Cloud Computing 2021

Contributing editor Marcus Pearl





© Law Business Research 2020

Publisher Tom Barnes tom.barnes@lbresearch.com

Subscriptions Claire Bagnall claire.bagnall@lbresearch.com

Senior business development manager Adam Sargent

adam.sargent@gettingthedealthrough.com

Published by

Law Business Research Ltd Meridian House, 34-35 Farringdon Street London, EC4A 4HL, UK

The information provided in this publication is general and may not apply in a specific situation. Legal advice should always be sought before taking any legal action based on the information provided. This information is not intended to create, nor does receipt of it constitute, a lawyerclient relationship. The publishers and authors accept no responsibility for any acts or omissions contained herein. The information provided was verified between September and October 2020. Be advised that this is a developing area.

© Law Business Research Ltd 2020 No photocopying without a CLA licence. First published 2017 Fourth edition ISBN 978-1-83862-312-8

Printed and distributed by Encompass Print Solutions Tel: 0844 2480 112



Cloud Computing 2021

Contributing editor Marcus Pearl Bryan Cave Leighton Paisner LLP

Lexology Getting The Deal Through is delighted to publish the fourth edition of *Cloud Computing*, which is available in print and online at www.lexology.com/gtdt.

Lexology Getting The Deal Through provides international expert analysis in key areas of law, practice and regulation for corporate counsel, cross-border legal practitioners, and company directors and officers.

Throughout this edition, and following the unique Lexology Getting The Deal Through format, the same key questions are answered by leading practitioners in each of the jurisdictions featured.

Lexology Getting The Deal Through titles are published annually in print. Please ensure you are referring to the latest edition or to the online version at www.lexology.com/gtdt.

Every effort has been made to cover all matters of concern to readers. However, specific legal advice should always be sought from experienced local advisers.

Lexology Getting The Deal Through gratefully acknowledges the efforts of all the contributors to this volume, who were chosen for their recognised expertise. We also extend special thanks to the contributing editor, Marcus Pearl of Bryan Cave Leighton Paisner LLP, for his assistance with this volume.



London October 2020

Reproduced with permission from Law Business Research Ltd This article was first published in November 2020 For further information please contact editorial@gettingthedealthrough.com

Contents

Austria

Árpád Geréd
Maybach Görg Lenneis Geréd

Brazil

José Mauro Decoussau Machado, Ana Carolina Fernandes Carpinetti and Gustavo Gonçalves Ferrer Pinheiro Neto Advogados

France

Jean-Luc Juhan and Myria Saarinen Latham & Watkins

Germany

Laura M Zentner and Viola Bensinger Greenberg Traurig LLP

Japan

Akira Matsuda, Hiroki Saito and Landry Guesdon Iwata Godo

South Korea	3
Seungmin Jasmine Jung, Young-Hee Jo and Youngju Kim LAB Partners	
Sweden	4
Peter Nordbeck and Dahae Roland Advokatfirman Delphi	
Switzerland	5
Oliver M Brupbacher, Ralph Gramigna and Nicolas Mosimann Kellerhals Carrard	
United Kingdom	5
Marcus Pearl	
Bryan Cave Leighton Paisner LLP	
United States	7

Manita Rawat and Matthew C Mousley Duane Morris LLP

3

10

18

24

31

United Kingdom

Marcus Pearl*

Bryan Cave Leighton Paisner LLP

MARKET OVERVIEW

Kinds of transaction

1 What kinds of cloud computing transactions take place in your jurisdiction?

As a G7 economy with mature IT and related services markets, the UK is one of the most important global markets for cloud computing. According to Gartner, judged by cloud spending rates and growth, the UK is among the fastest cloud adopters globally, ranking behind the United States (the world leader in cloud adoption since 2015) and Canada. In its 2018 BSA Global Cloud Computing Scorecard (the latest version since first publication in 2012 and claimed to be the only global report to rank countries' preparedness for the adoption and growth of cloud computing services), BSA|The Software Alliance ranks the UK at fourth after Germany, Japan and the USA. To account for the difference in the UK's standing in these two reports, it is worth explaining that the BSA Global Cloud Computing Scorecard is based on a methodology that emphasises policy areas that 'matter most to cloud computing', such as data protection and privacy laws, cybersecurity regimes and intellectual property protection (ie, the effectiveness of the legal and regulatory environment for cloud computing). And it also applies a test of IT infrastructure readiness, in particular access to broadband. However, a 2019 CloudPro survey discussed in TechUK's 'Cloud 2020 and beyond: Unlocking the power of the cloud' report ranked the UK sixth in the EU for adoption of cloud services, behind the Scandinavian countries, but ahead of France and Germany.

Other market analysts, such as MarketsandMarkets, observe that successful implementation of the UK's National Broadband Plan has resulted in faster mobile data connection speeds in the UK, which in turn has facilitated the more rapid adoption of cloud services in the UK. The government's stated ambition is to increase availability of full-fibre and 5G networks, as detailed in The Future Telecoms Infrastructure Review of 2018. The government's proposed National Infrastructure Strategy was due to be published in March 2020 (this was delayed due to the covid-19 outbreak).

Using the US National Institute of Standards and Technology (NIST) definition of cloud computing, there is extensive use of the three NIST service models: software-as-a-service (SaaS), platform-as-aservice (PaaS), and infrastructure-as-a-service (IaaS), referred to below as 'service models'. Of the four NIST deployment models (private cloud, community cloud, public cloud and hybrid cloud (deployment models)), private, public and hybrid clouds are widely adopted. Community clouds are also used, though apparently less regularly.

As part of the UK's cloud business ecosystem, there are cloud service brokers (providers who aggregate several different cloud services to provide a unified offering to a customer) and cloud exchanges (providers that offer direct connections between several cloud platforms, enabling their customers access to and portability among separate cloud platforms, without their data passing through the internet). 'Cloudbursting' – in the context of the hybrid deployment model, with customers moving specific processes running in-house to public cloud services to provide greater capacity – has become more common.

A notable feature of the UK market is the adoption by central and local government of the G-Cloud, which enables government departments and state agencies to buy and deploy cloud services from pre-approved vendors, which include some of the biggest cloud providers, for example, Amazon Web Services (AWS). In February 2017, the UK government reaffirmed the Government Cloud First Policy, under which public sector organisations must consider and evaluate potential public cloud as a deployment model, before considering any other IT option. Cloud First has been mandatory for central government departments and agencies, but has been strongly recommended to the wider UK public sector. For the origins of this important cloud initiative, see the UK government's 2011 paper, Government Cloud Strategy, at: www.gov.uk/government/publications/government-cloud-strategy. Following a round of user research in early 2019, the Government Digital Service confirmed that the Cloud First policy would remain in place 'as is' and remains a flagship technology policy. The National Cyber Security Centre published its Cloud Security Guidance in 2018 in support of the Cloud First Policy. Recent research has shown that 78 per cent of UK public sector organisations are using some form of cloud-based service, compared with only 38 per cent in 2010. However, although adoption of cloud services by UK local government still lags behind central government's rate of deployment, the adoption rate at local government level is apparently steadily increasing. UKCloud's 2020 survey reported very high levels of interest in shifting to cloud solutions, but that respondents still remained concerned about: (1) the commercial risks of single provider solutions, with over-reliance on a single provider inhibiting cloud adoption; (2) operational and security risks in using public cloud; and (3) the cost or affordability of cloud solutions. There is a growing trend in customer use of hybrid or multi-cloud strategies, driven by cost and performance objectives, to avoid risk of vendor lock-in. This allows a customer greater flexibility in moving workloads between cloud providers and potentially reduced costs by not relying on a single provider for fees and terms and can improve latency by avoiding being tied to the availability and location of the data centres of a single public cloud provider. If multiple cloud providers are used, the number of available virtual machines and proximity to locations can improve.

The Flexera State of the Cloud Report for 2020 reported that as of 2020, globally, 90 per cent of companies actively used cloud services, with over half the respondents considering themselves heavy users of cloud. The same report also noted that companies ran half their work-load and stored half their data in the public cloud.

With the UK being one of the most advanced global markets for cloud computing, there is a sizeable business ecosystem serving the primary market, for example, in data centres.

Active global providers

2 Who are the global international cloud providers active in your jurisdiction?

All are active in the UK, including (as a small sample):

- Accenture;
- Adobe;
- Alibaba Cloud;
- AWS;
- Avaya;
- Basecamp;
- Cisco;
- Citrix;
- Dell EMC;
- Dropbox;
- Equinox;
- Facebook;
- Google;
- Huawei;
- IBM;
- iCloud;Interoute:
- · Interoute,
- Joyent;
- Kaspersky;
- Microsoft;NetApp;
- Oracle:
- Rackspace:
- Rackspace,
 Red Hat;
- SalesForce
- SAP:
- SAS
- Skype:
- Sungard;
- Symantec;
- Tencent Cloud;
- VMware; and
- Workday.

(See www.cloudpro.co.uk/providers.)

AWS, Google Cloud and Microsoft Azure are the leading IaaS providers in the UK.

Active local providers

3 Name the local cloud providers established and active in your jurisdiction. What cloud services do they provide?

The following is a small, illustrative, selection by service segment:

- server, storage and infrastructure: RedstoneConnect, ElasticHosts, Fasthosts, Flexiant, BT Cloud, UKFast eCloud, Memset and Vmhosts;
- managed services: BT, Claranet, Colt, Interoute, iomart, IT Lab, Nasstar, TIG and Webfusion;
- data backup and security: BT, Cloud Direct, iomart, IT Lab, Memset, RedstoneConnect, TIG, UKFast, UK2 and Vodafone;
- hosted desktop: Colt, Nasstar and Vodafone; and
- channel enablement, go-to market, digitisation and CRM: BCSG and NewVoiceMedia.

See https://www.computerweekly.com/tutorial/UK-hosted-desktopcloud-providers; (noting that this study was undertaken in 2010 and that it has not been updated since) and Cloud Tango's list of its UK Top 50 managed service providers. For various cloud services mainly focused on the UK public sector, there is UKCloud.

Market size

4 How well established is cloud computing? What is the size of the cloud computing market in your jurisdiction?

A report from Research and Markets' Cloud Computing Market by Service Model, Deployment Model, Organization Size, Workload, Vertical and Region – Global Forecast to 2023 estimated that the global value of cloud services could grow by an annual rate of 18 per cent between 2019 and 2023.

Research undertaken and provided to BCLP by MarketsandMarkets suggests that in 2019 the UK's cloud computing market will be worth £20.3 billion, rising to £22.8 billion in 2020 (a 12.3 per cent increase from 2019) and £35.1 billion by 2023 (a 73 per cent rise from 2019): source, private research provided to BCLP by MarketsandMarkets in September 2019, based on primary interviews, secondary literature and MarketsandMarkets analysis.

According to the MarketsandMarkets report referred to above, in 2020, the size of the UK's cloud computing market by service model will be as follows: SaaS £14.3 billion; PaaS £2.1 billion and IaaS £6.4 billion.

The same MarketsandMarkets report forecasts that, in 2020, the size of UK's cloud computing market for the three main deployment models will be as follows: private cloud £6.8 billion, public cloud £10.9 billion and hybrid cloud £6.8 billion.

The Bank of England estimated in a June 2019 report that over 40 per cent of financial services may be cloud hosted in a decade.

Impact studies

5 Are data and studies on the impact of cloud computing in your jurisdiction publicly available?

Authoritative, specific, recent data on the true size and, therefore, impact of cloud computing in the UK is hard to find. And such reports are not in the author's experience freely available to the general public, online or otherwise. The report from Research and Markets' Cloud Computing Market by Service Model, Deployment Model, Organization Size, Workload, Vertical and Region – Global Forecast to 2023 is the most specific and authoritative by reference to the size of the UK cloud market generally, and by reference more specifically to the cloud service and deployment models. We anticipate that new data sets will be available later in 2020, which will also reflect the impact that the increased use of remote working due to covid-19 has had on organisations' adoption and use of cloud technologies. Current data available is focused on the global cloud computing market and does not tend to split out revenues received by the larger providers by geography.

POLICY

Encouragement of cloud computing

6 Does government policy encourage the development of your jurisdiction as a cloud computing centre for the domestic market or to provide cloud services to foreign customers?

In short, yes. The policy manifests itself in various forms and initiatives, but comprehensive coverage of them is beyond the scope of this chapter.

The starting point is the government's policy paper, UK Digital Strategy 2017, published on 1 March 2017 by the responsible government department, the Department for Digital, Culture, Media & Sport. The stated core aim of the policy is 'to create a world-leading digital economy that works for everyone. It is part of this government's Plan for Britain, strengthening our economy for the long term as we take advantage of the opportunities that leaving the European Union provides' (Ministerial foreword, page 2).

There are seven elements to this policy, together with a framework for action:

- connectivity building world-class digital infrastructure for the UK;
- digital skills and inclusion giving everyone access to the digital skills they need;
- the digital sectors making the UK the best place to start and grow a digital business;
- the wider economy helping every British business become a digital business;
- a safe and secure cyberspace making the UK the safest place in the world to live and work online;
- digital government maintaining the UK government as a world leader in serving its citizens online; and
- data unlocking the power of data in the UK economy and improving confidence in its use.

In April 2017, the Digital Economy Act 2017 was enacted to implement the government's digital strategy. It is clear from the UK's digital strategy, the Digital Economy Act 2017 and examples of government support given directly or indirectly to cloud computing and cloud-enabled organisations, that the policy and implementation framework embraces all the cloud service models and deployment models. And the UK government is a world leader in its deployment of cloud computing through its Government Cloud First Policy. In October 2019, the government reaffirmed the Government Cloud First Policy would remain a flagship technology policy, after some speculation that it would be replaced. The coronavirus pandemic has meant that the G-Cloud 11 framework, which allows UK public sector bodies to buy cloud computing services, was not replaced by G-Cloud 12 on 1 July 2020 but will instead run until 18 December 2020.

Incentives

7 Are there fiscal or customs incentives, development grants or other government incentives to promote cloud computing operations in your jurisdiction?

Yes, and in its 2020 Budget, the government announced investment in R&D would increase to £22 billion per year by 2024–2025, although this will cover general R&D of which cloud computing is a part. Although in most cases cloud computing is not specifically mentioned, and eligibility for fiscal benefits, funding and other incentives will depend on specific criteria for particular applications and uses of ICT, it is clear that the incentives do extend to cloud computing and individual elements of it.

Broadly, these incentives are directed at start-ups and early-stage companies. They generally cover; tax incentives for the companies themselves as well as their investors, grant funding, contributions towards running costs and start-up and later-stage corporate development loans.

Specifically, these incentives include the following as a representative sample.

The Seed Enterprise Investment Scheme

This offers tax efficient benefits to investors in return for investment in small and early stage start-up technology business in the UK.

The Enterprise Investment Scheme

This also offers tax benefits to investors in technology companies.

R&D tax credits

This is available for both small and medium-sized enterprises (SMEs) and larger companies (at different levels), comprising a tax credits regime for qualifying R&D relating to assets developed for internal use, which may include subcontractor costs, supporting software and SaaS, and some hardware costs. However, general hosting and cloud

computing costs do not fall into any of these qualifying areas specifically, and companies have to apportion expenditure between qualifying and non-qualifying costs. The government is currently consulting on whether to broaden the scope of qualifying expenditure for R&D tax credits to include general data and cloud computing costs. The government also increased the Research and Development Expenditure Credit in its 2020 Budget, from 12 to 13 per cent.

The Patent Box

This enables SMEs and larger companies to apply a lower rate of UK Corporation Tax to profits earned after 1 April 2013 from their patented inventions.

Innovation funding

For innovative products, processes or services, funding of between £25,000 and £10 million is available. Innovate UK runs funding competitions for projects led by UK-based companies. As at July 2019, competitions include the opportunity to apply for a share of up to £25 million to deliver 'ambitious' or disruptive R&D innovations that can make a significant impact on the UK economy, and the chance to obtain loans for 'game-changing' innovations with strong commercial potential that will significantly improve the UK economy.

Regional growth funds

Grants and loans of up to £1 million are available through regional growth funds (RGF) programmes, namely schemes run by national or local organisations that have been awarded RGF funds to offer grants and loans to eligible businesses since the launch of the RGF in 2010. Each RGF programme will have specific criteria for applications.

The British Business Bank and enterprise capital funds

The British Business Bank invests alongside venture capital funds (partners) under a rolling programme. Funding is aimed at smaller UK growth companies. One of TBBB's partners, Notion Capital, invests in enterprise SaaS and other cloud computing businesses. In July 2015, Notion Capital announced a US\$120 million fund that would continue to invest in European business-to-business (B2B) high-growth software as a service (SaaS) companies.

On 31 March 2020, the government published all its guidance on cloud computing in the public sector in one place, to improve support and make adoption of cloud computing easier.

LEGISLATION AND REGULATION

Recognition of concept

8 Is cloud computing specifically recognised and provided for in your legal system? If so, how?

Not specifically, other than in the Network and Information Systems Regulations 2018.

Governing legislation

9 Does legislation or regulation directly and specifically prohibit, restrict or otherwise govern cloud computing, in or outside your jurisdiction?

Yes, in respect of cybersecurity and resilience and cyber incident reporting. The Network and Information Systems Regulations 2018, which implement the NIS Directive (2016/1148/EU), specifically govern a 'cloud computing service', meaning 'a digital service that enables access to a scalable and elastic pool of shareable computing resources' (Regulation 1(2)). Cloud service providers (CSPs) that fall within the definition of a 'relevant digital service provider' (RDSP) must, broadly stated,

take appropriate and proportionate technical and organisational measures to prevent and minimise the impact of cyber incidents and related risks to their system. The regulations deal with any 'incident' that has an impact on a service, where that impact produces a significant disruptive effect (and while this includes cybersecurity incidents, it also extends to non-cyber events that have an impact on systems). RDSPs are also required to notify within 72 hours the UK Information Commissioner's Office (ICO), the regulator for these purposes, of any incident that has a substantial impact on the provision of the cloud services. The ICO has a range of enforcement powers, including the right to issue financial penalties for material contraventions, up to a maximum of £17 million. RDSPs were required to register with the ICO by 1 November 2018. There are exceptions for, among others, small or micro businesses. To be subject to the NIS for UK regulatory purposes, a CSP must have a head office in the UK (or a nominated representative) and more than 50 staff and a turnover or balance sheet of more than €10 million.

The ICO has issued a detailed and helpful Guide to the NIS Regulations, which as a first step all CSPs operating in the UK should consult. Included in the Guide are pointers to the cloud services to be governed by the Regulations. The guide states that PaaS and IaaS service models will be covered, but that SaaS will only be regulated to the extent that the service is 'scalable and elastic' and B2B. Readers are also referred to the UK National Cyber Security Centre's guidance.

10 What legislation or regulation may indirectly prohibit, restrict or otherwise govern cloud computing, in or outside your jurisdiction?

In the UK, as business-to-consumer (B2C) and B2B IT services, cloud computing services will – depending on the scope of the services and the circumstances and context of their supply – be subject to the legislation and regulation that apply to all similar IT services. Given the breadth and complexity of the cloud computing business in the UK, other participants in the provision of elements of cloud infrastructure and in the cloud supply chain may be subject to that legislation and regulation, too, for example, a communications service provider supplying a transmission service enabling the CSP to communicate with a cloud customer, or the provider of cloud servers to a CSP.

As such (and with applicable B2C cloud computing consumerprotection measures and data protection law), the following are likely to apply to cloud computing (or elements of it) in the UK:

- Digital Economy Act 2017;
- Investigatory Powers Act 2016 (as amended) interception of communications and retention of communications data, etc;
- EU Dual-Use Regulation 2009, Council Regulation (EC) No. 428/2009 (and associated legal amendments) – regulates the export of dualuse technologies and software;
- Export Control Order 2008 (as amended) controls on the export of military and certain other technologies and software;
- Communications Act 2003 (overall regulatory structure and powers for communications and media in the UK, including the regulator, Ofcom);
- Export Control Act 2002 controls on the export of, among others, strategic technologies);
- Regulation of Investigatory Powers Act 2000 (interception of communications and data retention, etc) as amended;
- Unfair Contract Terms Act 1977 makes unenforceable certain terms in B2B contracts that do not satisfy the requirements of 'reasonableness'); and
- The Platform to Business Regulation (2019/1150), which applies from 12 July 2020, requires online intermediation service providers (such as providers of online e-commerce market places, software application services and social media services) and online search

engines to comply with certain transparency obligations, mainly by including information in their terms and conditions or, for search engines, publishing it on their websites. It is implemented in English law by virtue of the Online Intermediation Services for Business Users (Enforcement) Regulations 2020 (SI 2020/609).

The above is not an exhaustive list, and readers should also consider other areas covered by UK legislation and regulation, for example, regarding intellectual property rights, insolvency, consumer protection and employment law, some of which are covered below.

Apart from legal and regulatory enactments, particularly in the context of cloud computing, readers should be aware of various international law enforcement measures under treaty and applicable EU measures that are likely to be relevant. These generally relate to cybercrime, criminal investigations and enforcement, and inter-state mutual legal assistance in criminal matters. (See, for example: the Council of European Convention on Cybercrime 2004, ETS No. 185; the Agreement on Mutual Legal Assistance between the United States of America and the European Union signed 25 June 2003 and the UK's (then) proposed bilateral ratification of the Agreement on Mutual Legal Assistance between the United States of America and the European Union signed 25 June 2003).

Although beyond the scope of this section, readers will be aware of the extraterritorial impact of the USA PATRIOT Act on cloud services.

To give readers a complete view, the same rules and principles (including as to liability) that apply to consumer and commercial technology-related services contracts under the three UK jurisdictions (England and Wales, Scotland and Northern Ireland) will apply to cloud computing contracts – again subject to the scope of the services and the circumstances and context of their supply.

Although it is not legislation or public regulation, for the reasons given below, the Cloud Industry Forum Code of Practice for Cloud Service Providers (CIF Code) is relevant. Its stated purpose is 'to bring greater transparency and trust to doing business in the cloud' – for an overview, see www.cloudindustryforum.org/content/code-practice-cloud-service-providers). The CIF Code could influence the choice of CSP by potential customers, whether consumers or commercial organisations. CSPs claiming compliance with the CIF Code and the right to use CIF certification may, for validated infringement, face sanctions by CIF, including publication of CIF's findings on its website and press releases. So, while the CIF Code does not have any public legal effect, it may be normative to the conduct of CSPs and it may influence the choice of CSP by commercial end users and consumers, as well as the public's view of certain CSPs – especially those who have contravened the CIF Code.

Finally, though, it too is not legislation or public regulation, the role of the UK Advertising Standards Authority (ASA) is important in the fast-growing cloud services market. The ASA's role is to ensure that all advertisements are 'legal, decent, honest and truthful'. The ASA publishes codes that it administers and under which it hears and rules on complaints. ASA rulings are published weekly and are 'a transparent record of what is and isn't acceptable' in advertising. The rulings can remain on the ASA website for five years. Though ASA rulings do not have any legal effect, an adverse ruling may have significant commercial impact, especially if a business is seen to be disregarding rules designed to protect consumers. And, as a last resort, if advertisers persistently break the ASA codes and are unwilling to change their practices, the ASA states that it can and does refer those advertisers to enforcement agencies - who do have legally enforceable powers and the ability to impose legal sanctions - for further action, for example, UK Trading Standards or Ofcom (the communications regulator). It is worth noting that the ASA has in the past considered several specific cloud computing-related advertisements and has found against advertisers.

Breach of laws

11 What are the consequences for breach of the laws directly or indirectly prohibiting, restricting or otherwise governing cloud computing?

For laws and regulations, the consequences of breach range from contractual unenforceability and civil enforcement remedies to criminal and regulatory fines, penalties and other sanctions. In some situations, company directors and senior executives may face personal sanctions.

Consumer protection measures

12 What consumer protection measures apply to cloud computing in your jurisdiction?

For B2C cloud computing arrangements, the following main consumer protection measures will apply.

- the Electronic Commerce (EC Directive) Regulations 2002;
- the Consumer Protection from Unfair Trading Regulations 2008;
- the Consumer Contracts (Information, Cancellation and Additional Charges) Regulations 2013; and
- the Consumer Rights Act 2015.

Together these cover matters including distance selling, the provision of certain information to consumers, marketing and marketing claims, onerous and unfair contract terms and how they are presented, cancellation rights, 'cooling-off' periods, choice of law and venue for consumer litigation (for example, standard terms seeking to impose compulsory arbitration against consumers may be regarded as unfair terms CRA 2015, Sch.2, 20(a)).

Other legislation includes:

- the Financial Services and Markets Act 2000 (as amended) (FSMA);
- the Financial Services and Markets Act 2000 (Regulated Activities) Order 2001; and
- the Consumer Credit Act 1974 (as amended).

Together these regulate B2C credit terms, including any form of 'financial accommodation', and specify certain contract terms and restrictions (which sanctions, including legal unenforceability except by court order), the provision of certain kinds of information, the format of that information, 'cooling-off' periods and termination processes.

The above are not exhaustive lists.

The Competition and Markets Authority (CMA), the UK's primary competition and consumer authority, has historically taken a close interest in B2C cloud storage contracts, in particular to see if consumers are being fairly treated when saving and storing their content online. The CMA was concerned that some CSPs were using contract terms and practices that could breach consumer protection law ('An open letter to cloud storage providers on complying with consumer law', May 2016). The upshot was that several of the leading B2C cloud storage providers, including Amazon, Apple and Microsoft, voluntarily modified their terms for the benefit of UK consumers. You can find a list of all of the consumer outcomes secured by the CMA and relating to Cloud Storage here: https://www.gov.uk/government/publications/consumer-enforcement-outcomes/ consumer-outcomes-secured-by-the-cma-since-april-2014.

While (at the time of writing) we are approaching the end of the transition period, there have been two developments in 2020 in EU consumer protection law, which will have an impact on UK traders selling to EU consumers even after 31 December 2020. The two EU developments are: (1) the updated Consumer Protection Cooperation Regulation (the CPC Regulation), which came into force in the UK on 17 January 2020 (supplemented by the Consumer Protection (Enforcement) (Amendment etc.) Regulations 2020), which came into force on 2 June 2020; and (2) the 'Omnibus Directive', adopted on 7 January 2020 and due to be transposed into national law by 28 November 2020, which was adopted in the context of the EU's 'New Deal for Consumers Initiative'. These key developments are principally aimed at improving cross-border regulator cooperation and enforcement of consumer protection laws within the EU to ensure that domestic enforcement agencies have the necessary investigation and enforcement powers to perform their functions. The CPC Regulation (and the related UK regulations) grant enforcement authorities greater powers to intervene in the digital sphere. So the CMA has a new power to apply to the High Court for an online interface order or an interim online interface order where the CMA believes there has been an infringement of consumer law in any European Economic Area member state (although the geographical scope of the enforcement power is likely to be redrawn following the end of the transition period).

The CPC Regulation will be implemented into national law at the end of the Brexit transition period (unless it is repealed or introduced into English law in slightly amended form) so UK traders will be required to continue complying with the new CPC regulation in subsequent years. The UK is not required to implement the Omnibus Directive (given the current end date for the Brexit transition period) but UK traders selling to EU consumers will still be affected by the new rules and (at the time of writing) the UK has indicated that it is likely to adopt similar enforcement measures and penalties in English law.

Sector-specific legislation

13 Describe any sector-specific legislation or regulation that applies to cloud computing transactions in your jurisdiction.

The extent (if any) to which UK industry sectoral regulation may apply to cloud computing will require knowledge and examination of sector-specific legislation, regulations, guidance and regulatory and statutory codes of conduct. In the UK – and with the exception of the NIS Regulations and the following example – at the time of writing this chapter there is no regulation that applies specifically or directly to cloud computing as such. Where regulation is found to apply to a cloud computing project the approval, licence or consent – or at least the informal go-ahead – of a regulator may be required. Common sense and best practice dictate that, where applicable, the regulated entity should consult its regulator as soon as practicable and as fully as possible. This should also be of concern to a CSP expecting to enter a cloud arrangement with a regulated customer.

UK financial services

Only in the UK financial services sector has cloud computing been specifically addressed. Operational resilience, including outsourcing to the cloud, has long been identified as a cross-sector priority in the Financial Conduct Authority (FCA)'s annual regulatory business plans. The FCA, Bank of England and Prudential Regulation Authority (PRA) issued a joint Discussion Paper (18/4) in July 2018 on operational resilience, which stressed the importance of understanding and mapping important third party providers. Building on DP 18/4, in December 2019, the FCA, Bank of England and PRA published a shared policy summary and coordinated consultation papers on new requirements to strengthen operational resilience in the financial services sector: FCA CP19/32 and PRA CP19/29. The FCA's CP19/32 contains a chapter on outsourcing, which includes cloud computing. The PRA's CP19/29 is accompanied by CP 19/30 entitled 'Outsourcing and third-party risk management'. The objectives of CP 19/30 are to deliver on the commitment to 'facilitate greater resilience and adoption of the cloud and other new technologies', as set out in the Bank of England's response to the Future of Finance report, and to support the proposals on operational resilience. In CP 19/30, the PRA is consulting on a draft supervisory statement (SS) to govern outsourcing and third party risk management and reflects the Pending these proposals taking effect, currently in the UK it is only the FCA who has actually issued what is known as Finalised Guidance: FG16/5 'Guidance for firms outscoring to the 'cloud' and other thirdparty IT services' (FCA Cloud Guidance). This was first published in July 2016 and has since been updated (most recently in September 2019) to reflect the EBA Outsourcing Guidelines. The FCA Cloud Guidance is not binding, rather it is intended to illustrate how firms can comply with the relevant rules. Notwithstanding this, firms are advised to pay close attention to the guidance and use it to inform their systems and controls on outsourcing.

Broader regulatory context

Before outlining the FCA Cloud Guidance in more detail, it must be put in its sectoral regulatory context. When financial services organisations (firms) regulated under FSMA by the FCA and PRA engage in any IT, business process or other outsourcing, they must have regard to and, if applicable, comply with, the regulatory guidance and rules governing that outsourcing. The PRA supervises banks, insurance companies, building societies, credit unions and certain large investment entities. The FCA regulates the conduct of business of all financial services organisations within its statutory jurisdiction, including those prudentially supervised by the PRA. Some outsource providers (who, incidentally, are also CSPs) are themselves authorised and regulated by the FCA.

The PRA and FCA rules are complex and their application to outsourcing will depend on the nature of the firm (the outsourcing customer), the financial services and related activities to be outsourced, and the impact of the proposed outsourcing. The main rules and guidance governing outsourcing by regulated firms are contained in the FCA Handbook and PRA Rulebook. There is also more general FCA guidance on outsourcing to meet FSMA compliance. These are the main sources of prudential and operational provisions regulating outsourcing by financial services firms and regulated outsource providers in the UK. There are also specific outsourcing-related obligations on insurance and reinsurance companies under the Solvency II Directive (2009/138/ EC) and related subordinate rules and guidelines.

The detailed rules governing outsourcing under the PRA Rulebook, FCA Handbook, Solvency II Directive and Solvency 2 Regulations 2015 are beyond the scope of this section. In essence, though, the rules provide for what should be regarded as sensible outsourcing practice, having regard to systemic risk, initial diligence and ongoing operational risk affecting the conduct of regulated business and the interests of business and consumer end customers, and the needs of the regulators to supervise and intervene if necessary (for a fuller statement, see the FCA Handbook, Systems and Controls (SYSC), chapters 3, 4, 8, 13 and 14. Different requirements and guidance apply to different types of firms and may also depend on the type of function being outsourced. For example, whether the function being outsourced is considered critical or important, is a material outsourcing, or involve important operational functions. These specific terms apply to different types of firms and are explained in the FCA Handbook (eg, SYSC 8 and 13), the Electronic Money Regulations 2011, the Payment Services Regulations 2017, the directly applicable MiFiD II Org Regulation covering organisational requirements and the European Banking Authority (EBA) Outsourcing Guidelines.

The Markets in Financial Instruments Directive (MiFID) II (2014/65/ EU), which repealed and recast the MiFID Directive (2004/39/EC) and (largely) entered into force on 3 January 2018, together with the Delegated Regulation (2017/565/EU) (commonly referred to as the MiFID Organisation Regulation or the MiFID Org Regulation), imposes on regulated firms a wide range of conduct of business and organisational requirements. These include requirements relating to outsourcing, as well as more general record keeping and business continuity issues. The FCA handbook was updated to reflect these requirements.

As set out above, also feeding into the FCA Cloud Guidance are the EBA Outsourcing Guidelines which came into force on 30 September 2019. Firms are required to amend existing outsourcing arrangements to comply with the EBA Guidelines by 31 December 2021. These Guidelines apply to credit institutions and investment firms, as well as to authorised payment institutions and e-money institutions.

The EBA Guidelines are divided into five sections or Titles: (I) Proportionality: group application and institutional protection schemes (setting out a principle of proportionality in application of the EBA Guidelines, and requiring transparency within groups); (II) Assessment of outsourcing arrangements (defining 'outsourcing' and 'critical or important' functions); (III) Governance framework; (IV) Outsourcing process (setting out aspects to be included in an outsourcing agreement at a minimum for a critical or important function); and (V) Guidelines on outsourcing addressed to competent authorities. The governance framework in Title III requires: a holistic risk management framework, a written outsourcing policy, management of conflicts, business continuity plans, internal audit and a register of information on all outsourcing agreements. EBA Guidelines on internal governance published in March 2018 should also be taken into account. Note that the EBA Guidelines replace the Committee of European Banking Supervisors Guidelines on Outsourcing published in 2006, and incorporated the EBA Recommendations on Outsourcing to Cloud Service Providers (which were applicable from 1 July 2018).

Following suit, in February 2020, EIOPA published its finalised guidance on outsourcing to cloud service providers: the EIOPA Cloud Guidelines. The Guidelines, which will apply from 1 January 2021, are relevant to insurance and reinsurance providers and expand upon legislative requirements under the Solvency II framework. When in force, the EIOPA Cloud Guidelines will help align standards across the financial services sector. However, they will not apply to regulated activities within the UK's jurisdiction, as they will enter into force after the EU withdrawal transition period is expected to end. Separately, the European Securities and Markets Authority has recently issued a consultation in respect of its proposed outsourcing to the cloud guidelines. These are consistent with the EBA and EIOPA guidelines and ESMA aims to publish its final report on the guidelines by Q1 2021 so that the ESMA guidelines can take effect from 30 June 2021.

The FCA Cloud Guidance was updated to confirm that the FCA Cloud Guidance does not apply to a bank, building society, designated investment firm, IFPRU investment firm or payment and electronic money institutions to whom the EBA Recommendations are addressed. The FCA has confirmed that it will keep its Cloud Guidance under review to assess what, if any, changes are required, including as a result of Brexit. In the interests of space, this section now focuses on the FCA Cloud Guidance.

Overview of the FCA Cloud Guidance

The FCA Cloud Guidance is addressed to such firms 'when outsourcing to the "cloud" and other third party IT services'. As is evident from the FCA Cloud Guidance, for the FCA, not only is cloud computing equivalent to outsourcing in its potential impact on regulated firms, their operations and end-customers, but also it sees the cloud 'as encompassing a range of IT services provided in various formats over the Internet' (paragraph 1.4 FCA Cloud Guidance). Accordingly, the FCA sees no distinction between private, public or hybrid cloud deployment or Infrastructure as a Service (IaaS), Platform as a Service (PaaS) and Software as a Service (SaaS) (paragraph 1.4 FCA Cloud Guidance). And it says that 'from a regulatory perspective, the exact form of the service used does not, in itself, alter the regulatory obligations placed on firms'. So, where a third party (including a CSP) delivers services on behalf of a regulated firm, this is considered outsourcing. Firms therefore need to consider the relevant regulatory obligations and how they comply with them (paragraph 3.3 FCA Cloud Guidance).

The stated aim of the FCA Cloud Guidance is to facilitate adoption of cloud computing in the regulated financial services sector, recognising the benefits of cloud computing and innovation in the sector. It came about because firms and CSPs had told the FCA that they were unsure about how to apply its Handbook outsourcing rules to the cloud: this uncertainty may have been acting 'as a barrier to firms using the cloud' (paragraph 1.3 FCA Cloud Guidance).

Apart from the regulated firms themselves, the FCA Cloud Guidance is stated to be of interest to third-party IT providers, trade associations and consumer groups, professional advisers and the auditors of regulated firms.

In outline, and focusing below on the most important aspects of the FCA Cloud Guidance for cloud computing, the regulated firm in scope of the FCA Cloud Guidance must have regard to the following.

Criticality or materiality of the cloud service

Whether the function being processed under the cloud service is 'critical or important' or 'material' and (for authorised payment institutions and authorised electronic money institutions) if it relates to 'important operational functions'. Each of these terms is defined in the FCA Handbook and the Electronic Money Regulations 2011 and Payment Services Regulations 2009; paragraph 3.6 FCA Cloud Guidance); and see section 4, paragraph 29 of the EBA Guidelines. Overall, if the above kinds of functions are 'outsourced' to cloud, firms in scope of the FCA Cloud Guidance will have more stringent duties with regard to management of operational risk in the transaction, as will CSPs in enabling firms to comply with their obligations. In addition, firms must notify the FCA when entering into or significantly changing material or critical cloud services arrangements (paragraph 3.7 FCA Cloud Guidance).

In some cases, dual-regulated firms subject to the PRA's preferred resolution strategy will also have to consider resolution arrangements when entering into cloud services projects. These arrangements are designed to ensure continuity in distressed economic circumstances or insolvency to ensure that 'critical economic functions' are maintained (paragraph 3.8 FCA Cloud Guidance and https://www.bankofengland. co.uk/financial-stability/resolution).

Legal and regulatory considerations

These include having a business case or rationale for the decision to outsource to the cloud and the use of one or more CSPs for the delivery of critical or important operational functions, or a material outsourcing; due diligence risk assessment of the proposed project; relative risks of each type of cloud service or deployment model (eg, private versus public cloud); knowing where the CSP service and other relevant locations are situated; and the need to identify all service providers in the cloud supply chain – to ensure that the regulatory requirements are met throughout the supply chain.

Risk management

Including: conducting and documenting a risk assessment of the proposed cloud project; identifying current industry good practice (including data and information security management system requirements and cyber risks); monitoring concentration risk, to avoid too great a dependency on any one CSP; and understanding what action to take if the CSP failed.

International standards

Including: as part of due diligence, assessing the CSP's adherence to accepted international IT and service standards; and applying greater standards of assurance when the functions concerned are critical or important or a material outsourcing.

CSP oversight

Including: clarity about the allocation of responsibilities between the firm and the CSP; the firm having an internal function responsible for the strategic and day-to-day management of the CSP: and ensuring that the firm's staff have sufficient skills and resources to oversee and test the cloud services and properly manage an exit or migration from the existing CSP. In other words, this would mean firms having and retaining specific cloud service management expertise.

Data security

Including: conducting a specific risk assessment; agreeing data residency terms with the CSP, setting out contractually the locations in which the firm's data can be stored, processed and managed; understanding the CSP's data loss and breach notification processes; considering how the firm's data will be segregated (for public cloud); assessing the sensitivity of data and how the data will be transmitted, stored and encrypted, where necessary – noting that encryption keys or other forms of authentication must be accessible to the FCA or PRA.

Data protection

Including: continuing compliance with data protection laws. Firms are, of course, required separately to comply with UK data protection law (now the GDPR, as supplemented by the Data Protection Act 2018). In that sense, though the data protection laws are separate, the FCA Cloud Guidance forms part of the firm's compliance with its duties as a regulated firm. Firms should consider the UK Information Commissioner's guidance concerning the transmission of personal data outside the European Economic Area (EEA).

Effective access to data

'Data' is used here in its widest meaning. Firms should ensure that the cloud computing arrangement has addressed the following: access for the firm, their auditors, the regulators and other competent authorities to the firm's data; contractual ability for the regulators to contact the CSP directly where the firm cannot for any reason disclose the data; ensuring that the data is not stored in jurisdictions that may prevent or inhibit effective access for UK regulators; geopolitical stability as it concerns the data; whether the CSP's jurisdiction provides for data protection; the law enforcement provisions of the relevant jurisdiction or jurisdictions where data is to be processed, for example, whether and how easily the authorities in the CSP's jurisdiction may intervene in accessing the firm's data.

Access to business premises

'Premises' here include head offices and operations centres, but not necessarily data centres. The guidance includes: knowing which CSP or supply chain premises are relevant for the cloud services and effective oversight of them (the FCA recognising that CSPs may have legitimate reasons for limiting access to some sites, eg, data centres); providing for the unrestricted contractual and legal ability for the firm or its auditors to request an onsite visit to the business premises – on reasonable prior notice, except in the case of an emergency or crisis; enabling visits by the financial services regulators or other competent authorities as they deem necessary and required by law or regulation, without any conditions being imposed; having the CSP commit contractually to cooperating with all reasonable requests of the regulators during such visits: affording the regulators the right to observe the provision of the cloud services to the firm or any of its affiliates (although the regulators may commit to minimising disruption to the CSP's operations).

Relationship between service providers

Including: considering how the cloud supply chain is constructed and operates; enabling the firm to review subcontracting and other supply chain arrangements to ensure that they facilitate the firm's compliance with its regulatory requirements, including security, effective access to data and business sites; understanding the roles of CSPs within the supply chain; knowing how a CSP's services will interface with the firm's own systems or other necessary third-party systems (eg, agency banking arrangements for payments).

Change management

Including: ensuring that contractual and operational provision is made for changes to the cloud services; and establishing how changes will be tested.

Continuity and business planning

Including: providing contractually and operationally for appropriate arrangements for the continuity of functions and the ability of the firm to meet its regulatory obligations in the event of an 'unforeseen interruption' of the cloud services; having a plan documenting the continuity, business interruption and recovery arrangements; regular testing of the business continuity plan; and putting in place contractual and operational measures to ensure regulatory access to data in an insolvency or other disruption of the cloud services.

Resolution

This guidance will only apply to certain firms. In this context, the main aspect of the resolution and recovery arrangements and the Bank of England's 'stabilisation' powers that will concern firms, CSPs and providers within the cloud supply chain is this: neither financial distress or insolvency leading to resolution, nor the change of ownership or control of the firm following that event, will enable the CSP or a cloud supply chain provider to terminate the contract or the provision of cloud services. Moreover, the CSP and its supply chain may have to provide the cloud services to the resolution successor entity or firm for a transitional period. The CSP (and by implication providers in its supply chain) must agree not to delete, revoke or change the firm's data in the case of resolution.

Exit planning

Including: firms having contractually documented exit plans and termination assistance arrangements to ensure continuity, and these plans being 'fully tested'; firms understanding how they would migrate the cloud services to an alternative CSP and maintain business continuity; contractually requiring the CSP (and by implication its supply chain) to cooperate fully with the firm and the incoming CSP to ensure a smooth transition; the firm understanding how it could and would remove its data from the CSP's systems on exit.

The aim of the FCA Cloud Guidance is to help overcome the barriers created by the perceived regulatory uncertainty in the adoption of cloud computing by UK financial services firms. As the FCA says: 'We see no fundamental reason why cloud services (including public cloud services) cannot be implemented, with appropriate consideration, in a manner that complies with our rules' (paragraph 1.6 FCA Cloud Guidance).

The European Insurance and Occupational Pensions Authority published its final guidelines on outsourcing to cloud service providers for insurers or reinsurers in February 2020. As a consequence of the Brexit transition period ending, the FCA has now notified EIOPA that the EIOPA guidelines are not applicable to regulated activities within the UK's jurisdiction, as these guidelines will enter into force on 1 January 2021, after the transition period is currently expected to end. The FCA will, therefore, continue to apply FCA FG16/5 Guidance (discussed above) for firms outsourcing to the cloud and other third-party IT services in the UK.

The FCA has been consulting since 2018 on the topic of operational resilience in the financial services sector and has a live consultation, due to conclude in October 2020 (conclusion date delayed owing to the covid-19 outbreak), with firms then expected to comply with the requirements resulting from the consultations by the end of 2021. While the FCA is not intending to propose changes to the rules and guidance on outsourcing or third-party service provision, it wants the delivery of important business services by firms to be able to prevent, adapt, respond, recover and learn from disruptive operational incidents. To achieve this outcome, firms need to consider their dependency on services supplied by third parties and the resilience of these third-party services. This includes those third parties typically outside the regulatory perimeter, where firms retain responsibility for the delivery of their regulated services, including any dependency on the third-party service provider. It is therefore proposing firms conduct mapping exercises to identify likely impact of disruption, set impact tolerances for each important business service and test ability to remain within impact tolerances in a range of disruption scenarios. The outcome of the consultation may therefore affect how regulated businesses approach outsourcing to CSPs in the future

The UK banking sector trade body, UK Finance, sponsored the creation of a public cloud computing framework in February 2019. The framework consists of 44 controls, with each control mapped to one of nine domains and one of 11 risks associated with the management of cloud computing as a service. The controls are derived from analysis of UK Finance members' control sets and in collaboration with CSPs, cross-checked for compliance against various industry standards as well as the EBA Guidelines. Despite laudable efforts by the regulators and industry bodies to help firms around financial services regulatory hurdles in adopting the cloud, there are still significant concerns about the compatibility of cloud computing with regulatory compliance. In February 2017, the British Bankers' Association (now UK Finance), identified seven barriers to cloud adoption:

- · the regulatory approach to 'important' and 'critical' functions;
- supervision and oversight;
- the risk framework;
- access to CSP sites and services by regulators;
- data residency:
- termination; and
- data breaches and monitoring.

Most of these concerns will be identifiable from the FCA Cloud Guidance summarised above and look likely to remain of concern to the financial services sector in the immediate future.

Insolvency laws

14 Outline the insolvency laws that apply generally or specifically in relation to cloud computing.

There is no specialist insolvency regime for cloud computing. The primary UK insolvency regime is set out in the Insolvency Act 1986 and the Insolvency (England and Wales) Rules 2016 (both as amended). For an overall guide to the UK insolvency regime, see www.pwc.co.uk/ assets/pdf/insolvency-in-brief.pdf.

The rules that govern the insolvency of a CSP or a cloud customer, as well as those governing how corporate insolvencies are managed and disposed of, are complex. And experience in the UK has shown just how difficult it can be for cloud customers when a CSP suffers financial distress and insolvency. In early 2013, UK CSP 2e2 went into administration and subsequently liquidation. As a result, UK CSP customers are advised to consider carefully:

- the selection of their CSP;
- ongoing monitoring of the financial robustness of the CSP; and
- the terms of their cloud service contracts, including ownership of the customer's tangible and intangible assets, exit arrangements and data migration where the CSP suffers financial distress or insolvency.

In addition, CSPs and other IT providers operating in the UK need to be aware of legislation that could severely restrict their ability to withdraw service from insolvent customers, terminate supply contracts or demand higher payments for continuity of supply. The legislation overrides conflicting terms in a supply contract – see sections 233 and 233A of the Insolvency Act 1986 (as amended by the Insolvency (Protection of Essential Supplies) Order 2015. The amendments introduced by the 2015 Order ensure that, like utility services, 'communication services' and other IT supplies will now be treated as essential supplies. 'IT supplies' include a 'supply of goods and services ... for the purpose of enabling or facilitating anything to be done by electronic means', specifically including computer hardware and software; information, advice and technical assistance in connection with the use of information technology; data storage and processing; and website hosting – in other words, they are wide enough to cover cloud computing services.

The regime prevents suppliers of 'essential supplies' (water, electricity, gas, communication services and other IT supplies) from requiring payment of pre-insolvency charges as a condition of continuing to provide supplies in specified formal insolvency situations. In addition, where a customer enters either administration or a company voluntary arrangement, the regime locks the CSP into the pre-insolvency contract (subject to certain safeguards) to prevent the CSP from terminating supply, terminating the contract or increasing prices. However, the protections for customers of essential supplies do not apply to contracts for the supply of goods and services where either the company or the supplier is involved in financial services (which include situations where the company or supplier is an insurer, bank, electronic money institution, investment bank or investment firm, payment institution, operator of payment systems or a recognised investment exchange). In practice, this means that financial services firms and their creditors or suppliers can continue to terminate contracts, as they see fit.

DATA PROTECTION/PRIVACY LEGISLATION AND REGULATION

Principal applicable legislation

15 Identify the principal data protection or privacy legislation applicable to cloud computing in your jurisdiction.

The main data protection and privacy legislation in the UK comprises the General Data Protection Regulation (GDPR) and the Data Protection Act 2018 (DPA). The UK government has legislated to ensure that the country's data protection regime will remain substantially aligned to that of the EU following the expiry of the transition period on 31 December 2020. The DPA is the successor to the previous Data Protection Act 1998. It supplements, and must be read alongside, the GDPR. The ICO issued, for organisations rather than members of the public, specific guidance on the use of cloud computing. Although this guidance has not yet been updated to reflect the DPA, the ICO states that it 'still considers the information useful'. At the time of writing, the ICO has confirmed that the guidance will be updated soon.

The following section outlines the likely and most direct impact on cloud computing in the UK of the GDPR and the DPA.

General knowledge of the principles of the GDPR and the terminology used in that legislation is assumed. It is beyond the scope of this section fully to cover the contents and operation of the GDPR. The following focuses on certain elements of the GDPR that are new to data protection law or that have particular significance for cloud computing. This outline is not, therefore, exhaustive. References below to articles are to the articles of the GDPR.

Territorial scope

The GDPR applies to the processing of personal data within the context of the activities of an establishment of a controller or processor in the EU, regardless of whether such processing takes place in the EU or not. Clearly, the GDPR applies to the processing of personal data of a controller or processor in the EU; in addition, guidelines issued by the European Data Protection Board (EDPB) indicate that 'within the context of the activities' is capable of a wider meaning depending on the context itself. This developing area will be of interest to CSPs. The GDPR will also apply to the processing of personal data of data subjects in the EU by data controllers and processors with no EU establishment where the processing relates to offering goods and services (free or for payment) to EU data subjects, or to monitoring the behaviour taking place in the EU of such data subjects (article 3(2)). The GDPR may, therefore, apply to CSPs (assuming them to be either processors or controllers) without sites in the EU, if they meet either or both of the above tests. Certain controllers or processors (including CSPs) will have to appoint a local EU representative for legal enforcement purposes (article 27).

Data controllers

Generally – though it should not always be assumed – in B2B cloud computing the customer will be the controller of any hosted personal data, as the customer will be determining the purposes and means of the processing of such personal data (article 4(7)). This characterisation has continued under the GDPR and this is to the advantage of CSPs as ultimately the controller will be bound by more stringent duties than the processor. One area where this relationship could be open to question is if a CSP was looking to contract on the basis of its standard public cloud terms with customers who are consumers. The GDPR does not apply to processing wholly for domestic or household purposes – so consumer customers could be neither controllers nor processors, indicating that such standard terms could be a poor fit.

The controller, or cloud customer, will be primarily liable for identifying a lawful basis for processing, as well as implementing appropriate technical and organisational measures to ensure, and be able to demonstrate, that processing is performed in accordance with the GDPR, including ongoing reviews and the updating of those measures (article 24(1)). Cloud customer-controllers must, therefore, be able to demonstrate that processing performed on their behalf by CSPs is compliant, which in turn will mean having to satisfy themselves that CSP contract terms facilitate the controller's obligations.

Controllers should only engage processors who provide sufficient 'guarantees' to implement appropriate technical and organisational measures in such a way that the processing will meet the requirements of the GDPR and ensure the rights of data subjects (article 28(1)). This raises important questions for cloud customer due diligence in appointing CSPs. In some cases, for example regulated financial services firms deciding to engage CSPs for their operations, this aspect of the decision will almost certainly have to be documented.

The controller may refer to the adherence to approved codes of conduct under article 40 or to approved certification mechanisms under article 42 for the purpose of demonstrating compliance with its GDPR obligations (for the current European Union Agency for Network and Information Security (ENISA) framework see www.enisa.europa.eu/ news/enisa-news/enisa-cloud-certification-schemes-metaframe-work/).

We should expect to see the development by CSP industry organisations of cloud-specific codes of conduct and certification mechanisms, for example, the CIF Code; although such codes and certification mechanisms will have to be approved.

Although article 28 is headed 'Processor', it is clear that some of the obligations it imposes, for example, under article 28(1), are directed to and will be the primary responsibility of controllers. And so it is with article 28(3), which requires not only for there to be a binding contract between the controller and processor governing data processing, but also for that contract to stipulate a range of specific provisions (article 28(3)(a)-(h)), including, for example: that processing will only be in accordance with the controller's documented instructions, including with regard to third country data transfers: confidentiality undertakings by all those authorised to process the data; controls on the engagement of sub-processors (see below): and processor obligations to assist the controller in ensuring compliance under articles 32 to 36 regarding its obligations of data security, pseudonymisation and encryption, data breaches and notifications, and data protection impact assessments. Cloud customers and CSPs must address these requirements in their cloud computing contracts, whether on the CSP's standard contract terms or otherwise. Article 28(8) provides that both regulators and the European Commission may adopt standard contractual clauses (SCCs) covering the requirements of article 28(3): no such clauses have been adopted by the European Commission or the Information Commissioner's Office to date. We should expect that any SCCs adopted will be focused on compliance with the legislation's requirements, and may not be suitable for CSPs or customers wishing to accommodate commercial issues in their drafting.

Processors

As stated above, in B2B cloud computing, the CSP is usually likely to be – and to prefer to be – the entity processing personal data on behalf of the controller, namely the processor: article 4(8). Among the changes to data protection law made by the GDPR is that processors – hence CSPs – are for the first time directly accountable for and liable to data subjects and regulators for infringements. Aside from the need for a binding contract between the controller and processor with its various contractual stipulations (see above), additional requirements imposed on processors will include the following.

Processors must not engage sub-processors without the controller's prior specific or general written authorisation, including changes to sub-processors after general written authorisation has been given – so giving the controller the opportunity to object to those changes: article 28(2). This could clearly have a material impact on cloud supply chains and changes to them. Moreover, where a processor has engaged sub-processors, it must impose by contract the same data protection requirements on those sub-processors as apply in the controllerprocessor 'head' contract, in particular to ensure that sub-processors provide sufficient 'guarantees' to implement appropriate technical and organisational measures to meet the requirements of the GDPR. Processors will be liable to controllers for the acts and omissions of sub-processors (article 28(4)).

Processors must keep a written or electronic record of all categories of processing activities undertaken for a controller (article 30(2)). There is an exemption for organisations employing fewer than 250 employees, with certain exceptions (article 30(5)).

There is a specific requirement for processors to cooperate with data protection supervisory authorities (article 31).

Another new set of obligations on processors relates to data security and breach reporting. In their own right, processors must – having regard to the state of the art, costs, risk, etc – implement appropriate technical and organisational measures to ensure data security, including the pseudonymisation and encryption of personal data; the confidentiality, integrity, availability and resilience of processing systems and services: the restoration and availability of data following 'physical or technical' incidents: and regular security testing (article 32(1)). The economics of cloud computing – especially in public cloud deployment models – are likely to be challenged by these requirements.

Under article 33(2), the processor must notify the controller 'without undue delay' after becoming aware of a personal data breach. This must be seen in the context of the controller's new obligation to notify its supervisory authority – except for breaches unlikely to compromise data subjects' rights – without undue delay and, where feasible, not later than 72 hours after becoming aware of a data breach, including details surrounding the breach (article 33(1) and (3)). CSP processors are often therefore required to support B2B customer controllers in breach management and notification, which will in turn need to be reflected in cloud arrangements and contracts.

Sanctions and remedies

Under the GDPR controllers and (as mentioned above) processors will be directly accountable and liable for non-compliance, both to data subjects and regulators. The allocation of responsibility and liability for infringements as between cloud customers and CSPs has, therefore, assumed even greater importance in B2B and B2C-related cloud contracts – particularly because of the extent and scale of the GDPR sanctions and remedies.

Any person who has suffered 'material or non-material' damage as a result of an infringement will have a right to receive compensation from the controller or processor (article 82(1)). Controllers will remain liable overall for such damage, while processors will only be liable where they have not complied with the GDPR obligations specifically directed to them or where they have acted outside or contrary to the lawful instructions of controllers (article 82(2)). A controller or processor that has paid full compensation to a data subject following a claim for damages is entitled to recover that element of the damage that they are not responsible for from the other controllers or processors involved in processing (article 82(5)).

Administrative fines will depend on the gravity of the non-compliance (article 83(2) (a)-(k), 83(3)). There are two tiers of fine for specified infringements: a lower level of up to €10 million or, in the case of businesses, up to 2 per cent of the preceding financial year's worldwide annual turnover, whichever is higher (article 83(4)); and an upper level of up to €20 million or, in the case of businesses, up to 4 per cent of the preceding financial year's worldwide annual turnover, whichever is higher (article 83(5)).

There are other processes and sanctions available for noncompliance under both the GDPR and the DPA, including audits, access rights, reprimands and administrative orders (article 58).

Cross-border data transfers

These rules are dealt with in articles 44 to 50. As applied to cloud computing and cloud supply chains, they are an important part of the GDPR's regulation. Personal data transfers to recipients in 'third countries' continue to be closely regulated, broadly to ensure that the level of data protection for data subjects is not undermined (article 44). Overall, the GDPR framework for such transfers is similar to that under the previous Data Protection Act 1998 and Data Protection Directive, with some new (although as yet unavailable) compliance measures, including the ability of data exporters to demonstrate compliance through approved codes of conduct and approved certification mechanisms (article 46(2)). Breach of these provisions will be a non-compliance issue for which the upper tier of administrative fines can be imposed (see sanctions and remedies above). Both controllers and processors will be liable to non-compliance proceedings.

The Court of Justice of the European Union's (CJEU) judgment in the Schrems II litigation (Facebook Ireland v Schrems (Case C-311/18))

(*Schrems II*) has created significant uncertainty for controllers and processors carrying out cross-border data transfers. While the SCCs (also known as model clauses) approved by the European Commission survived an invalidity challenge, the CJEU stated that data exporters and data importers looking to rely on them must also consider the 'relevant aspects of the legal system' of the destination country. These aspects must be considered by the parties when assessing whether the level of protection offered in the case of any transfer to a third country (not just those to the US) is 'essentially equivalent' to that guaranteed in the European Union. At the time of writing, guidance is awaited from the ICO and EDPB on how such an assessment may be carried out and what further measures data exporters and data importers may be required to take.

It is increasingly problematic for cloud customers and CSPs that there are no 'processor to processor' SCCs.

Privacy Shield following Schrems II decision

Adopted in July 2016, the EU-US Privacy Shield applies to EU-US data transfers and is therefore relevant for cloud computing in EU-US and related trade. Microsoft claimed to be the first US CSP to appear on the US Department of Commerce's list of Privacy Shield certified entities. However, following the July 2020 Court of Justice of the European Union (CJEU) decision in *Schrems II*, the Privacy Shield is no longer valid as a legal mechanism for companies in the EU sending personal data to Privacy Shield program members in the US. This has significant ramifications for cloud service providers that rely on the Privacy Shield mechanism for EU-US data transfers. There may also be consequences for EU-UK data transfers following the end of the transition period, if the EU does not issue an adequacy decision in respect of the UK's data protection regime (due to the UK's data sharing or transfer arrangements with the US).

Access to EU personal data by third-country governments

In the light of the Snowden disclosures and the litigation that followed them (eg, *Microsoft v United States*, No. 14-2985 (2d Cir. 2016), it is worth noting that article 48 of the GDPR contains specific safeguards against third country governments' access to EU personal data. Any third country judgment or administrative decision requiring a controller or processor to disclose EU personal data will only be enforceable if it is based on an international agreement, for example, a mutual assistance treaty between that third country and the EU or a member state. (See the Agreement on Mutual Legal Assistance between the United States of America and the European Union signed 25 June 2003.)

CLOUD COMPUTING CONTRACTS

Types of contract

16 What forms of cloud computing contract are usually adopted in your jurisdiction, including cloud provider supply chains (if applicable)?

In the UK, contracts cover the full range of cloud service and deployment models and reflect the UK's large and sophisticated cloud business ecosystem, including cloud service provider (CSPs) supply chains.

One aspect of cloud contracting that tends to cause difficulties for cloud customers is where, as is typical, cloud contract formats are modular. This means that the provisions of the contract must be located from a combination of offline and online sets of terms or – more typically – from a combination of multiple online sets of terms, policies, etc, which users must access by clicking on different hypertext links. These sets of terms are then assembled and stipulated by the CSP to form the entire contract.

See European Commission Study on consumers' attitudes towards Terms and Conditions published in 2016, which looked at typical consumer reading times of terms and conditions (T&Cs), which indicated reading times of around two minutes for lengthy T&Cs and slightly more than 30 seconds for shorter T&Cs - and showed that despite readership of the T&Cs being very low, the vast majority of consumers do accept the T&Cs when required to indicate acceptance when concluding a transaction. This is supported by the findings of an earlier US study, which found (in a study of 50,000 visitors to 90 software company websites) that only around 0.2 per cent of online customers accessed a product's EULA, spending just under a minute on average on the EULA page ('Does Anyone Read the Fine Print? Consumer Attention to Standard Form Contracts' NYU Law and Economics Research paper No. 09-40 (2009). In 'Contracts for Clouds, Revisited: An analysis of the standard contracts for 40 cloud computing services' by Johan David Michels, Christopher Millard and Felicity Turton (Queen Mary University of London, School of Law Legal Studies Research Paper No. 334/2020) (Queen Mary Cloud Study), the authors noted that the terms of service surveyed were lengthy, consisting of documents incorporated by reference, using the example of the Facebook terms of service documents, which combined amount to over 33,000 words, which would take a typical adult over two hours to read. In our experience, these formats and contract processes make it difficult even for sophisticated corporate customers to ascertain the full extent of cloud contracts and, in some cases, to determine what terms will govern them. In B2C contracts, and possibly where B2B cloud customers are negotiating on CSP standard terms of business, this difficulty in ascertaining applicable contractual terms could in certain circumstances ultimately result in the legal ineffectiveness or unenforceability of certain contract terms and lead to regulatory intervention.

The answers to the next six questions are based on: (1) a review and knowledge of a limited, but meaningful, range of B2B public cloud service agreements (CSAs) and related documents proposed by the major international CSPs that are available from public resources; and (2) commentary in the June 2020 Queen Mary Cloud Study on a range of CSP terms of service. It is beyond the scope of this work to survey a much wider range of such contracts or to segment them by deployment model, service model or specific cloud services within each service model. Readers are referred to the work of leading UK academics, (including Cloud Computing Law, Christopher Millard (ed), (Oxford University Press 2013) and the Queen Mary Cloud Study mentioned above), noting that, inevitably there will have been changes to CSA practice and that we expect practice may change further in respect of the UK following the end of the Brexit transition period (currently expected to be 31 December 2020). We also wish to acknowledge the excellent reports and other deliverables produced by the (now decommissioned) SLALOM Project teams. SLALOM documentation is recommended reading for this area and may be downloaded from the links at: https://cordis.europa. eu/news/rcn/134076 en.html, using 'slalom' as a search term.

The answers below do not identify CSPs by name; they reflect a composite, high-level, view of the CSAs and related materials reviewed. Moreover, they do not attempt to assess the reasonableness, fairness or validity of the terms outlined. Here, we adopt the approach taken by the SLALOM Project team: readers will be aware that, in assessing these matters, much will depend on the context of the service and deployment and service model or models adopted, the relative bargaining strength of the parties, the economic basis of the cloud arrangement, cost or no-cost, and whether it is a beta product or service, etc.

The European Commission actively promotes the development and use of fair standard cloud computing contracts and standardised service level agreements to guarantee the quality of cloud services in the European markets. Details of the initiatives currently being undertaken and revised by the European Commission can be found at https://ec.europa.eu/digital-single-market/en/cloud. These are likely to include creation of:

- a European federation of cloud infrastructures and services (discussed in the European Data Strategy);
- a European marketplace for cloud services, as a single point of entry to find certified cloud services; and
- a governance framework and an EU Cloud Rulebook for cloud services and infrastructures, which will provide clarity on the compliance of cloud services with relevant rules.

Pending the outcome of EU-UK trade negotiations and any mutual recognition arrangements for regulated sectors, UK-based CSPs offering services in the EU will need to be mindful of relevant developments in this sphere.

Finally, the role of international standards will be ever more important as applied to cloud computing services, service level agreements (SLAs) and CSAs (see for cloud computing and distributed platforms ISO/IEC JTC1 SC38).

Typical terms for governing law

17 What are the typical terms of a B2B public cloud computing contract in your jurisdiction covering governing law, jurisdiction, enforceability and cross-border issues, and dispute resolution?

With limited exceptions, the governing law of the CSP's home jurisdiction or a chosen regional location will apply. For certain purposes, for example, EU data protection standard contractual clauses, will mean that the choice of governing law and jurisdiction may be those of the customer's location (for the consequences for the use of SCCs following the CJEU's decision in *Schrems II*). Courts (rather than arbitral tribunals) competent in the CSP's jurisdiction are most commonly chosen, with just less than a quarter of CSPs surveyed opting for binding arbitration clauses (in the research paper 'Contracts for Clouds, Revisited: An analysis of the standard contracts for 40 cloud computing services' by Johan David Michels, Christopher Millard and Felicity Turton (Queen Mary University of London, School of Law Legal Studies Research Paper No. 334/2020) (Queen Mary Cloud Study)). US CSPs usually require all customers to commit to compliance with applicable US export controls, sanctions and related laws and regulations.

The Queen Mary Cloud Study indicates that for the 40 CSP terms of service (ToS) surveyed, around half the ToSs are governed by English or Irish law (in respect of English contracting parties, although this is based on the authors identifying the law applicable to consumers in the UK where the ToS provided for differing choices of law depending on the identity of the customer), with the remainder governed by the law of a US state, Luxembourg or Swiss law.

Following the UK's withdrawal from the European Union, it may be that UK-based CSPs making agreements with EU entities give extra consideration to the provisions which are most appropriate for jurisdiction and enforcement, although changes to clauses are probably only likely where a CSP identifies a particular local law issue in a relevant member state. We have already seen Google change its contracting entity for UK customers from an Irish Google entity to Google LLC, which is registered in the US, and change the governing law to Californian law, which change it ascribes to the UK leaving the EU. It is not yet clear whether other CSPs will make similar changes and whether international CSPs who use an English or Irish contracting entity will continue to do so in respect of their UK customers after the end of the transition period. It is likely UK-based business customers may see (depending on changes to the data protection regime in the UK and the results of UK-EU negotiations as to the adequacy of the UK's data protection regime) more non-UK CSPs opting to contract through non-EU entities using US governing law and jurisdiction clauses. This would have an impact on UK customers' ability to seek redress for breach of the terms of service.

Typical terms of service

18 What are the typical terms of a B2B public cloud computing contract in your jurisdiction covering material terms, such as commercial terms of service and acceptable use, and variation?

Pricing and payment

Pricing will, of course, vary depending on the deployment and service model offered, and whether the contract is formed on- or offline. Some CSPs reserve the right to vary charges for existing services. There are usually remedies for late payment, including interest and, in some cases, the right for the CSP to suspend service for payment defaults. If the customer defaults on payment when due, all CSAs reviewed entitle the CSP to terminate them.

Suspension of service by the CSP

It is common to see suspension rights in addition to specific termination rights (and sometimes for the same or overlapping triggering events). The most typical cause for suspension is where there has been a breach by the customer or an end user of the acceptable use policy (AUP – see below), which will usually include the customer or an end user causing security risks to the cloud service, the CSP or other cloud service users, or infringing third-party rights or failing to pay or entering insolvency proceedings. Suspension may be on notice or, where urgent (as in the case of security risks), without notice. In some cases, the customer will remain liable to pay the charges during the suspension period, while service credits (see below) will not accrue.

Acceptable use policy

The CSAs of all the major CSPs contain an acceptable use policy (AUP): it has become one of the defining features of CSAs in the UK as elsewhere. Readers will be familiar with the standard terms of AUPs, which address conduct by both customers and their end users in using the cloud services, and will include prohibitions on:

- · illegal activities of any kind;
- violation of any third-party rights (including reverse engineering of the service) or conduct that violates any applicable law;
- gaining or attempting to gain unauthorised access to any networks, systems, devices or data;
- · unauthorised disruption of any networks, systems, devices or data;
- sending unsolicited messages or marketing; and
- distributing malware.

There are also typically restrictions on the type of customer who can use the services (by age limit) and the purpose for which the service can be used.

Breach of the AUP may entitle the CSP to suspend or terminate the CSA – in some cases, the breach of a single end user could result in suspension or termination. Other CSAs contain indemnities for AUP breaches. Where the AUP has been breached, or the CSP suspects it has been breached by illegal conduct, the CSP may report those activities to the authorities or interested third parties and reserve the right to cooperate with them.

Variation

One of the more disquieting terms of CSAs in the UK as elsewhere is that CSPs may without the customer's consent vary cloud services, SLAs and other terms of the CSA – usually without any justification and in some cases even without the obligation to notify customers beforehand, although it is becoming more common for the CSPs to include a notice period for at least some types of changes to the terms. This is usually done by posting a revised version on a website, by emailing the customer or through a notification in the user interface and customers who continued to use the service are deemed to have accepted the new terms. Some standard ToS now expressly permit a customer to terminate for variation of the terms of the CSA (although this places the burden on customers to monitor the ToS to identify when the terms are varied and is burdensome for customers using a multi-cloud model). A very small number of the ToS surveyed in the Queen Mary Cloud Study expressly stated that the CSP's contract terms would not vary during the contract period, providing a greater level of contractual certainty as to the applicable ToS. In B2C contracts, suppliers may only alter the terms of a contract of indeterminate duration unilaterally after providing the consumer with reasonable notice of the proposed variation (Consumer Rights Act 2015, Sch.2, 11, 23).

Typical terms covering data protection

19 What are the typical terms of a B2B public cloud computing contract in your jurisdiction covering data and confidentiality considerations?

To reflect the entry into force of the GDPR, all the major CSPs operating within, or providing services to, the EEA introduced detailed data protection and processing terms for incorporation into their CSAs, in some cases in separate addenda or supplements.

Typically, the GDPR-related terms include:

- the allocation of processor and controller roles and functions between the customer and the CSP, with the CSP as processor and with the right for the CSP to appoint sub-processors (subject to the customer's right to object to the appointment of new sub-processors and with concomitant sub-processor obligations);
- the application of technical and security features provided to the customer to enable it to comply with the technical and organisational measures required by the GDPR;
- deeming of 'documented' customer instructions to the CSP with regard to the CSP's processing of customer data in accordance with the GDPR;
- confidentiality obligations of the CSP in relation to customer data;
- terms for the handling of data subject access requests;
- detailed operational security provisions, including security breach notification obligations on the CSP;
- · CSP data security certification and audits;
- provision for the transfer of personal data outside the EEA, with the incorporation of the SCCs accordingly; and
- the return or deletion of customer data on termination of the CSA; obligations relating to record keeping of all processing activities; and terms ensuring the processor's cooperation with the relevant regulator in the performance of their duties.

As at the time of writing, there have been no reported legal challenges emanating from the UK to CSP GDPR terms.

Typical terms covering liability

20 What are the typical terms of a B2B public cloud computing contract in your jurisdiction covering liability, warranties and provision of service?

Liability

Understandably, all CSAs contain limitations and exclusions of liability: some are written from a US perspective, while others are localised. The CSP's liability is commonly limited (sometimes mutually) to the amount of charges paid by the customer – typically during the 12 months preceding the event giving rise to liability, with absolute caps ranging from US\$20 to US\$100,000. Liability caps of this kind are sometimes tiered by reference to different services, for example, the greater of a specified monetary amount or the total charges paid, depending on

Some CSAs exclude from this limitation the CSP's liability for thirdparty IPR infringements (whether under an indemnity or otherwise), and for confidentiality and data protection breaches.

It is common for CSAs to exclude liability:

- in general for direct and indirect, consequential, incidental, exemplary, punitive or special losses or damages (even if some of those kinds of loss or damages are not recognised in the UK jurisdictions and even if the possibility of such losses have been brought to the CSP's attention); and
- for a range of: (1) specific losses, including loss of revenue, loss of profits, loss of customers or goodwill, loss of use of data, loss of anticipated savings, loss of the use of the cloud service, etc;
 (2) causes (eg caused by breach of contract, inability to access a service, force majeure event or security breaches); and (3) theories of liability (eg, contract, tort or breach of statutory duty).

Not all of the broader contractual exclusion provisions will be binding under English law even for B2B contracts however, as where parties contract on standard form contracts that limit liability for breach of contract or for negligence, these clauses are required to be fair and reasonable in light of the circumstances at the time the contract was made (Unfair Contract Terms Act 1977, sections 2, 3, 11). Liability caps could also be the subject of challenge under UCTA, depending on the context of the particular contractual relationship.

Some CSAs disclaim liability for unauthorised access to, and for loss or destruction of, uploaded content and data. In other cases, CSAs will acknowledge the CSP's liability for content or data loss where the CSP has failed to meet its own security obligations. Many CSAs require customers to take responsibility for making backup copies of their own content and data or otherwise mitigating their own risks in using the cloud service.

Warranties and provision of service

Some CSAs contain a CSP warranty that it will deliver the services in accordance with the SLA or some other service description. Some CSAs state that cloud services are provided 'as is'. Almost invariably, any other express or implied warranties (eg, as to fitness for purpose, satisfactory quality, non-infringement) are disclaimed to the extent permitted by law. Some CSPs specifically exclude any express or implied warranty that the operation of the cloud service or software made available through it will be uninterrupted or error-free. The picture is slightly different in the consumer context, where CSPs will typically commit to providing the services with reasonable skill and care.

Indemnities

It is common for the customer to have to indemnify the CSP against the customer's and any end user's:

- act or omission or use of the cloud service that infringes any third party's rights;
- breaches of the CSA generally and the AUP specifically;
- infringement of applicable law;
- creation or use of uploaded content; and
- in each case where the act, omission, use, etc, gives rise to claims, costs, losses, and so on.

Where there are detailed data processing provisions, including data transfer agreements, some CSAs will provide for customer indemnification of the CSP against breach of data protection law caused by the customer or an end user.

Service availability, quality, service levels and service credits

Many B2B public cloud CSAs contain or incorporate by reference specific SLAs as applicable to the service modules provided to the customer. (For an example of CSA service levels applied by the major CSPs (and some others), readers are referred to the SLALOM Project's documentation.)

While many CSAs provide that customers will not be entitled to claim for service unavailability for scheduled or unscheduled downtime or other service interruptions, we are seeing more CSPs offering SLAs in which they commit to deliver a certain level of service, and offer compensation to customers for failure to meet the SLA in the form of service credits. These are usually expressed as a percentage of the customer's monthly fees, usually set on a scale depending on the uptime percentage, thereby linking service credits to monthly spends, and usually capped at a percentage of a month's fees. Where service credits are included in an SLA, these are typically stated to be the customer's sole and exclusive remedy (which suggests the customer could not sue the provider for damages in relation to the service being unavailable). Some CSPs make specific claims or promises about their levels of service and are willing to enable the customer to terminate the CSA for stipulated breaches of those service levels, subject to following mandated procedures for doing so, with repayment of any prepaid charges. Many CSAs contain caps on the maximum amount of service credits allowable in a specified period.

The SLAs also require the customer to track downtime and make reports to claim service credits, with very few providers committed to proactively reporting on service availability levels. This would of course make monitoring and enforcing the SLA or service credit regime difficult for the customer. In other situations, customers are required, within stipulated deadlines, to follow specified procedures to report the service level breaches, as well as providing details of them for verification by the CSP, who may retain the option of rejecting the customer's claim. The SLAs also tend to exclude service unavailability where this arises from factors outside the CSP's control (force majeure events, network or device failures outside the CSP's data centre, customer actions, thirdparty actions, the CSP system being down for maintenance or customer breach of the CSA or AUP). Customers will therefore usually need to accept the CSP's limited liability and factor this into the overall risk assessment of cloud service adoption (against the advantage of cost and scalability). To mitigate risks, customers may want to consider cyber insurance and resilience testing.

Business continuity and disaster recovery

In general, unless the CSP is providing a cloud-based business continuity service, CSAs do not contain any, or in any detail, business continuity or disaster recovery terms – although it is typical for CSAs to contain force majeure provisions excusing the CSP's performance in such cases. This is a feature of CSAs in the UK, US and elsewhere (see the useful report, Public Cloud Service Agreements: What to Expect and What to Negotiate Version 3.0 produced by the Cloud Standards Customer Council.

Usually, the customer is expected or obliged to make its own backup arrangements to ensure continuity. Sometimes, CSAs will refer to CSPs having their own disaster contingency plans for their data centres, using redundant processing and storage capacity to back up data held in those data centres, but without any contractually binding commitment to implement such plans.

Typical terms covering IP rights

21 What are the typical terms of a B2B public cloud computing contract in your jurisdiction covering intellectual property rights (IPR) ownership in content and the consequences of infringement of third-party rights?

Typical terms are as follows.

- The customer usually warrants that it owns or has all necessary rights to use its content (eg, software, data) processed by the cloud service or to grant any licences to the CSP under the CSA, and that its content or end users' use of the customer's content will not breach the AUP (which may entitle the CSP to suspend or terminate the CSA).
- The customer retains ownership of all IPR in the content uploaded or created by it in using the cloud service. The CSP is usually granted a limited licence to use the content to provide the cloud service (for example covering rights of access, storage or distribution, as applicable), or to act on feedback, or to comply with regulatory or governmental directions or orders, and in some instances the CSP's rights of use of the customer's content is extended to cover advertising.
- The CSP may use without restriction any suggestions for improvements to the cloud service made by the customer, in some cases, with an obligation to assign ownership in such suggestions to the CSP.
- The CSP reserves rights in all IPR relating to its cloud services, including IPR in the applications and infrastructure used in providing the services.
- If the cloud services are found, or understood by the CSP, to infringe any third-party IPR, the CSP may at its discretion, and usually as a preferred remedy, procure the necessary rights for customers to continue using the services, modify the services so that they become non-infringing without any material loss of functionality, or provide equivalent services in substitution for the infringing services – or failing that, to terminate the cloud services concerned. In some cases, instead of the above 'work around' language, the CSP will undertake to defend or indemnify the customer against the claims, costs, losses, etc, arising from final judgments. Where CSAs are governed by the laws of a US jurisdiction, customers may find that the obligation to defend does not include the obligation to indemnify – though this is, of course, to be determined under the relevant US jurisdiction if validly chosen.

Typical terms covering termination

22 What are the typical terms of a B2B public cloud computing contract in your jurisdiction covering termination?

CSAs may allow termination for convenience on specified notice for both the customer and the CSP.

Either party will usually have a right to terminate for the (unembodied) material breach of the other, change of control of the other, or the insolvency of the other. There is often also a range of specific rights of termination by the CSP, including:

non-payment by the customer of due invoices. Note that the ability
of a supplier to terminate a contract where the counterparty has
entered an insolvency or restructuring process has been limited
by the new measures introduced in June 2020 (see the Corporate
Insolvency and Governance Act) which render these types of 'ipso
facto' termination clauses in goods and services contracts ineffective. The ban on these clauses however does not apply in respect of
contractual arrangements with insurers, banks, electronic money
institutions and operators of payment systems and infrastructure
providers;

- where the cloud service is dependent on third-party IPR (eg, software) licences, when a relevant third-party licence expires or is terminated;
- · for a specified period of customer inactivity;
- where the customer or an end user's use of the cloud service presents a security risk to the CSP or any third party (typically contained in the AUP);
- general discontinuance of the service by the CSP;
- contravention of export and sanctions controls laws and regulations: and
- one or more (other) breaches of the AUP or any other term of the CSA by the customer or an end user.

A CSA containing a termination clause allowing a CSP to terminate a contract of indefinite duration with a consumer without reasonable notice is liable to be unfair under UK consumer protection law, which may mean a termination clause is unenforceable against a UK consumer. The consequences of termination may include:

- the customer's obligation to cease using or to return any proprietary material (eg, software), or to destroy any content provided by the CSP;
- that the CSP will not erase the customer's data for a specified period after termination (unless otherwise required by law), and in some cases that the customer will be entitled to retrieve its data for a limited period following termination, prior to the data being deleted (usually also subject to a charge by the CSP);
- where the CSP has terminated for cause, that the customer must pay all unpaid charges for the remainder of the term; and
- where the customer has terminated for cause, that the CSP will refund any prepaid charges for the remainder of the term.

Employment law considerations

23 Identify any labour and employment law considerations that apply specifically to cloud computing in your jurisdiction.

There are none that apply specifically to cloud computing.

However, depending on the cloud deployment model or service model adopted and the circumstances of the migration to cloud or the termination of the cloud service, cloud customers and CSPs should consider the application of the Transfer of Undertakings (Protection of Employment) Regulations 2006, as amended by (among others) the Collective Redundancies and Transfer of Undertakings (Protection of Employment) (Amendment) Regulations 2014 (together, TUPE). TUPE implements in the UK the EU Acquired Rights Directive 2001/23/EC (ARD).

In outsourcing transactions, because the application of TUPE is so well settled in the UK, it has become customary for the customer and outsource provider to provide specifically and in some detail in the outsourcing contract for the legal, regulatory and financial implications of TUPE – allocating duties, risk, costs and liabilities between them. In public and hybrid cloud contracts, the issue is often simply not considered and, therefore, is not provided for, most probably because the parties do not expect that TUPE will apply to such cloud arrangements or because CSPs that are based outside the EU are unaware of the ARD and TUPE.

However, neither CSPs nor their customers should assume that TUPE cannot or does not apply in relation to any of the cloud deployment models or service models. They should at least consider the question and take advice accordingly. The application of the ARD and TUPE to, and their effect on, outsourcing are now widely understood in relation to the UK, where the government has expanded TUPE's application to outsourced services with the intention that TUPE should (if conditions are met) generally apply to outsourcing transactions. It is worth reiterating that TUPE is mandatory law: parties cannot 'disapply' or contract out of TUPE. In broad terms, where TUPE does apply, it transfers automatically by operation of law the staff from one organisation to another. Their terms and conditions of employment and continuity of service are preserved, and there are other procedural and substantive protections for the staff before and after a 'TUPE transfer', for example protection against dismissal and protection against changes to the transferring staff's terms and conditions of employment. There are also prescribed information (and in some cases, consultation) processes that must take place before any transfer (see generally www.acas.org.uk/index. aspx?articleid=1655). Accordingly, if TUPE applies to a cloud computing arrangement (in which one of the key drivers is cost-reduction) the potential financial implications resulting from the constraints and obligations arising out of TUPE may be significant and could undermine the economics of the arrangement.

In the UK, the most relevant trigger for TUPE in the context of cloud computing will be a 'service provision change' (rather than a 'traditional transfer' of an undertaking which retains its identity) where an in-house IT service ceases to be provided by the customer itself and is then provided by the CSP - or is migrated from one CSP to another CSP, or from the CSP back to the original customer, if it wishes to resume the IT service in-house. This can constitute a service provision change under TUPE Regulation 3(1)(b). The workforce (organised grouping) carrying on the activities liable to transfer must be based in Great Britain and the principal purpose of that workforce must be to carry out those activities for the customer. In broad terms this means they must work wholly or mainly for the customer; although they may still do work for others (TUPE Regulation 3(3); and see generally www.gov.uk/transferstakeovers). More significantly for cloud computing arrangements, the activities to be carried out by the CSP must be 'fundamentally the same' as those undertaken previously by the customer's staff (TUPE Regulation 3(2A).

So, the threshold question for a service provision change TUPE transfer in cloud computing migration is most likely to be: will the activities to be undertaken by the CSP be 'fundamentally the same as those undertaken previously by the customer's IT staff? This will come down to an analysis of fact and degree. One – and only one – factor will be a reduction in the volume or scope of work, which is likely to be the case in migration from 'traditional' IT activities to the cloud (see *Department for Education v Huke and another* UKEAT/0080/12; *OCS Group UK Ltd v Jones and another*).

At first glance, IT activities or services migrated to, say, a public or hybrid cloud, from which the customer may then receive very different cloud services (at least by reference to scope and possibly volume) to the services or activities previously provided in-house, simply do not intuitively look and feel 'fundamentally the same' in the cloud. And – if they addressed the question at all – it would be understandable if the customer and CSP considered that the activities to be carried out by the CSP are not 'fundamentally the same' as the original in-house IT activities, so that TUPE would not apply. This could be a very costly mistake. In addition, there could still be a 'traditional transfer' of an undertaking which retains its identity under TUPE.

There will, of course, be other questions about which of the customer's staff members and how many of its IT workforce are in scope for TUPE, if it is likely to apply (see www.gov.uk/transfers-takeovers).

And it is worth reiterating that TUPE can apply equally to the subsequent move by the customer from one CSP to another, or back in-house to the customer, subject to the rules referred to above.

In cloud computing arrangements, it is quite likely that the CSP will be based outside the UK or that the cloud services will be provided from an offshore location. If there is an assigned workforce based in Great Britain, TUPE can apply to such arrangements, even if the service is provided from offshore. This is, however, likely to result in that assigned workforce becoming redundant.

TAXATION

Applicable tax rules

24 Outline the taxation rules that apply to the establishment and operation of cloud computing companies in your jurisdiction.

Consideration of the tax treatment of cloud computing will generally be more complex than in the case of 'terrestrial', in-country-only, IT services. This is because tax authorities and businesses alike are grappling with the tax implications of cloud computing. The first step required is to correctly classify the underlying transaction to ascertain the correct tax treatment. Individual elements within the scope of, and transactions comprising, the cloud services will need to be analysed, in order to determine whether there is a transfer of property to the customer (ie, a sale, lease or licence of tangible property). If there is no such transfer then it is necessary to consider the tax rules in respect of the provision of services, assuming that the cloud services are properly characterised as services (eg, data processing, an information service or a communications service). Consideration will also need to be given to the location of the cloud service provider (CSP) and its customers, to the source of the payments, and also to whether the location of the servers from which the services are provided can give rise to taxation.

The approach to taxation will also depend on the operating model of the supply chain of the cloud service, for example, whether it is intra-group or there are external providers in the supply chain and, if intra-group, whether the local CSP subsidiary performs sales and marketing functions for another group company or delivers the cloud services directly to local customers. (For an invaluable guide see Ernst & Young's Worldwide Digital Tax Guide.)

The following is a high-level outline of the UK taxes that are likely to be most relevant to cloud computing operations and the income derived from them. Readers - both CSPs and cloud customers – should seek specific advice on direct tax questions relating to UK cloud operations and service arrangements.

Corporation tax and permanent establishment (PE)

A company resident in the UK is subject to tax on the whole of its worldwide profits wherever they arise. A non-resident company is liable to corporation tax on profits attributable to a trade carried on in the UK through a PE in the UK. In determining whether a PE exists, the UK broadly adopts the OECD definition of PE. If a non-UK resident CSP has a fixed place of business in the UK through which some or all of its business is conducted, or has an agent acting on its behalf, it may be treated as having a PE in the UK and may be liable to UK corporation tax (currently 19 per cent). Will the presence of cloud servers in the UK be decisive in the determination of a PE? The HM Revenue & Customs (HMRC) approach is that the mere presence of a server or servers will not of itself create a PE. However, if the CSP is providing hosting services and the UK servers are essential for that hosting; this may result in the existence of a PE. Ultimately, whether a server will create a PE will depend on the functionality of the server or servers as well as the business activities in the UK.

UK diverted profits tax

Introduced in the Finance Act 2015 to counter the use of aggressive tax planning techniques by multinational enterprises to divert profits from the UK, this tax is also known as the 'Google tax'. It is charged at 25 per cent when a foreign company artificially avoids having a UK-taxable PE or when a UK company, or a foreign company with a UK PE, would benefit from a tax advantage (ie, a reduced UK tax liability) through the use of group structures, entities or transactions that lack economic substance. HMRC will consider various aspects of the structure, including the allocation of profits throughout the supply chain. (See generally www.gov. uk/government/publications/diverted-prof its-tax-guidance.)

Withholding taxes

Withholding taxes may apply at the rate of 20 per cent to sales, services and (in broad terms) income derived from annual payments, patent royalties and certain other payments arising from the exercise of intellectual property rights paid by a UK resident company to a non-UK resident person who is not a corporate taxpayer, subject to reduction under an applicable tax treaty. For example, withholding taxes may apply where in a CSP group structure, a non-UK, IPR-owning or licensor group company has put in place intra-group IPR licensing arrangements and the UK-based group CSP is required to remit payments to the non-UK licensor for the exploitation, licensing or distribution of that IPR. Legislation was enacted in the UK in 2016 to address the abuse of double taxation treaties in this context. (See, generally, http://taxsumman es.pwc.corn/ID/United-Kingdom-Corporate-Withholding-taxes.)

Offshore receipts in respect of intangible property

In 2019, the UK government introduced an income tax charge on offshore receipts from intangible property (ORIP). From 6 April 2019, non-UK residents in certain (generally low-tax) jurisdictions have been liable to UK income tax on their gross receipts from intangibles to the extent the IP enables, facilitates or promotes UK sales. The aim is to ensure that businesses generating income from UK sales are not able to artificially achieve low effective tax rates by holding their IP offshore. ORIP applies only if UK sales by the non-UK resident (and its connected persons) for a given tax year exceed £10 million, but it applies whether or not the non-UK resident has any presence in the UK. Several exemptions are available from the charge.

Businesses will need to determine whether their IP enables, facilitates or promotes UK sales, either directly or indirectly, and even through unrelated parties. Taxpayers may find it difficult to trace through often complex supply chains to determine whether their IP is supporting UK sales.

Taxing the digital economy

The UK government introduced a new Digital Services Tax in April 2020. It was introduced as an interim measure, until a multilateral solution that is acceptable to the UK is adopted. The UK government stated that it intends to disapply the tax once an appropriate international solution is in place. The UK has focused on 'user participation'. The government views user participation as being a key value driver for digital businesses and the legislation targets digital business models, where value is actually created as a result of the active participation and engagement of UK users of digital platforms. The business models that are impacted by these proposals include online marketplaces, social media platforms and search engines. To the extent that these models are served by cloud computing services and CSPs, they are likely to be relevant to the cloud computing industry operating in, or targeting customers in, the UK.

The digital services tax applies to revenue earned from 1 April 2020. Businesses are liable to the tax when the group's worldwide revenues from in scope digital activities are more than £500 million and more than £25 million of these revenues are derived from UK users. If the group's revenues exceed these thresholds, its revenues derived from UK users is taxed at a rate of 2 per cent. The first £25 million of the UK revenues are exempt from the digital services tax. These thresholds mean that only the very largest multinationals are caught, so while CSPs may be involved with in-scope activities, the thresholds may exclude them in practice.

Indirect taxes

25 Outline the indirect taxes imposed in your jurisdiction that apply to the provision from within, or importing of cloud computing services from outside, your jurisdiction.

Again, readers – both CSPs and cloud customers – are advised to seek specific advice on indirect tax questions relating to UK cloud operations and service arrangements. In particular, the rules outlined below will apply up to and including 31 December 2020, when the transition period for the UK's departure from the EU will end. There is significant uncertainty about whether the new regime will replicate or alter the current rules. We advise readers to be aware of the potential for significant change in this area.

The rules for applying VAT to electronically supplied services differ depending on whether the CSP and its customers are inside or outside the UK or the EU, whether the cloud services are for business or personal use, and if they are B2B supplies, whether they are used and enjoyed within the UK, elsewhere in the EU, or outside it.

A UK CSP will need to VAT register and will be liable to charge and account for VAT on the supply of cloud services delivered in the UK. However, supplies within a VAT group are generally disregarded for VAT purposes.

Non-UK suppliers will generally not need to VAT-register. For B2B transactions to a UK customer, VAT will generally be chargeable at the standard rate of 20 per cent. The customer will need to apply the reverse charge and may be able to recover the VAT depending on the outbound supplies it makes.

For B2C transactions, the place of supply will generally be where the supplier belongs. If the supplier is in the UK, UK VAT will generally be chargeable.

Non-EU CSPs providing cloud services to UK consumers are subject to a special set of rules. The supply is treated as made at the place of residence of the consumer. The CSP will be required to VAT register. There is a special scheme called the VAT Mini One Stop Shop, which allows such non-EU suppliers to account for VAT on supplies to the EU under one registration.

RECENT CASES

Notable cases

26 Identify and give details of any notable cases, or commercial, private, administrative or regulatory determinations within the past three years in your jurisdiction that have directly involved cloud computing as a business model.

Skyscape Cloud Services Ltd v Sky Plc [2016] EWHC 1340 (IPEC)

Skyscape supplied cloud services to UK public sector organisations under the G-Cloud scheme. Sky Plc is a well-known UK provider of broadcast and communications services (including an email service) under the trademark 'SKY'. Sky Plc claimed trademark infringement against Skyscape, the cloud service provider (CSP), which sought a declaration of non-infringement (DNI) for its marks 'SKYSCAPE' and 'SKYSCAPE CLOUD SERVICES' as applied to its cloud services. The court found that there was a likelihood that a significant part of the relevant public and therefore the average consumer, seeing the sign SKYSCAPE used for an email service, would confuse it with yet another service offered by Sky Plc. The DNI was refused. This case is mentioned because of the apparent popularity of the word 'sky' in the branding of cloud services and the position of Sky Plc in the UK market, together with its registered SKY trademarks. In the result, Skyscape was rebranded as UKCloud (for the background: www.thereg-isterco.uk/2016/07/28/skyscape_now_uk_cloud/). Unless CSPs are willing to forgo the use of 'sky' in branding and marketing their cloud services in the UK, cases of this kind will continue to proliferate.

See:

- the recent (and long-running) UK litigation involving a cloud migration company called SkyKick, which wanted to use SKY-prefix marks in relation to its cloud technology offering, *Sky Plc and others v SkyKick UK Ltd and another* (2018) EWHC 155 (Ch), *Sky Plc and others v SkyKick UK Ltd and another* [2020] EWHC 1735 (Ch)) (where the judge held that use of SKYKICK in relation to an email migration service (cloud migration) and a backup service (cloud backup) did infringe Sky's trade marks for SKY in relation to 'electronic mail services' and 'computer services for accessing and retrieving audio, visual and/or audio-visual content and documents via a computer or computer network' (notwithstanding the decision to limit certain terms in Sky's specifications, so that Sky's trade marks remain validly registered for 'electronic mail services'); and
- British Sky Broadcasting Group plc and others v Microsoft Corporation and another [2013) EWHC 1826 (Ch)).

Similar disputes have arisen about the use of the word 'cloud'. For example, in *Massive Bionics v EUIPO*, the EU General Court partially upheld an opposition by Apple to the registration of 'Dricloud' for cloud services by Massive Bionics on the basis that this sign was similar overall to Apple's own trademark 'iCloud' also covering cloud services.

UPDATE AND TRENDS

Key developments of the past year

27 What are the main challenges facing cloud computing within, from or to your jurisdiction? Are there any draft laws or legislative initiatives specific to cloud computing that are being developed or are contemplated?

None.

Coronavirus

28 What emergency legislation, relief programmes and other initiatives specific to your practice area has your state implemented to address the pandemic? Have any existing government programmes, laws or regulations been amended to address these concerns? What best practices are advisable for clients?

UK courts and tribunals

The pandemic has put pressure on the UK courts system, like any other public service, although the High Court divisions in which CSP disputes are most prevalent have adapted well to remote hearings. While no compulsory measures surrounding technology or commercial disputes have been introduced, the UK government has echoed calls from the wider legal community to give commercial parties adversely affected by the pandemic's effects 'breathing space'. Rather than rely on strict legal rights or issuing proceedings, parties are encouraged to consider negotiation and commercial compromise where possible. The Cabinet Office Guidance on responsible contractual behaviour and the concept notes issued by the British Institute of International and Comparative Law are the most notable.

Employment support schemes

The UK government has introduced a number of emergency measures and amended existing legislation to deal with the coronavirus pandemic. Key among these is the Coronavirus Job Retention Scheme (CJRS). This scheme runs from 1 March to 31 October 2020. It is designed to help employers whose operations have been severely affected by the pandemic to retain their employees and protect the UK economy. All employers have been eligible to claim under the CJRS, provided they satisfy the relevant conditions. In broad terms, employers have been able to furlough employees and receive grants covering 80 per cent of the furloughed employees' usual monthly wage costs, up to £2,500, together with (until August 2020) associated Employer National Insurance contributions and employer auto-enrolment pension contributions. With effect from August 2020, the CJRS is being wound down, with employers being required to bear progressively more of the furlough costs, until the CJRS closes on 31 October 2020.

The CJRS has been a particularly important support for employers who would otherwise have terminated employees as a result of the pandemic's impact on their businesses. The winding down of the CJRS raises the prospect of redundancies for those employers who are still materially affected by the pandemic.

The government has also introduced some additional temporary support measures in relation to sick pay as well as a bonus scheme to incentivise employers to bring furloughed employees back to work and a scheme to support younger workers.

Tax

The government's response has been a mixture of certain tax deferment measures and limited targeted tax cuts to assist specific business areas. The tax deferment measures include the ability to defer VAT payments due between 20 March 2020 and 30 June 2020 until 31 March 2021.

Insolvency reforms

The Corporate Insolvency and Governance Act 2020 (CIGA) came into force on 26 June 2020.

CIGA marks the most significant reform to the UK's corporate restructuring and insolvency framework in over 15 years, by introducing:

- a moratorium designed to give companies a breathing space from creditor action while they explore restructuring options,
- a new restructuring plan to provide a mechanism for compromising creditor claims and facilitating a rescue of the company, and
- a prohibition on insolvency termination clauses to protect supply and allow businesses to continue to trade.

In addition to these permanent reforms, CIGA introduced a number of temporary measures aimed at supporting businesses through the economic impact of the coronavirus pandemic. These include:

- a temporary restriction on the use of statutory demands and winding up petitions, and
- a temporary suspension of wrongful trading.

Data protection

The ICO has released a statement on its regulatory approach during covid-19, recognising the pressures that regulated entities have faced as a result of the pandemic. The statement promises an empathetic and pragmatic approach to regulation, but notes that information rights should be considered as part of a company's recovery plans.

Force majeure

As a general response to the covid-19 outbreak, we are seeing clients undertaking systematic reviews of their contracts to assess whether a force majeure event has taken place and whether this will excuse delayed or non-performance of contractual obligations. From an English law standpoint, a party will only be able to rely on force majeure: (1) if the contract contains an express FM clause; and (2) if the event that the party is relying on is within the scope of the particular clause, as drafted. A party is likely also to have to meet certain notification requirements, as prescribed by the individual contract and is likely to under a duty to mitigate the effects of any FM event. The text of the clause and the particular factual matrix are therefore key. In the absence of an FM clause, parties wishing to be excused liability for late or



Marcus Pearl marcus.pearl@bclplaw.com

Governor's House 5 Laurence Pountney Hill London EC4R 0BR United Kingdom Tel: +44 20 3400 1000 www.bclplaw.com

non-performance would need to prove instead that the contract has been frustrated. The bar for showing frustration of a contract is much higher under English law. There have not been any English decisions to date dealing with either the interpretation of a force majeure clause in the context of covid-19 or alleging that the impact of covid-19 has been to frustrate the objectives of a contract.

* The author would like to thank BCLP colleagues Anna Blest, Kate Brimsted, Sarah Breckenridge, Anne Powell, Samantha Paul, Sophie Taylor, Adam Turner and Ash von Schwan for their assistance in writing this chapter.

Other titles available in this series

Acquisition Finance Advertising & Marketing Agribusiness Air Transport Anti-Corruption Regulation Anti-Money Laundering Appeals Arbitration Art Law Asset Recovery Automotive Aviation Finance & Leasing Aviation Liability **Banking Regulation Business & Human Rights Cartel Regulation Class Actions Cloud Computing Commercial Contracts Competition Compliance Complex Commercial Litigation** Construction Copyright **Corporate Governance** Corporate Immigration **Corporate Reorganisations** Cybersecurity Data Protection & Privacy **Debt Capital Markets Defence & Security** Procurement **Dispute Resolution**

Distribution & Agency Domains & Domain Names Dominance **Drone Regulation** e-Commerce **Electricity Regulation Energy Disputes** Enforcement of Foreign Judgments **Environment & Climate** Regulation **Equity Derivatives Executive Compensation & Employee Benefits Financial Services Compliance Financial Services Litigation** Fintech Foreign Investment Review Franchise Fund Management Gaming Gas Regulation **Government Investigations Government Relations** Healthcare Enforcement & Litigation Healthcare M&A **High-Yield Debt** Initial Public Offerings Insurance & Reinsurance Insurance Litigation Intellectual Property & Antitrust Investment Treaty Arbitration Islamic Finance & Markets Joint Ventures Labour & Employment Legal Privilege & Professional Secrecy Licensing Life Sciences Litigation Funding Loans & Secured Financing Luxury & Fashion M&A Litigation Mediation Merger Control Mining **Oil Regulation** Partnerships Patents Pensions & Retirement Plans Pharma & Medical Device Regulation Pharmaceutical Antitrust Ports & Terminals **Private Antitrust Litigation** Private Banking & Wealth Management **Private Client Private Equity** Private M&A **Product Liability Product Recall Project Finance**

Public M&A **Public Procurement** Public-Private Partnerships Rail Transport **Real Estate** Real Estate M&A **Renewable Energy** Restructuring & Insolvency **Right of Publicity Risk & Compliance Management** Securities Finance Securities Litigation Shareholder Activism & Engagement Ship Finance Shipbuilding Shipping Sovereign Immunity Sports Law State Aid Structured Finance & Securitisation Tax Controversy Tax on Inbound Investment Technology M&A Telecoms & Media Trade & Customs Trademarks Transfer Pricing Vertical Agreements

Also available digitally

lexology.com/gtdt