained and reallocated funds from the 2012 personalised channels budget. From a total of €46,666 million it is estimated that €15,773 million of expenditure would be reallocated to alternative channels.

**Figure 21. Maintained and reallocated expenditure on the selected activities of Direct Marketing**



Source: Deloitte Analysis

The effect of this change will depend on how the diverted funds are reallocated. The results of the Deloitte Business Survey provide insights into what this reallocation may look like. According to these results, the reallocation is likely to be spread over a range of alternative channels (see Figure 22, panel 1).

However, some alternative channels may be more relevant as substitutes for some channels than others. For example, it may not be commercially viable to switch expenditure from online Direct Marketing activities to offline alternatives, such as radio and television. To account for the fact that online and offline channels are not equally substitutable, two reallocation scenarios are considered:

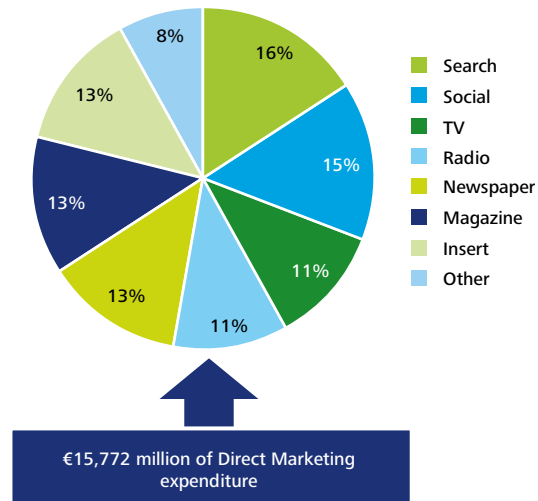
- Central estimate: In this scenario the reallocated expenditure is reallocated according to weights based on the results of the Deloitte Business Survey. Businesses were asked how they would reallocate their spending in place of spending on postal, email, telephone and mobile marketing. The weight given to each channel is calculated using the average reported likelihood (see Figure 22 (1)). This scenario is the basis for the estimates presented in the main report.
- Alternative reallocation scenario: In this scenario the reallocated expenditure on online Direct Marketing is reallocated to online alternatives and the expenditure on offline Direct Marketing is reallocated to offline alternatives (see Figure 22, panel 2).

These reallocations scenarios are illustrated in Figure 22.

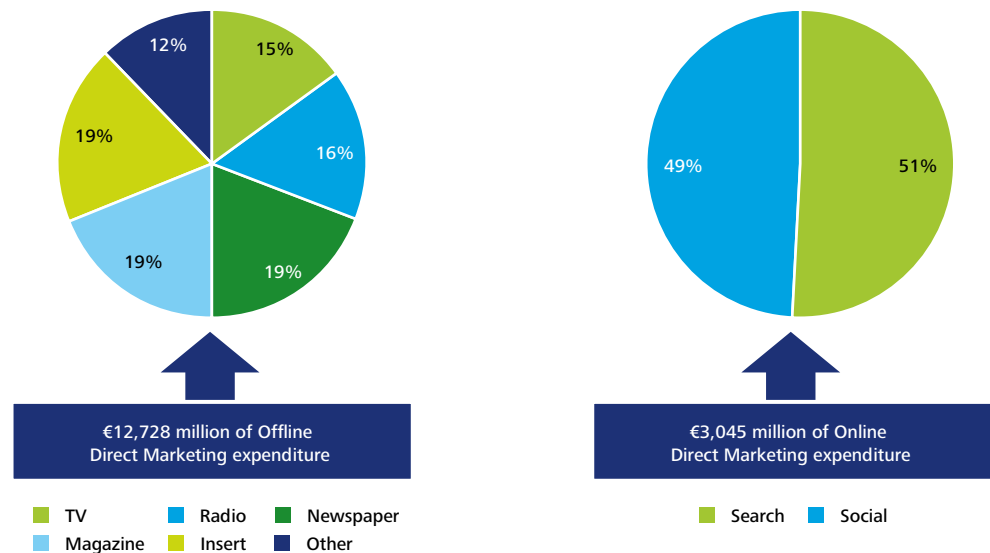


**Figure 22. Reallocations of Direct Marketing spend under the different scenarios**

(1) Central estimate



(2) Online-Offline Adjustment Scenario



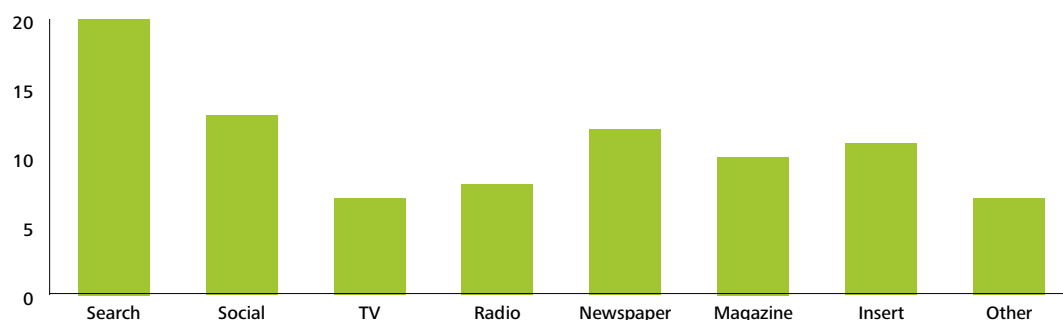
Source: Deloitte Analysis based on the Deloitte Business Survey

80 As is the case for OBA and Web Analytics, the Deloitte Consumer Survey indicates that the samples of consumers who give consent to having their personal data used for sharing are highly representative of the total population of consumers. Therefore it is not anticipated that the estimation of consumers' preferences based on the information that is available should be significantly affected by problems of sample bias

81 ROIs can be defined in different ways. For example, some measures are in terms of marginal sales and some measures are at the campaign level and so do not account for cannibalisation effects

The revenues generated from the different marketing activities are calculated using estimates of the ROIs for each activity. After the Proposed Regulation is introduced it is anticipated that the ROIs on Direct Marketing will be only marginally lower than those presented in Figure 19.<sup>80</sup> The ROI on the alternative advertising activities varies from activity to activity, as Figure 23 illustrates. For example, for Search channels the average ROI is estimated to be as high as 20 whereas for TV it is as low as 7. What this means is that a total of €20 of additional sales are generated for every euro currently spent on Search channels, whereas only €7 of additional sales are generated for every euro spent on TV marketing. These measures correspond to total additional sales, so they account for potential cannibalisation effects.<sup>81</sup> While some channels have higher ROIs than others, it should be noted that differences can be explained in part by the context in which the various channels. On average, however, the ROI on reallocated expenditure is expected to be lower than the average ROI achieved on Direct Marketing.

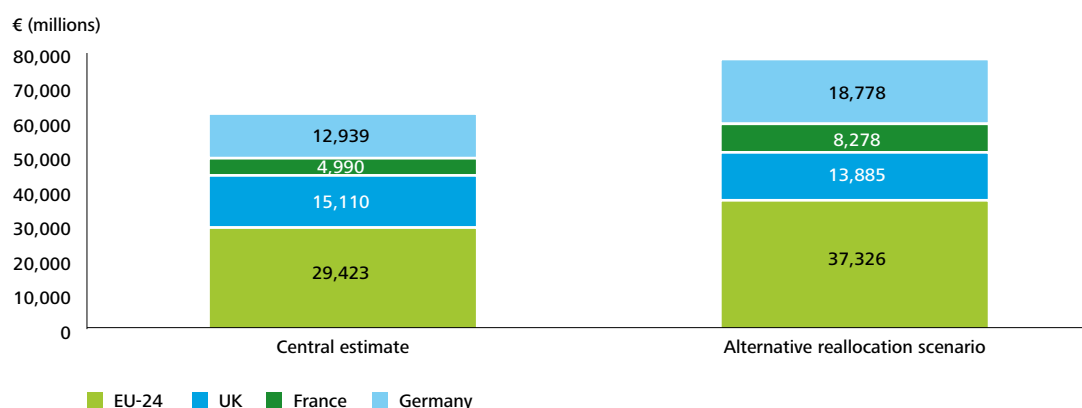
Figure 23. ROIs on alternative advertising channels (€ additional sales per € of marketing expenditure)



Source: DMA

The reallocation of businesses' marketing expenditure from Direct Marketing to these alternative channels will therefore lead to a decrease in business revenues. Figure 24 describes the losses to business revenues under each reallocation scenario.

Figure 24. Direct loss in revenues in Europe resulting from the impact on Direct Marketing

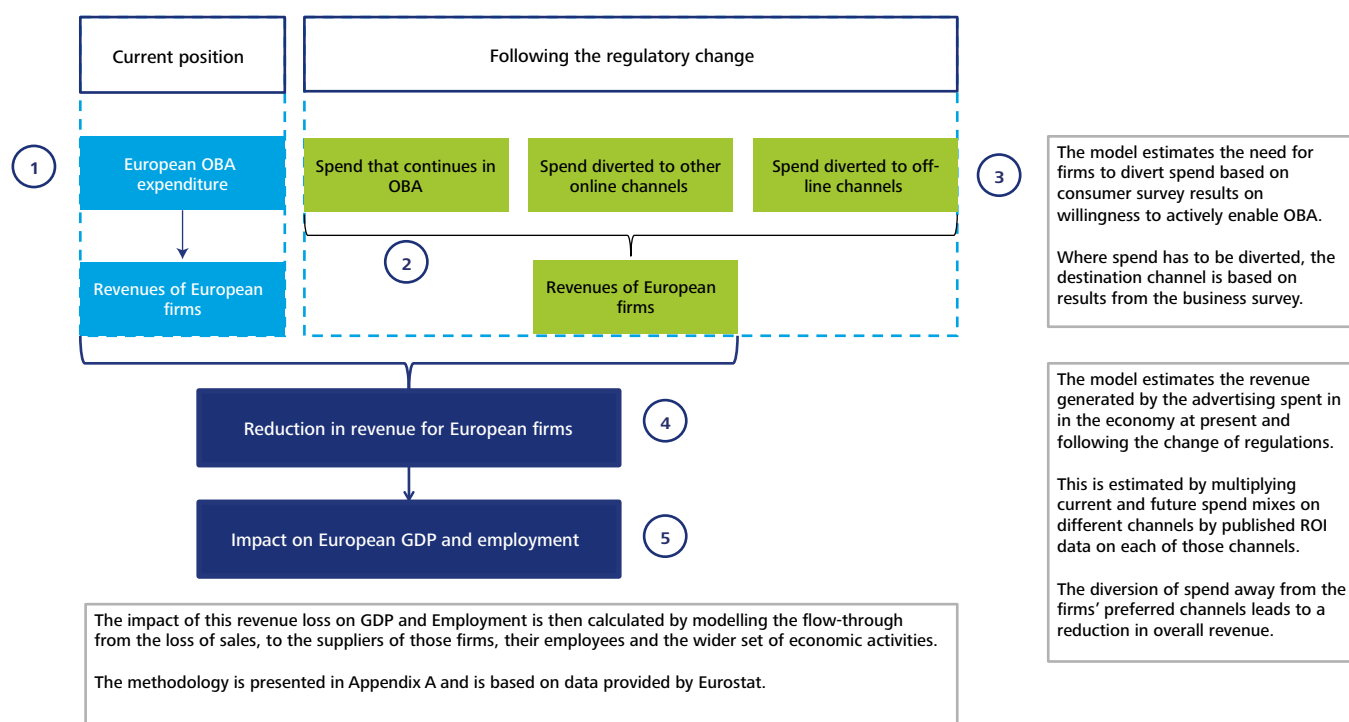


Source: Deloitte Analysis

## A.2 Online Behavioural Advertising

The approach that is taken to model the potential impact of the Proposed Regulation on OBA is illustrated in Figure 25 and expanded on below.

Figure 25. Modelling approach for OBA (replicated from Section 3)



The following broad steps were followed to model the economic impact of the Proposed Regulation:

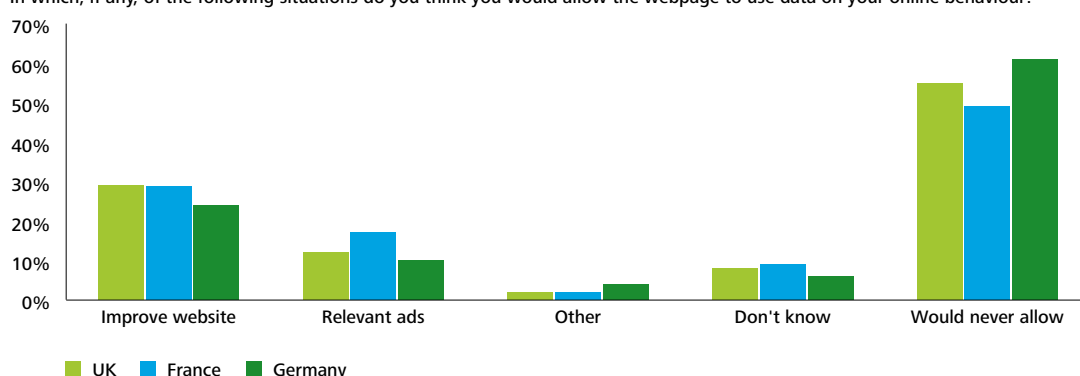
1. The total expenditure on OBA was estimated across Europe using published data.
2. The willingness of consumers to enable OBA and the implications this would have for OBA expenditure was estimated based on the results of the Deloitte Consumer Survey. A reduction in the ability to use OBA was then estimated by comparing these results to evidence on the proportion of users who currently disable third party cookies.
3. The ability of businesses to address these challenges by reallocating marketing spend is estimated based on findings from the Deloitte Business Survey.
4. The overall impact on incremental revenues was calculated, taking into account businesses' marketing budget response.
5. The loss of incremental revenue was applied to multipliers calculated from Eurostat data to generate estimates of the GDP and employment loss.

The quantification of the impacts is supported by data collected from a variety of sources, including industry studies, regulatory reports and findings gathered from the results of the surveys.

A key finding from the Deloitte Consumer Survey is that consent rates are likely to be low. Consumers were asked under what circumstances they would consent to websites using their online data and the results indicate that most users of web content are unlikely to consent to the use of their personal data for Online Behavioural Advertising.

**Figure 26. Reported consent rates for Web Analytics and Online Behavioural Advertising**

In which, if any, of the following situations do you think you would allow the webpage to use data on your online behaviour?



Source: Deloitte Consumer Survey

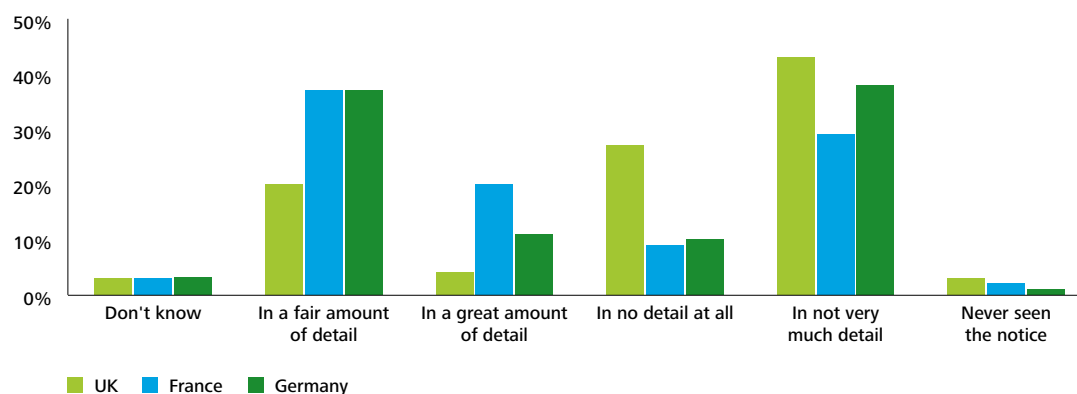
The robustness of this finding was tested by analysing whether the results are affected by:

- The type of website that requests consent, for example, blog, entertainment website, online shopping website or a social networking website; and
- Whether access to the site requires consent.

In both cases the results of the survey are consistent with main conclusions. They do not vary in any significant way by the type of website that is requesting the consent. When access to the site is made conditional on whether or not the user has granted consent, only 12% of those consumers who previously would not grant consent would change their decision.

The finding that consent rates are likely to be low is also consistent with the way the Proposed Regulation requires consent to be explicitly granted before personal data can be used for OBA. The shift from an opt-out basis for consent means that under the Proposed Regulation, ambivalent consumers would be counted as not giving consent. This could have a significant effect on consent rates – as Figure 27 shows, fewer than half of web users in Europe read terms and conditions of use and privacy notices in any detail. In addition many consumers are likely to not understand how websites use their personal data – an estimated 20% of users do not know what a cookie is and of those who do understand what a cookie is 27% have not made any changes to their browser related to cookies.

Figure 27. How users read online terms and conditions of use and privacy notices



Source: Deloitte Consumer Survey

### A.2.1 Estimating the impact on OBA

The value of online behavioural advertising stems from its capacity to use information on the website usage behaviour of specific devices. Without this information, the characteristics of the user could not be assessed and it would not be possible to accurately use behaviourally targeted advertising. A reduction in the consent levels of users is therefore likely to impact the effectiveness of OBA.

The current default setting of most browsers is to allow third party cookies, but users may change their settings to block them.<sup>82</sup> A recent industry estimate of the proportion of internet user traffic that blocks or prevents third party cookies from being set on computers is 12%.<sup>83</sup> This estimate is used to construct the baseline hypothesis that the proportion of users whose personal data is currently used for the purposes of OBA is 88%.

Figure 28. Degree of third party cookie enablement by browser



Source: Gibson Research Corporation

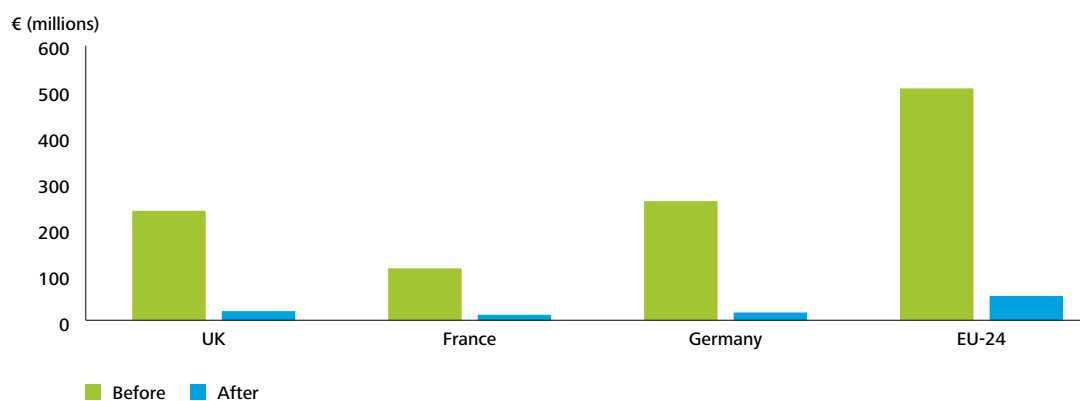
As the large majority of website users are not expected to give their consent to having their data used for OBA and will not be able to view behaviourally targeted ads, it is expected that there will be a substantial decrease in expenditure on OBA. The reduction in consent is the main contributor to the overall impact on businesses' expenditure on OBA.

Figure 29 describes the combined impact of the Proposed Regulation on expenditure on OBA for the different markets in Europe.

<sup>82</sup> An exception is Safari, which disables cookies as its default

<sup>83</sup> Source: Webtrends

**Figure 29. The estimated impact of Proposed Regulation on OBA expenditure in Europe**



Source: Deloitte Analysis

While there is likely to be a dramatic reduction in expenditure on OBA, the results of the Deloitte Business Survey indicate that businesses are not likely to change their total marketing budget, but rather reallocate the marketing funds elsewhere. Funds that are no longer used for OBA will be used to finance either non-behavioural display adverts or other forms of advertising.

The cost of non-behavioural display advertisements is approximately half the cost of behaviourally targeted display advertisements and the conversion rate for non-behavioural display advertisements is approximately half the conversion rate of behaviourally targeted display advertisements.<sup>84</sup> Hence the ROIs for these two forms of advertising are roughly the same. A small reallocation of funds between these forms of advertising will therefore not lead to significant differences in the gains from investment.

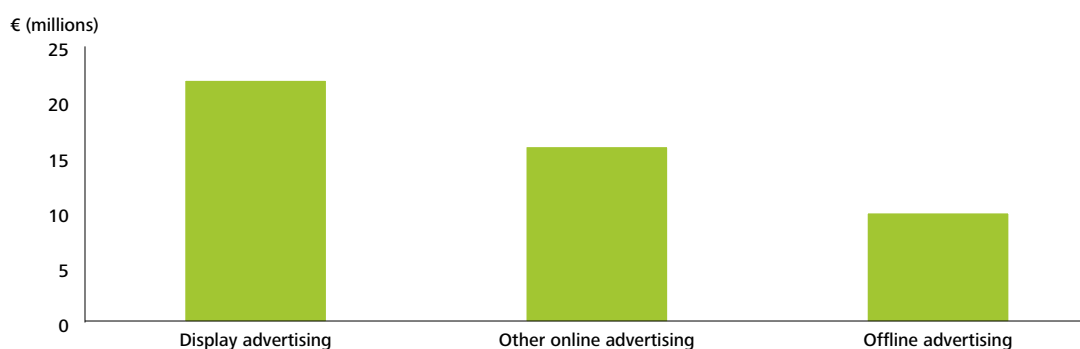
However, there are limits to the amount of non-behavioural advertisements that can be employed before there is a marked decline in ROI. The space available on a given webpage is fixed and increasing the number of adverts adds clutter to the webpage. As cluttering may deter users from accessing a given webpage, the value of a given advert on that page is reduced. According to a survey conducted by Burst Media:

*“Respondents accept that advertising will appear on a web page. However, for a majority (52.6%) there is low tolerance for more than two advertising units per web page. One-quarter of respondents (27.3%) say they will tolerate only a single advertisement per web page, and another one-quarter (25.3%) will tolerate just two ads per page”. Burst Media (2008)*

For the large reallocation of marketing expenditures that could take place, then, it is likely that businesses will have to reallocate some of their marketing funds to alternative channels. These channels may include other forms of online advertising (such as search query and social media advertising) or offline advertising (such as TV, radio newspaper).

As Figure 30 shows, the ROIs on the alternative forms of advertising are considerably lower than the ROI on display advertising, particularly for offline channels.

**Figure 30. ROIs for alternative forms of advertising**



Source: Deloitte analysis based on data from DMA UK and DMA US

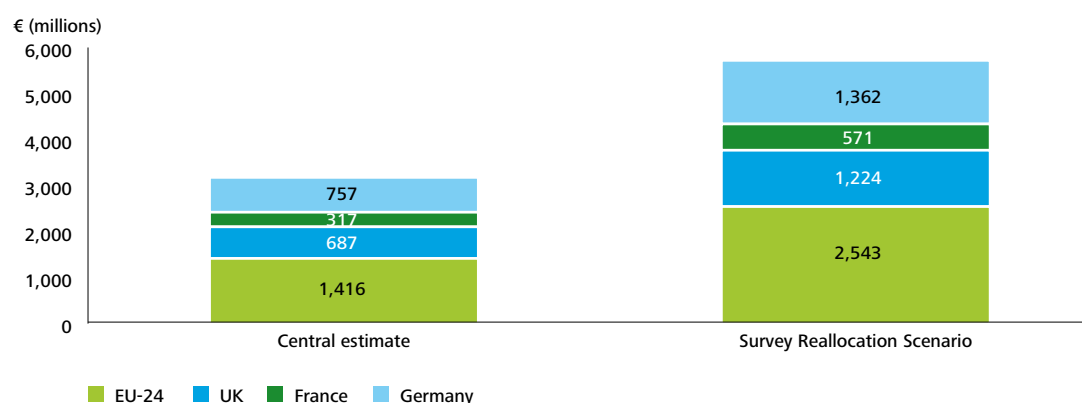
<sup>84</sup> Beales, H. (2010). The value of behavioral targeting. Network Advertising Initiative

A key factor in determining the impact of the Proposed Regulation on business revenues from OBA is the distribution of the reallocated marketing funds among the alternative channels. Two scenarios are considered:

- Central estimate: In this scenario all reallocated expenditure is reallocated to other online channels – search query and social media advertising – according to the findings from the Deloitte Business Survey (see Figure 22). This scenario captures the idea that off-line channels may not be appropriate substitutes for display advertising. This scenario forms the basis of the estimates in the main report.
- Survey Reallocation Scenario: This scenario allows for the possibility that funds will be reallocated into offline channels. The reallocated expenditure is reallocated according to weights based on the results of the Deloitte Business Survey (see Figure 22).

Figure 31 presents the direct impact of the Proposed Regulation on business revenues across the European markets.

**Figure 31. Direct loss in revenues in Europe resulting from the impact on OBA under the Survey Reallocation Scenario**

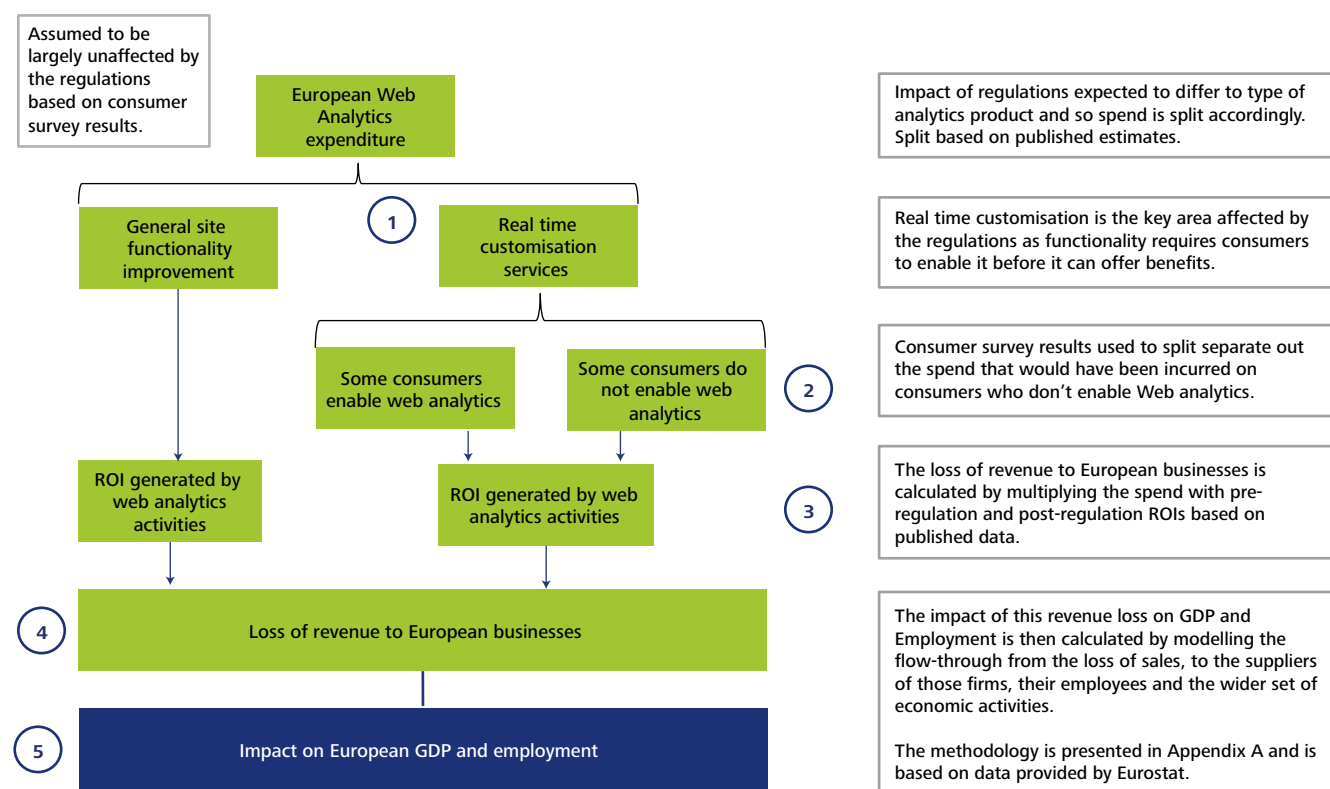


Source: Deloitte Analysis

### A.3 Web Analytics

The approach that is taken to model the potential impact of the Proposed Regulation on Web Analytics is illustrated in Figure 32 and expanded on below.

**Figure 32. Modelling approach for Web Analytics**



The following broad steps were followed to model the economic impact of the Proposed Regulation:

1. The total expenditure on Web Analytics and the breakdown of this expenditure by service was estimated across Europe using published market data, cross-referenced with confidential industry estimates.
2. The willingness of consumers to actively consent to having their data used for Web Analytics was estimated based on findings from the Deloitte Consumer Survey.
3. The effect of the change in consent on Web Analytics ROIs was estimated using published data on the impact of Web Analytics on firm revenues.
4. The overall impact of this change in the effectiveness of Web Analytics on business revenues was calculated.
5. The loss of incremental revenue was applied to multipliers calculated from Eurostat data to generate estimates of the GDP and employment loss.

The quantification of the impacts is supported by data collected from a variety of industry reports and findings gathered from the results of the surveys.

A key finding from the Deloitte Consumer Survey is that consent rates are likely to be low for Web Analytics, as illustrated in Figure 26 above.

### A.3.1 Estimating the impact on Web Analytics

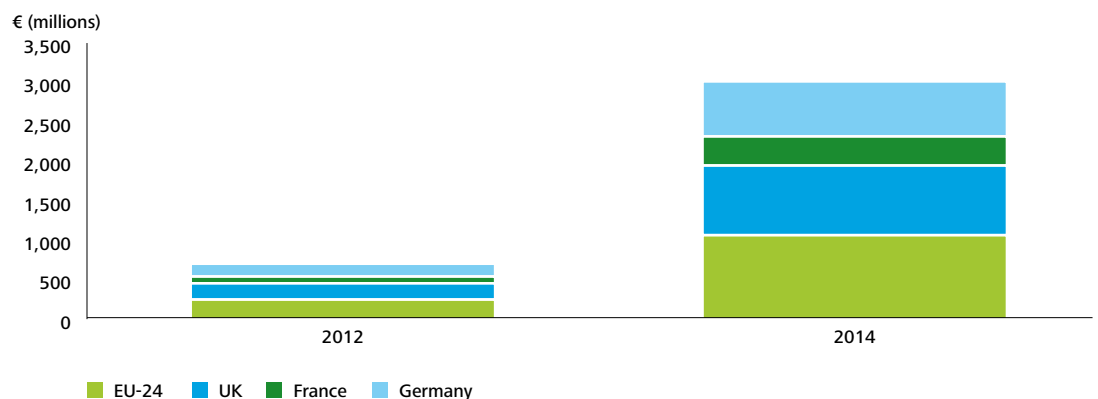
The introduction of the Proposed Regulation would tighten the restrictions on how businesses use personal data for the purposes of Web Analytics. As outlined in Section 4, one of the key implications of the Proposed Regulation is that under a number of scenarios businesses could be required to obtain the explicit consent of users before they can use this data. Users who do not explicitly grant consent will not be able to access any real time customisation services offered by the website.

The estimate of the proportion of users who currently enable Web Analytics is based on the proportion of site visits that allow third party visits. This is the same as the figure used for the baseline consent rate for OBA – 88% (see Section A.2.1).

As indicated by the results of the Deloitte Consumer Survey, it is expected that after the Proposed Regulation is introduced many users will not grant consent to having their data used for Web Analytics. The impact on the effectiveness of real time customisation is likely to be considerable.<sup>85</sup>

Since two thirds fewer users will be able to access this service, each euro spent on Web Analytics is likely to be two thirds less effective. Applying the expenditures on Web Analytics to the relevant ROIs gives the estimated revenues from Web Analytics before and after the Proposed Regulation.<sup>86</sup> Figure 33 illustrates how these revenues are likely to be impacted across Europe.

**Figure 33. Direct loss in revenues in Europe resulting from the impact on Web Analytics**



Source: Deloitte Analysis

<sup>85</sup> The impact on site improvement services is not expected to be large. The results of the Deloitte Consumer Survey suggest that the sample of consenting users is highly representative of the whole population of users. As a result it is anticipated that the reduction in the effectiveness of aggregated services will have a limited effect on the ROI from expenditure on aggregated services

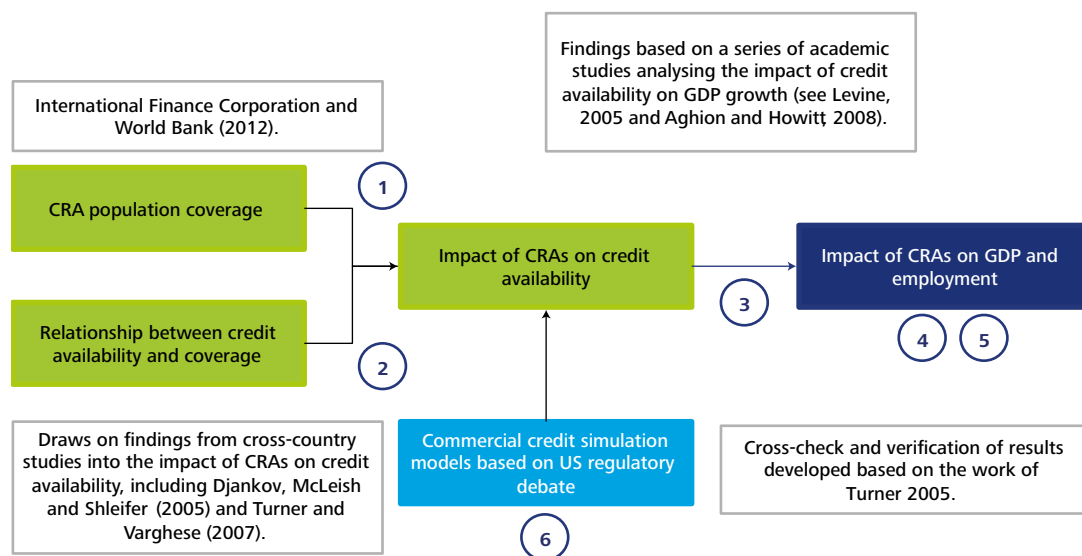
<sup>86</sup> Expenditure on Web Analytics is assumed not to change after the regulation is introduced, in line with the results of the Deloitte Business Survey



## A.4 Credit Information

The approach that is taken to model the potential impact of the Proposed Regulation on Credit Information is illustrated in Figure 34 and expanded on below.

**Figure 34. Summary of modelling framework for credit information**



Source: Deloitte analysis

The impact of the Proposed Regulation is estimated by considering the potential economic harm that could be caused if CRAs were no longer able to function. The impact is modelled as follows:

1. Data on the coverage of CRAs in Europe was collected from the World Bank database.
2. The effect that the loss of CRAs will have on private lending in Europe was calculated by combining this data with the results of cross-country econometric studies that test the relationship between CRA coverage and private lending.
3. Based on a large body of academic literature on the topic, the relationship between private lending and GDP growth was established.
4. The effect on GDP growth was then estimated by applying this relationship to the predicted change in private lending.
5. Using an employment multiplier, the impact on employment was estimated.
6. Finally, the estimates of the impact are cross-checked against estimates of the impact on the European economy of a particular set of restrictions on the availability of credit information.

### A.4.1 The link between CRA coverage and credit availability

A number of studies have investigated the relationship between credit information and the availability of credit in the economy.

Pagano and Japelli (1993) were the first to establish a positive relationship between the two, finding that private lending is higher in countries that have credit bureaus than those that do not.<sup>87</sup> Since then other studies, notably Jappelli and Pagano (2000, 2002), Sapienza (2002), Djankov, McLeish and Shleifer (2005) and Turner and Varghese (2007) have all shown that the availability of credit information is positively correlated with the availability of credit.

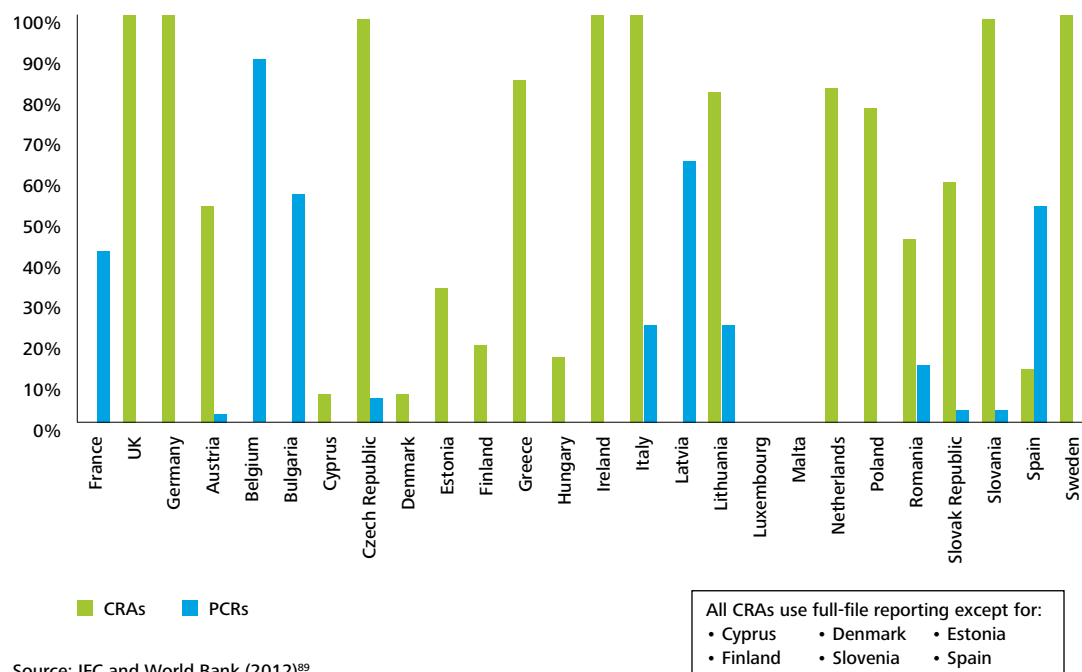
While previous work had focused on considering the impact of the presence of a CRA on the role of credit, Turner and Varghese (2007) extended this by focusing on the link between credit availability and the coverage of full-file CRAs. The key result of this paper is that “privately owned, full-file credit bureaus with 100% participation lead to significantly greater lending to the private sector (at least 47.5% greater) than no participation.”<sup>88</sup> This result is used in the current study to estimate what the effect on private lending would be if CRAs were no longer able to function.

<sup>87</sup> Pagano and Japelli, 1993. “Information Sharing in Credit Markets.” *Journal of Finance*

<sup>88</sup> Turner and Varghese (2007, p1)

By focussing on coverage, the model captures differences in the importance of credit information in the different European markets. Furthermore, as it considers only the impact of the Proposed Regulation on full-file CRAs, it does not capture the potential impact on markets that rely on PCRs or CRAs that use only negative information. In practice there would likely be some impact on these markets so, in this sense, the modelling takes a conservative approach.

**Figure 35. Coverage rates in Europe: the proportion of adults whose credit information is held by CRAs and PCRs**



Source: IFC and World Bank (2012)<sup>89</sup>

Data on the coverage of full-file CRAs for each market were taken from the World Bank (see Figure 35), while the credit to GDP ratio was calculated for each market in the area of the former EU-27 using data from the ECB database. The impact of the Proposed Regulation on the value of credit in the area of the former EU-27 was then estimated by applying the Turner and Varghese (2007) result to these figures. For example, the credit to GDP ratio in a country with a full-file CRA coverage of 80% would decrease by 26%. Taken across all of Europe, it is estimated that the total value of credit in the area of the former EU-27 would decrease by 19.4%, or €2,556 billion.

#### A.4.2 The link between credit availability and GDP growth

There is a large body of academic literature that has investigated the empirical relationship between financial development and economic growth (see Levine, 2005 and Aghion and Howitt, 2008 for more detailed reviews). A key study in this literature is King and Levine (1993), which used data from 77 countries to estimate a model of economic growth that depends on a number of indicators of financial development, including the ratio of private lending to GDP. While many recent studies have focused on extensions and developments of this seminal paper, it remains a relevant and highly cited result within the academic literature (e.g. Turner and Varghese, 2007 and Beck, 2012). According to their estimates, all else equal, a 30% increase in this ratio can be expected to lead to an increase in GDP growth of 1%.

The impact of the Proposed Regulation on GDP, through its effect on credit information, is estimated by applying this result to the estimated change in the credit to GDP ratio that would follow the introduction of the Proposed Regulation. Given that it is estimated that private lending will fall by €2,556 billion (19.4%), the GDP growth rate could fall by 0.65% per annum. After one year this is equivalent to a loss of €83 billion. Based on the relationship between GDP and employment it is estimated that this decrease in GDP would lead to a loss of approximately 1.4 million jobs.

#### A.5 Calculating the wider economic impact

Each of the sectors covered by this study adds value to the European economy directly through the production they support. Their capacity to improve the way advertisements are targeted and commercial websites are designed leads to increased sales in the economy. These sales then generate income, employment, profits and tax revenue.

A standard measure of value-added is the difference between the value of goods and services produced and the value of the intermediate inputs into the production process.

<sup>89</sup> <http://www.doingbusiness.org/data/exploretopics/getting-credit>

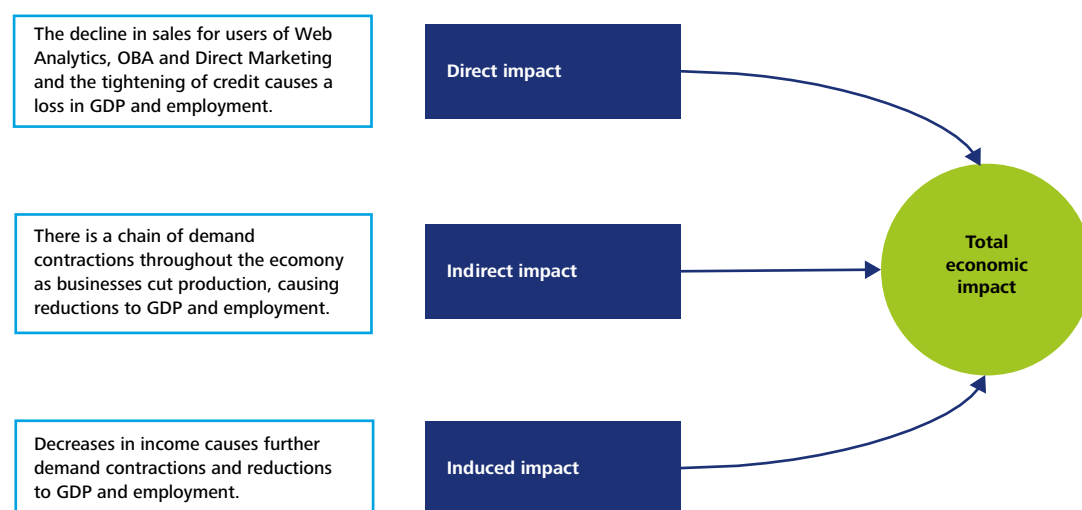
The decrease in sales that would be expected to follow the introduction of the Proposed Regulation would lead to a decrease in GDP and a loss of jobs in Europe. The tightening of credit that would be expected would compound this effect, reducing business sales and causing a further decrease in GDP and employment in Europe. This is the **direct** impact of the Proposed Regulation.

The total impact of the Proposed Regulation would be greater than this, however. First, as businesses see their sales fall, they would need to purchase fewer inputs. This would translate to lower demand for the goods and services produced by their suppliers. In response to the lower demand for their products, the suppliers would decrease their purchases of intermediate goods and services, which in turn would impact the revenues of their own suppliers. Faced with a reduction in the demand for their products, the suppliers' suppliers would decrease their purchases of inputs, causing the revenues of their suppliers to fall. This chain of demand contractions would continue throughout the economy, with subsequent rounds of expansions diminishing as at each stage, due to leakages from the economy (such as imports). At each stage, value added would be lost from the economy as businesses scale back their production activities. The sum of these losses is the **indirect impact** of the Proposed Regulation.

Second, as production falls at each stage of this process, businesses are likely to cut jobs or lower wages. This would reduce household incomes and precipitate a decrease in household consumption, which would impact output further. The value-added lost by the lower household expenditures is the **induced impact** of the Proposed Regulation.

The total impact on the economy is the sum of the direct, indirect and induced impacts. It can be calculated by applying the direct impacts to the relevant multipliers for the European economy.

**Figure 36. The determinants of economic impact**



Source: Deloitte Analysis

The business revenues that are lost due to the Proposed Regulation are distributed over a number of industries. As the links between different industries and the leakages from the economy differ by industry, the multipliers will be different from industry to industry. It is therefore necessary to allocate the revenues to different industries before applying that industry's multiplier. This allocation is based on an estimate of the distribution of business revenues over sectors, which is derived from the Eurostat Supply and Use tables for Europe.

In practice this approach is applied explicitly for Web Analytics, OBA and Direct Marketing. It was not necessary to apply the method for Credit Information as there are other studies on which the findings may be based. These studies are discussed in the relevant chapters of this report.

The direct impacts were then estimated by calculating the proportion of the revenues in each sector that represent value added to the economy. Type I and Type II multipliers for each sector were derived from the Eurostat Input-Output table for the European economy. This is a static description of the inter-sector links in the European economy (see Figure 37) for an example. The direct impact in each sector was then applied to the multipliers to obtain the indirect and induced multipliers.

Figure 37. Example of an input-output table

Millions of Euro

	Agriculture	Industry	Services	Consumption	Investment	Output
	1	2	3	4	5	6
	Quadrant I			Quadrant II		
1 Agriculture	20	34	10	30	6	100
2 Industry	20	152	40	88	100	400
3 Services	10	72	20	90	8	200
	Quadrant III			Quadrant IV		
4 Wages and salaries	30	100	90	0	0	220
5 Operating surplus	20	42	40	0	0	102
6 Output	100	400	200	208	114	–

Source: Eurostat Manual of Supply, Use and Input-Output Tables

# Appendix B: Consumer and business survey results

## B.1 Methodology

### B.1.1 Consumer survey

The Deloitte Consumer Survey was completed by a sample of two thousand consumers aged 18 and over in each of the UK, France and Germany. The questions covered consumers' attitudes to a range of issues including:

- Companies using and sharing personal data for commercial purposes;
- The receipt of various marketing materials, both online and offline;
- Website user experience; and
- The possibility of erasing one's credit history.

The survey questions were designed to obtain information about consumers' preferences and how they could be expected to respond to the Proposed Regulation. The characterisation of consumers' likely responses faced a number of challenges, which had to be addressed in the way the survey was designed. These challenges include the likelihood that:

- Consumers would not understand what the Proposed Regulation would mean for their website user experience or the advertising material they receive.
- Consumers would not understand their choices over how their credit information is used and what the implications of their choices would be.
- Their choices would be context-specific and difficult to generalise for the purposes of a survey.

A number of measures were adopted in the survey design to combat these challenges. For example:

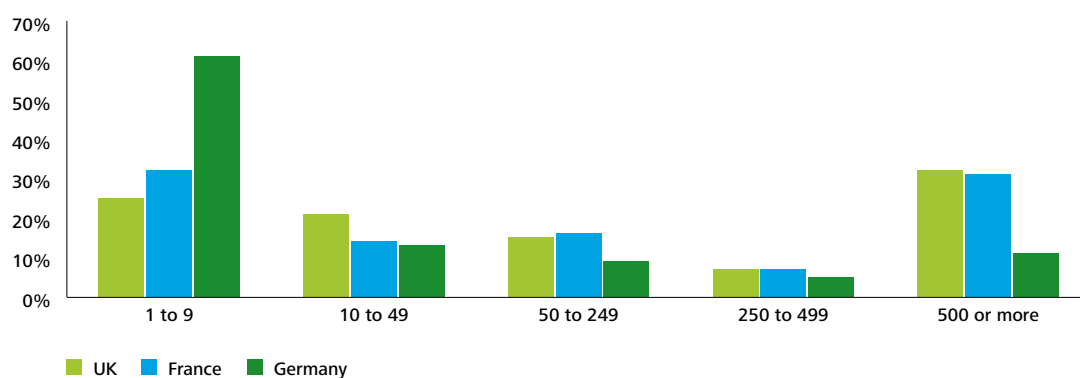
- Multiple questions were asked around the same topic so that an understanding of each issue could be built up from a number of responses.
- For the case of Web Analytics and OBA, information was gathered on the type of website that is visited and the importance of the content on the site to see whether the results vary by different metrics.
- For the case of credit information, consumers were asked in a number of ways about whether they would consider erasing their credit history or whether they would feel inclined to deny consent for their data being used for credit information purposes. Questions were asked about credit history to see how this affected the answers consumers gave.
- Consumers were asked to identify the website that they visited most recently before answering a series of questions relating to their user experience on that website. This measure focused respondents on a specific experience rather than drawing general answers. By asking for the last website that the consumer visited rather than asking for the consumer's favourite website, for example, it also improved the randomness of website selections.

### B.1.2 Business survey

The Deloitte Business Survey was completed by a sample of 750 business people, equally split between the UK, France and Germany. To ensure the results were reliable and that a wide range of perspectives were represented; responses were collected from senior decision-makers at different types of businesses.

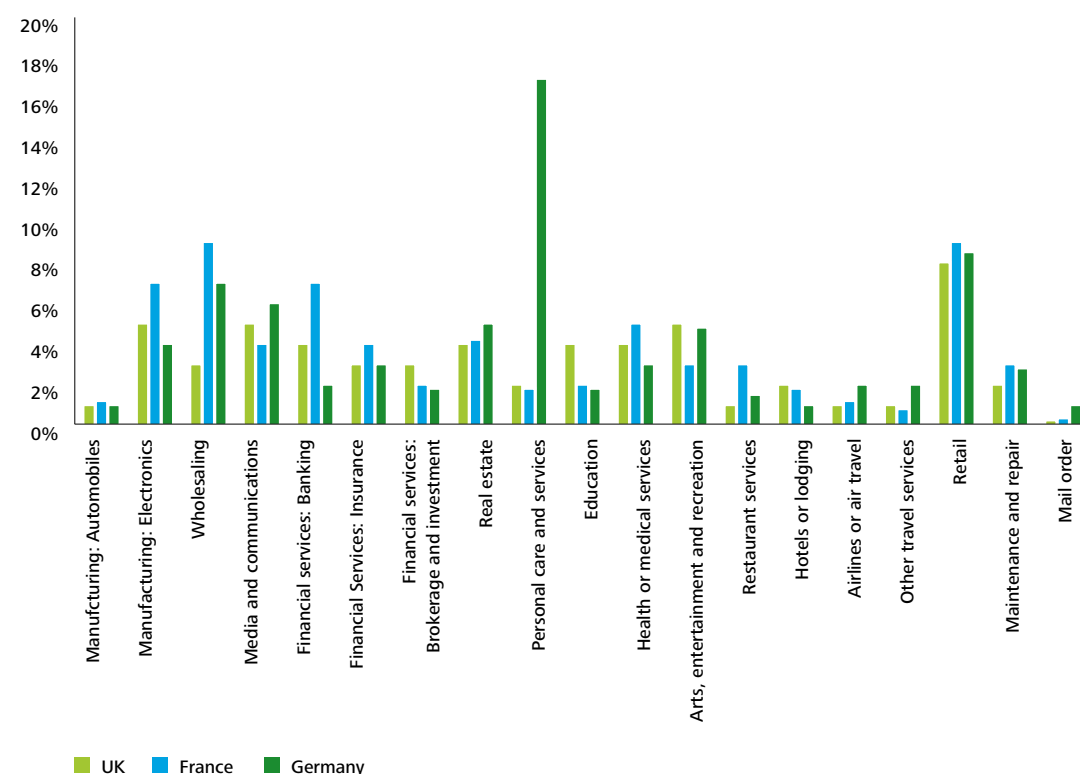
The characteristics of the businesses surveyed are presented in Figure 38, Figure 39 and Table 3.

**Figure 38. The distribution of surveyed businesses by number of employees**



Source: Deloitte Business Survey

**Figure 39. The distribution of surveyed businesses by industry**



Source: Deloitte Business Survey

Note: Distribution excludes those industries listed as "other".

**Table 3. Details of the characteristics of the businesses surveyed**

Characteristic	Details
Representation	52% of survey respondents hold a position of board level or above in the companies they represent. A range of professions are represented among the respondents.
Age	15% of businesses that were surveyed have been in operation for under 5 years, while 30% have been in operation for over 30 years.
Ownership	51% of businesses that were surveyed are privately owned, while 15% are publicly listed companies.
Growth	48% of businesses that were surveyed report having grown in the past year.
B2C	58% of businesses that were surveyed sell to consumers ("B2C").
International	28% of businesses surveyed have a global focus to their trading, while 43% focus on a single market in Europe.

Source: Deloitte Business Survey

The broad coverage of the survey ensures that it is able to capture a range of perspectives and a range of issues facing the different types of businesses in Europe.

The aim of the survey was to acquire information that would help determine the way businesses in each of the three countries might react to the Proposed Regulation. However, the same sorts of challenges that were present in the design of the Deloitte Consumer Survey were also present for the Deloitte Business Survey. In particular, the likelihood that businesses would not understand the full implications of the Proposed Regulation means that directly asking them how they would respond may not provide an accurate characterisation of what would happen.

For this reason the information that is gathered from the survey does not rely on businesses' understanding of the Proposed Regulation. Instead it provides a picture of how businesses currently operate, how important various activities (such as Web Analytics and marketing) are to their business and how they might reallocate expenditure if certain activities were no longer viable. By setting a number of questions around these points, the survey offers a depth of information on which the modelling assumptions and report findings can be based.

## B.2 Results

Many of the findings of the survey are presented elsewhere in the report, particularly those which feed directly into the modelling. The content below provides additional detail on the results of the survey.

### B.2.1 Consumer survey

***Consumers are generally sensitive to the issues around the use of their online personal data, but they do not want controls to significantly impair their user experience.***

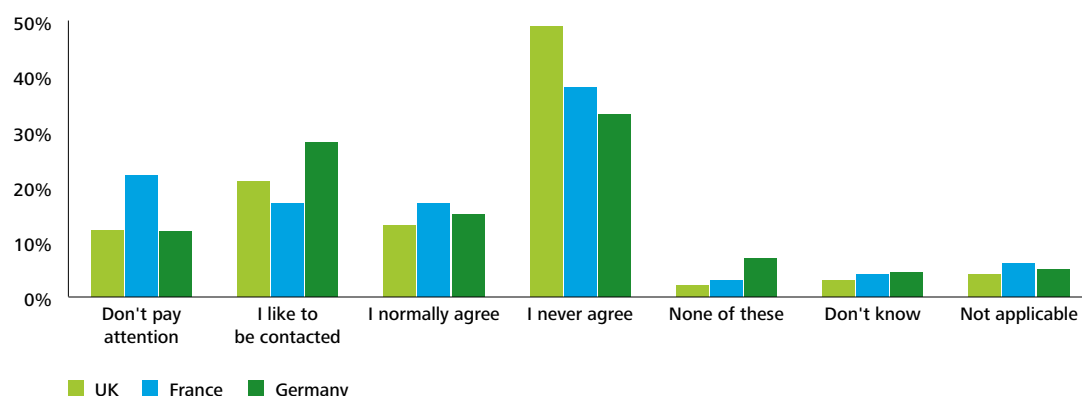
The results of the survey suggest that consumers want to be in control of how their data is used and they want to be asked for consent before it is used – 89% of respondents reported that this is important to them. At the same time consumers displayed an interest in maintaining some of the benefits that come with the existing data protection framework. They do not want to be contacted frequently about having their data used and they want to be able to access web content directly. In particular:

- 78% of consumers think that having access to content directly is at least as important as being in control of how their data is used.
- Frequent requests for consent are more important than having access to content for only 16% of consumers.

**Roughly as many consumers who agree to be contacted about future products and promotions ignore requests for contact.**

The results of the Deloitte Consumer Survey suggest that a significant minority of consumers (over 20% in France) ignore requests to be contacted about future products and promotions (see Figure 40). As the Proposed Regulation would require that consent is explicitly provided before consumers may be contacted, businesses would not be allowed to contact these consumers.

**Figure 40. How consumers react when firms ask if they are willing to be contacted about future products and promotions**



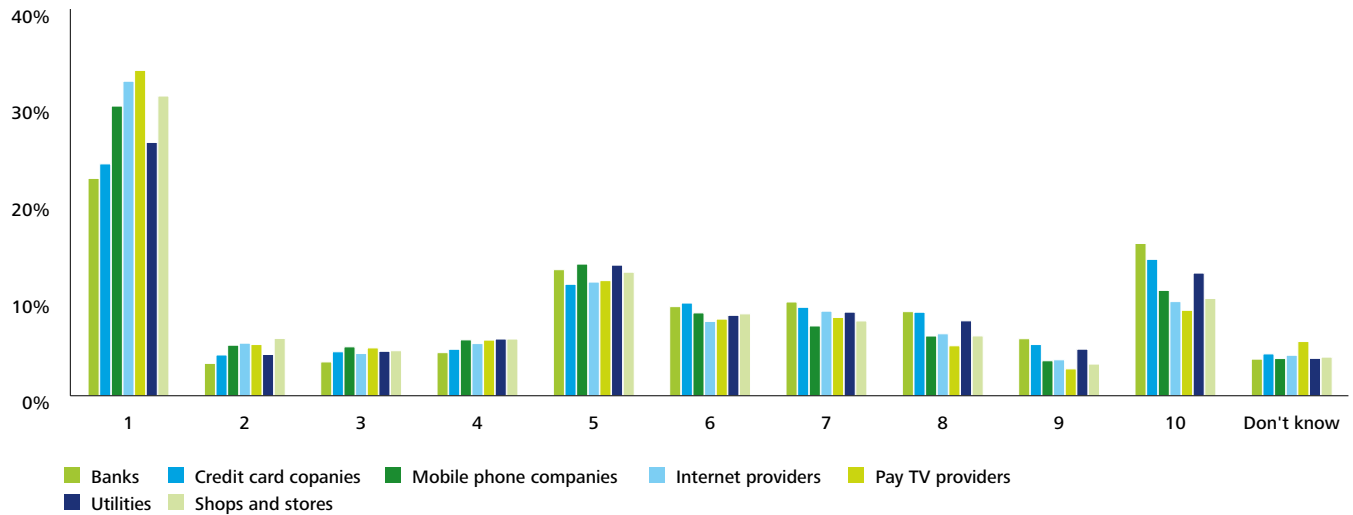
Source: Deloitte Consumer Survey



Consumers are generally very uncomfortable with businesses sharing their credit information with credit rating agencies.

Consumers are generally very uncomfortable with businesses sharing their credit information, such as payments for debts, with credit rating agencies. There is some variability in the level of comfort by type of business, however. As Figure 41 shows, consumers are generally more comfortable with banks and credit cards sharing their information and least comfortable with Internet and Pay TV providers.

Figure 41. Consumer comfort with companies sharing credit information with credit rating agencies



Source: Deloitte Consumer Survey

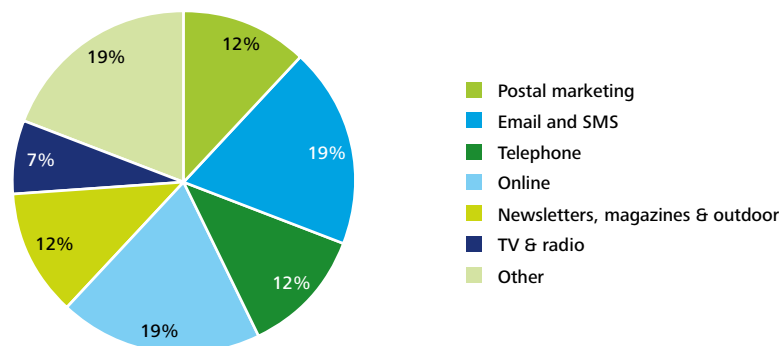
## B.2.2 Business survey

### B.2.2.1 Data usage

*Companies' marketing activities generally require extensive use of personal data, both own company and third party data.*

As Figure 42 shows, most forms of marketing depend on the use of personal data of some sort. The marketing channels which require the least personal data – namely TV, radio, newspapers, magazine and outdoor advertising – account for only 20% of marketing expenditure in Europe.

Figure 42. The allocation of marketing expenditure in the UK, France and Germany



Source: Deloitte Business Survey

While there is some variation between the countries, the results of the Deloitte Business Survey suggest that a range of information types are important for B2C marketing campaigns. This highlights the point that businesses rely on a portfolio of information rather than on one particular source. Nevertheless, the most important types of information for B2C marketing appear to be:

- Previous purchases with the own company;
- Geographical location; and
- Income.

For B2B marketing the most important types of data appear to be previous purchases with the own company followed by private data, such as key contact details in targeted organisations.

As Figure 43 shows, own-company data plays an important role in advertising campaigns targeted at existing customers. The results suggest that this is particularly true for online advertising.

**Figure 43. The importance of own-company data for advertising campaigns targeted at existing customers (average of the UK, France and Germany)**



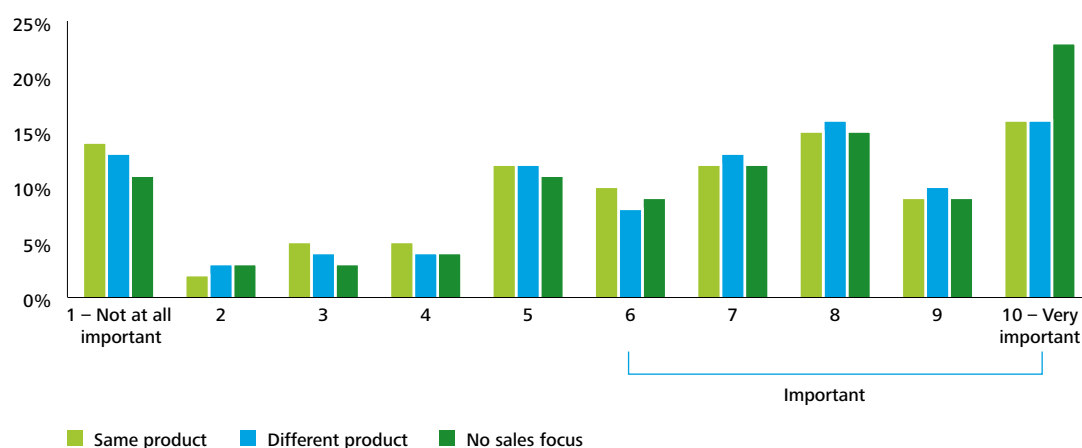
Source: Deloitte Business Survey

Companies also depend heavily on third party data for their marketing activities. As Figure 44 shows, this is even the case for customer retention campaigns and campaigns with no sales focus (based on the results of the survey it is estimated that approximately one third of expenditure on customer retention is not sales focused).

The industries which appear to be particularly reliant on third party data for same product advertising are Manufacturing (72% report it is important), Hotels and Restaurants (71%) and Banking (65%).

The industries that have the highest non-sales focus appear to be Insurance (35%) and Hotels and Lodging (38%). The industries which are particularly reliant on third party data for marketing with no sales focus are Health and medical services (82% report it is important), Retail (72%), Manufacturing (72%) and Financial Services (70%).

**Figure 44. The importance of third party data for campaigns targeted at existing customers (average of the UK, France and Germany)**



Source: Deloitte Business Survey

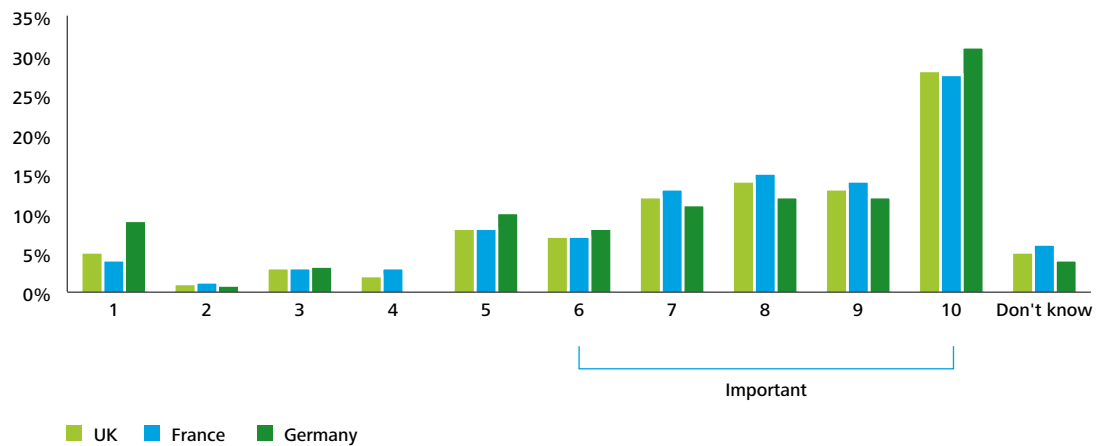
#### B.2.2.2 Direct Marketing

*The use of personal data allows companies to better target consumers, which is critical to the success of their marketing campaigns.*

The data that businesses use for these forms of marketing allows them to target consumers accurately. Such targeting is critical to the success of the advertising campaign, as Figure 45 illustrates.

81% of businesses in Europe rate the ability to target customers as being important for their Direct Marketing campaigns to be successful. The data appears to suggest that the larger the firm, the more important the ability to target. However, targeting is important even for the smallest firms – 75% of firms with between 1 and 9 employees rate targeting as being important to the economic viability of their campaign.

**Figure 45. Importance of being able to reach the targeted customer group for the success of a targeted marketing campaign (e.g. postal, SMS, telephone, email)**



Source: Deloitte Business Survey

***Direct Marketing is important to businesses across a variety of sectors and across a variety of firm characteristics.***

The proportion of the Direct Marketing budget that is allocated to customer retention and customer acquisition is relatively consistent across the different industries – businesses appear to divide their expenditure relatively equally between these activities. Contacting people who are not yet customers is therefore an important part of businesses' marketing campaigns.

Some industries appear to focus slightly more on one form of advertising than the other. In particular:

- The proportion of businesses' total marketing expenditure that is used for customer acquisition is consistently highest in the Real estate (59%) and Mail order (56%) industries.
- The proportion of business's total marketing expenditure that is used for customer retention is consistently highest in the Automobile manufacturing (57%), Media and Communications (56%) and Air travel (55%) industries.

### B.2.2.3 Web Analytics

***Web Analytics is important to businesses in Europe, especially large businesses***

The results of the survey indicate that Web Analytics is valued by many businesses in Europe, especially large companies. 67% of all businesses interviewed report that free Web Analytics is important to their business. This response is consistent across all business types. 60% of publicly listed companies report that paid Web Analytics is important to improving their website, whereas only 20% of sole traders and micro businesses reported the same.

***Web Analytics can be used to strengthen businesses' brand awareness and image***

Web Analytics can increase the user engagement of visitors to a business' website. 91% of firms that use Web Analytics estimate that the use of these services has increased the time that customers spend on their website.

This improved engagement can improve consumers' perceptions of the business. 58% of businesses claim that Web Analytics is important in strengthening their brand awareness and image. The results appear to suggest that the larger the firm the more important Web Analytics to improving brand image: only 46% of firms with between 1 and 9 employees claimed it was important, compared to 72% of firms with more than 500 employees.

***Web Analytics appears to have a moderate but significant effect on business revenues.***

91% of businesses that use Web Analytics reported that it has a positive effect on their revenues. 3% claim that the impact on revenues is over 20% of total company revenues. Again, the impact on revenues is generally larger for larger businesses. 85% of businesses that use Web Analytics and have between 1 and 9 employees claim it has a positive effect on their revenues, compared to 95% for businesses with more than 500 employees.

#### **B.2.2.4 Online Behavioural Advertising**

***OBA offers advantages to businesses that other forms of advertising do not.***

Only 18% of firms say that there are no benefits of OBA compared to other forms of advertising.

Compared to other types of advertising, 38% of firms believe that OBA allows them to target a particular group better, while 35% of firms believe that OBA improves the accuracy of targeting.

***OBA appears to have a moderate but significant effect on business revenues.***

69% of businesses report that their revenues increase as a result of OBA. 1% of firms claim that OBA increases their revenues by over 50%.

#### **B.2.2.5 Credit Information**

***The most important reason for using credit rating agencies is that they reduce the risk associated with taking on new customers who may not be able to pay for the goods they purchase.***

The industries for which credit rating agencies are most important are manufacturing, wholesaling and financial services, while arts, entertainment and recreation, retail and education use them the least. Larger businesses are generally more likely to use credit rating agencies: 49% of businesses with more than 500 employees report using credit rating agencies.

The businesses surveyed identified a range of reasons for why businesses use credit rating agencies, but the most important reasons cited were:

- It helps to minimise the risk of taking on customers that end up not paying for the goods they purchase (57% of businesses agreed with this statement).
- It enables businesses to take credit risks, such as lending, allowing customers to pay on account on invoice or with instalments (41% of businesses agreed with this statement).

These responses highlight the importance of the effectiveness of credit rating agencies to the credit decision.

# The Data Industry Platform

The Data Industry Platform is an informal European association of large and small companies and associations operating across the European member states and industry sectors, and which share a common view on the need for a balanced and innovation-friendly review of the European data protection regime.

Companies and associations that have voluntarily endorsed or contributed to the Data Industry Platform's advocacy initiatives range from such diverse European industries such as advertising agencies, banking, business intelligence, consumer electronics, consultants, credit information, insurance, manufacturing, media companies, postal service providers, publishers, retail, search engines, software developer, & social networks. All supporters operate in the European Union's Single Market and have a vested interest in a healthy and growing European economy and adequate and proportional data protection rules.

The Data Industry Platform can be contacted by [dip@balanced-approach.eu](mailto:dip@balanced-approach.eu).

# Glossary

<b>Byte</b>	A unit of data measurement capable of storing a single character.
<b>Cookies</b>	Small text files passed from the server to the browser when a user accesses certain websites.
<b>CRA</b>	Credit reference agency. A private firm or non-profit organization that maintains a database on the creditworthiness of borrowers (persons or businesses) in the financial system and facilitates the exchange of credit information among banks and financial institutions. <sup>90</sup>
<b>Credit Information</b>	Information about consumers and businesses that is relevant to the assessment of their ability to make debt repayments.
<b>Credit rationing</b>	When a lender limits or denies credit to a borrower even when the borrower is willing to pay higher interest rates.
<b>Deloitte Business Survey</b>	A survey of businesses that Deloitte carried out to support this report. It was completed by a sample of 750 businesspeople in the UK, France and Germany.
<b>Deloitte Consumer Survey</b>	A survey of consumers that Deloitte carried out to support this report. It was completed by a sample of 2,000 adults in the UK, France and Germany.
<b>Direct Mail</b>	A form of Direct Marketing that includes all (often customised) advertising communications delivered by mail, including postcards, letters, self-mailers, brochures, pamphlets, flyers and promotional materials. It also includes catalogues which are designed to immediately sell a product or a service, identify a lead, generate a retail purchase or solicit contributions.
<b>Direct Marketing (general definition)</b>	An interactive system which uses one or more advertising media to effect a measurable response and/or transaction at any location, with this activity stored on a database. <sup>91</sup>
<b>Direct Marketing (operational definition for this report)</b>	Mail, e-mail marketing, telemarketing and mobile marketing activities that meet the general definition of Direct Marketing above.
<b>Email Marketing</b>	A form of Direct Marketing that includes all trackable advertising communications delivered to an email address, which are designed to immediately sell a product or service, identify a lead, generate a retail purchase, or solicit contributions.
<b>Employment multiplier</b>	The ratio of the total impact on employment to the initial change in output in a given sector.
<b>Full-File Credit Reporting</b>	A credit reporting methodology that uses both positive and negative information on subjects.
<b>GDP Multiplier</b>	The ratio of the total impact on GDP in the economy to the initial direct impact on GDP in a given sector.
<b>Gigabyte</b>	1,000,000,000 bytes.
<b>Incremental revenue</b>	The additional value of revenue generated by increased sales.
<b>Lettershop</b>	A company that other companies use to send out advertisements or letters to people. <sup>92</sup>
<b>Mobile Marketing</b>	A form of Direct Marketing that includes all advertising messages directed to a mobile phone or smartphone designed to immediately sell a product or service, identify a lead, generate a retail purchase, or solicit contributions.
<b>OBA</b>	Online behavioural advertising. Online advertising that uses data collected on user behaviour to serve targeted advertisements.
<b>PCR</b>	Public credit registry. A database managed by the public sector, usually by the central bank or the superintendent of banks, that collects information on the creditworthiness of borrowers (persons or businesses) in the financial system and makes it available to financial institutions. <sup>93</sup>

90 Doing Business definition

91 DMA definition

92 Financial Times Lexicon definition

93 Doing Business definition

<b>RIA</b>	Regulatory Impact Assessment. A document that provides a detailed appraisal of the potential impacts of a new regulation.
<b>ROI</b>	Return on Investment. Used in this study to define the euro value of business revenues generated for every euro spent on marketing. As this study is concerned with aggregate economic effects the ROI estimates control for cannibalisation between firms.
<b>SME</b>	Small or medium-sized enterprise.
<b>SMS</b>	Stands for "Short Message Service". It is used to send short text messages to mobile phones.
<b>Telemarketing</b>	A form of Direct Marketing that includes all outbound calls designed to immediately sell a product or service, identify a lead, generate a retail purchase, or solicit contributions.
<b>Web Analytics</b>	The collection of data on website usage and the use of that data for the purposes of optimizing the operation of that website and providing customized content to customers.
<b>Zettabyte</b>	1,000,000,000,000,000,000 bytes.





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