slalom

LEGAL & OPEN MODEL TERMS FOR CLOUD SLA AND CONTRACTS

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Introduction

In most European jurisdictions, cloud computing services are generally not specifically regulated under law or directly addressed in case law [1].

While case law that expressly mentions cloud computing contracts is still scarce, the courts have issued decisions that may in fact apply to these contracts even though direct reference to cloud computing is not made[2].

As a result, if no contractual provisions have been agreed by the provider and the adopter, it may not be clear which main rules should govern the contractual relationship.

The purpose of this document is to illustrate how cloud computing agreements can be classified under the legislations of EU Member countries such as Germany, Italy, France, UK and Greece, and whether this type of contract can be likened to standard model contracts ruled by the contract law of each jurisdiction or envisioned under relevant case law.

In civil law countries, legislation provides several standard model contracts concerning transactions typically taking place between parties.

In the history of legislation, this was the approach taken in the area of the Roman-Germanic law tradition. With the codification of the first civil codes, the lawmaker provided, among other things, a set of essential provisions applicable to the main contracts[3].

In most cases these provisions are not mandatory but apply if the parties have not governed the relevant points in their agreements or have no contract at all in place.

In common law countries, in the absence of a civil code that provides standard model contracts, we find that rules concerning contracts are provided by special laws (i.e.: statutes) and case law.

This document will also provide an overview of the essential provisions deriving from the codes or case law to the extent that they may apply to cloud computing agreements.

Section 1: – Cloud computing contracts under Italian law

1.1 Classification of cloud computing contracts

[1] The proposal of European Directive COM(2015) 634 is under discussion "*on certain aspects concerning contracts for the supply of digital content*": as the definition of digital content also includes "[…] (b) *a service allowing the creation, processing or storage of data in digital form, where such data is provided by the consumer, and (c) a service allowing sharing of and any other interaction with data in digital form provided by other users of the service […].*" We can assume that the supply of cloud computing services may also be considered a supply of digital content. As a result, the provisions provided in the proposal would also apply to this type of contract. In any case, the provisions mainly contain consumer protection measures and do not provide a complete set of rules applicable to cloud computing contracts.

[2] European Commission, *Comparative Study On Cloud Computing Contracts, Final Report*, March 2015, pag. 8.

[3] France was the first to codify standard model contracts in the Napoleon Code of 1804, followed by Germany in the German Civil Code of 1900. The Italian Civil Code is dated 1942andprovides standard models for sales contracts (Articles 1470-1547), barter contracts (Articles 1552-1555); supply of goods contracts (Articles 1559-1570); lease contracts (Articles 1571-1654); contract work (Articles 1655-1677); transport contracts (Articles 1678-1702) and several others.

Before cloud computing contracts were identified as such, authors discussed the nature of contracts for the outsourcing of electronic systems which, to some respect, may be considered a precursor of cloud computing service contracts[4].

The outsourcing of electronic systems has been defined as the transfer to an external provider of all technologies and human resources, as well as the transfer of responsibility of management by the provider of the information technology services[5].

Typically, this type of contract includes a first step whereby the information technology resources are transferred (migration), and a second step in which the external provider is entrusted with the information technology services once the migration has been completed.

Most authors consider the above a supply of service contract, which under Italian law is regulated by Article 1677 of the Italian Civil Code (hereinafter, "ICC")[6]. According to their interpretations, cloud computing service contracts should be classified as a service contract rather than as a lease agreement or supply contract[7].

Article 1677 of the ICC provides that: "*If the subject matter of the contract is the continuous or periodic performance of services, the provisions of this chapter* [i.e.: the chapter relating to "contract work", Article 1655 and following of the ICC] *and those relating to standard "supply contracts"* [i.e.: Article 1559 and following of the ICC] *apply to the extent that they are compatible*[8]". In other words, under Italian contract law, service contracts are ruled in part according to the rules applicable to contract work contracts and in part to those applicable to supply of goods contracts.

Cloud computing has been defined as follows:

"*Cloud computing is a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and*

[4] Alessandro Musella, *Il contratto di outsourcing del sistema informativo*, Diritto dell'Informazione e dell'Informatica, 1998, pag. 859; Federico Tosi, *Il contratto di outsourcing informatico*, 2001.

[5] Federico Tosi, *Il contratto di outsourcing informatico*, 2001, pag. 5 ; Willcocks L.P., Lacity M, *Strategic sourcing of information system*, 1998, pag. 4.

[6] Rossello, *I contratti dell'informatica nella nuova disciplina del software*, 1997, 97; Cardarelli*, La cooperazione fra imprese nella gestione di risorse informatiche: aspetti giuridici del c.d. "outsourcing"*, Dir. Informaz. e informatica, 1993, 94; Alessandro Musella, *Il Contratto di Outsourcing del Sistema Informativo*, Diritto dell'Informazione e dell'Informatica, 1998, pag. 859; Zincone, *Il Contratto di Outsourcing: natura, caratteristiche, effetti*, Rivista Dir. Autore 4/2002, pag. 379; Ricci, *L'outsourcing e cloud computing*, in Diritto dell'informatica, of Finocchiaro, pag. 669. This last author points out that because there may be major differences in how different outsourcing agreements are performed, it is necessary to assess on a case-by-case basis, as it is not always possible to consider them as a service contract.

[7] Even if other fulfilments, such us the lease or the supply of goods, may be included in the above contracts, the "main" fulfilment must be considered as the most important fulfilment in the contract. Accordingly, in line with the "theory of absorption" (in Italian: "*teoria dell'assorbimento*"), which is considered the most reliable theory in relation to contracts that entail a range of fulfilments, these types of contracts (so called "mixed contracts") should be ruled in accordance with the provisions applicable to the main fulfilment. In the case of cloud computing, the most important fulfilment is the supply of a service. Consequently, the provisions of law applicable to the supply of services should apply.

[8] In this document, the translation of the Articles of the Italian Civil Code are from: "*The Italian Civil Code and Complementary Legislation*", translated by Mario Beltramo, Giovanni E. Longo, John H. Merryman, New revised and updated edition by Mario Beltramo, Oceana Publications, Inc., Dobbs Ferry, N.Y. Release 91-1, Issued March 1991.

services) that can be rapidly provisioned and released with minimal management effort or service provider interaction […]"[9].

Some authors have underlined that, unlike electronic system outsourcing contracts, many cloud computing services do not entail specific services for specific adopters, but are typically standard services provided on a general basis to all adopters. Moreover, according to these authors, cloud computing contracts are very often not negotiated with the adopters.

Consequently, cloud computing contracts should not be equated to a services contract as regulated by Article 1677 of the ICC. According to these authors, the service contracts under Article 1677 of the ICC are characterized by their strictly personal nature (i.e.: "*intuitus personae*") and therefore do not qualify as standard services.

In line with this interpretation[10], cloud computing contracts should instead be considered as non-standard contracts (in Italian: "*Contratti atipici*"[11]). As a consequence, they should not fall into the category of the standard model contracts provided by the ICC (or other laws) and the contract provisions should be entirely agreed by the parties since it is not possible to find applicable provisions in any standard model.

Other authors argue that cloud computing contracts should be considered as mixed contracts that share the features of both service contracts and license contracts[12].

According to this interpretation, the service aspect concerns the supply of information technology services, while the license aspect relates to the software provided by the provider (or third parties) on the cloud platform used by the adopter.

It could be argued that a license is not needed for software used by adopters through cloud platforms. If anything, a license would be needed by adopters to use the software installed on their own computers.

It is worth noting that, according to the majority of authors, a license contract is similar to a lease contract wherein the licensee has the right to use a good in its possession[13].

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[9] The NIST Definition of Cloud Computing, Recommendations of the National Institute of Standards and Technology, by Peter Mell Timothy Grance. According to the definition: "*This cloud model is composed of five essential characteristics, three service models, and four deployment models*". The five essential characteristics are On-demand self-service, Broad network access, Resource pooling, Rapid elasticity, Measured service. The three service models are Software as a Service (SaaS), Platform as a Service (PaaS), Infrastructure as a Service (IaaS). The four deployment models are Private cloud; Community cloud, Public cloud, Hybrid cloud.

[10] Fabiano, *I nuovi paradigmi della rete. Distributed computing, cloud computing e "computing paradigms": abstract sugli aspetti e i profili giuridici*, http://www.diritto.it/docs/27973-i-nuovi-paradigmi-della-rete-distributed-computing-cloud-computing-e-computing-paradigms-abstract-sugli-aspetti-e-i-profili-giuridici?page=3.

[11] Non-standard contracts are allowed under Italian law: Article 1322 of the ICC provides that "*The parties can also make contracts that are not of the types that are particularly regulated, provided that they are directed to the realization of interests worthy of protection according to the legal order*".

[12] Mantelero, *Il contratto per l'erogazione alle imprese di servizi di cloud computing*, in Contratto e Impresa 4-5/2012, pag. 1219; Limone, I Contratti di Cloud, at http://www.comparazionedirittocivile.it/prova/files/limone_cloud.pdf, pag. 4; Ricci, *l'Outsourcing e cloud computing, in Diritto dell'informatica*, of Finocchiaro, pag. 673.

[13] Sbisà, *Profili generali dei contratti di utilizzazione dei computers*, in I contratti di utilizzazione del computer, by Alpa, Milan, 1984, p. 23; La Rosa, *Lineamenti dei contratti di fornitura dei computers e dei servizi informatici*,

As in cloud computing services, generally, the software is installed on the provider's servers and given that the adopter uses it via remote computer ("as a service"). It could be disputed that the adopter should be granted a license on the software since it is not reproduced, copied, installed, stored or working in any way on the adopter's computer[14].

Finally, most of the authors adopting this view hold that cloud computing contracts, like electronic system outsourcing contracts, may be likened to service contracts regulated by Article 1677 of the ICC [15] for the following reasons.

In cloud computing contracts, the provider, in line with Articles 1655 and 1677 of the ICC, undertakes to render periodic or continuous services organizing the necessary means and operating at his own risks, in return for monetary compensation.

Even if, in some cases, cloud computing services are not specifically designed for the adopter, as often happens with outsourcing agreements, it could be argued that by choosing one specific provider, transferring to the provider important data and information, and requesting services that are important to the company, the adopter trusts in the capability of the provider to correctly store and process such data and provide the services.

Therefore, we cannot deny that, in this case, the contract is a kind of personal contract ("*intuitus personae*") where the identity of the provider is an essential factor in the adopter's decision to appoint it as a service provider[16].

In cloud computing contracts, as in every service contract governed by Article 1677 of the ICC, the "performance of a service" seems to prevail over other possible fulfilments, such as the ongoing supply of goods, which would fall under the application of Article 1559 of the ICC on supply of goods contracts.

Storing and processing data, providing remote use of software, or providing other information technology services cannot be considered merely a supply of goods[17] where the performance of a service is a means to the end of the subsequent supply of goods. In the case of cloud computing

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in Giur. Comm., 1986, I, pag. 339; F. Galgano, *La cultura giuridica italiana di fronte ai problemi informatici (considerazioni di sintesi)*, in I Contratti di informatica, by Alpa, V. Zeno-Zencovich, Milan, 1987, pag. 379.

[14] Under Italian law, one of the main obligations of the lessor is to guarantee the peaceful enjoyment of the object of the lease during the lease period (Article 1575 of the ICC). The lessee in turn has several obligations and rights connected with the possession of the good (e.g.: receiving the good and observing the diligence of a good *pater familias*, Article 1587 of the ICC, returning the good at the end of the lease, Article 1590; shouldering responsibility if the good is lost, Article 1588, having a right of sublease, Article 1594, having the obligation to maintain the good in good condition, Article 1576). It is possible to argue that a lease should never concern a good that is not in the possession of the lessee but in the possession of third parties.
Software license contracts generally entitle the licensee to use the software installing and reproducing the software on the licensee's computer. If any third party needs to use the software through its computer (even if for the benefit on someone else), it would need to be granted with a further license.

[15] Bendandi, *Software as a Service (SaaS): aspetti giuridici e negoziali*, pag. 2, http://www.altalex.com/documents/news/2008/12/18/software-as-a-service-saas-aspetti-giuridici-e-negoziali; DigitPA, Raccomandazioni e proposte sull'utilizzo del Cloud Computing nella pubblica amministrazione, 2012, pag. 19, at http://www.agid.gov.it/sites/default/files/documenti_indirizzo/raccomandazioni_cloud_e_pa_-_2.0_0.pdf.

[16] Galgano, *Il Contratto*, 2007, pag. 315. The author points out that in personal contracts the most important elements when one party decides to enter into an agreement with another party (natural person or legal entity) are the identity and personal qualities of that other party .

[17] Italian Court of Cassation ruling no. 12546/2003.

contracts, the purpose of the activity is the establishment of a service and the subsequent supply thereof for the benefit of the adopter through the use of technological means.

In view of the above, it could be argued that cloud computing agreements should be considered akin to service contracts governed under Article 1677 of the ICC.

1.2 Consequences of classifying cloud computing contracts as service contracts as per Article 1677 of the Italian Civil Code

If cloud computing contracts are classified as services contracts, the provisions set forth in the ICC for this latter type of contract would have to apply.

The parties should take into account that Article 1677 of the ICC will apply if the terms of contract do not set forth otherwise. If nothing is mentioned on this point and the contract does not expressly exclude the applicability of or partial derogations to the ICC provision, it could be argued that the ICC rules governing the standard models also apply to the relationship of the parties.

In the following paragraph 1.2.1, an overview of the Articles of the ICC that could apply to cloud computing contracts is provided[18].

1.2.1 Provision of services

As stated in paragraph 1.1 above, Article 1677 of the ICC provides that service contracts do not have their own specific standard model[19] but are to be ruled by the provisions applicable to standard contract work contracts (or "independent contracts") (Article 1655 of the ICC) and those applying to supply of goods contracts (Article 1559 of the ICC).

Article 1655 of the ICC provides that:

"*The contract work is a contract by which a party undertakes to perform a piece of work or render services, organizing the necessary means and operating at his own risk, in return for compensation in money*".

Article 1559 of ICC states that:

"*A supply contract is one by which a party binds himself to supply another with things continuously or periodically, in return for a price*".

It is important to note that cloud computing contracts do not entail a compensation in money in exchange for services especially mass cloud services, and thus, according to the above definition, cannot be equated to a service supply contract as regulated under Article 1677 of the ICC[20].

[18] In the following paragraph 1.2 we refer solely to main provision included in the Italian Civil Code ruling service contracts to the extent they may apply to cloud computing contracts. With reference to any other laws and regulation generally applicable to cloud computing contracts under Italian laws and regulations, see Deliverable 2.2.

[19] Many authors point out that in 1942, when the ICC was drafted, service contracts were not so important to the economy at the time. As a result, lawmakers did not see the need to provide a specific standard model for this type of contract. Instead, it was decided that the rules governing both contract work contracts and supply contracts would be the points of reference.

[20] In this respect, we note that the proposal of European Directive COM(2015) 634 "on certain aspects concerning contracts for the supply of digital content", Article 3, paragraph 1, sets out that: "*This Directive shall apply to any contract where the supplier supplies digital content to the consumer or undertakes to do so*

1.2.2 Quantity of services

Another Article of the ICC which could apply to cloud computing agreements is Article 1560:

"*If the amount to be supplied is not established, it is deemed to correspond to the normal requirements of the customer as of the time of making the contract.*

If the parties have established only a maximum and a minimum limit for the entire supply contract or for each instalment, the right to establish the quantity due, within those limits, vests in the customer.

If the quantity to be supplied is to be determined in relation to requirements and a minimum quantity was agreed upon, the customer is bound for the quantity corresponding to his requirements if this exceeds the agreed minimum".

This provision could be considered as the first model clause of a service level agreement. Such a clause could apply in all cases in which the parties have not established a clear quantity or the parameters of the cloud services.

Also in light of this clause, it would be advisable for the parties (whose contracts are governed by Italian law) to always set out the service levels of the cloud services in order to avoid the application of Article 1560 of the ICC to their contractual relationship, which could lead to unexpected and uncertain consequences.

1.2.3 Duration - Termination

Article 1569 of the ICC provides that:

"*If the duration of the supply is not established, each of the parties can withdraw from the contract by giving notice within the time agreed upon or established by usage or, in the absence thereof, within a reasonable time with regard to the nature of the supply*".

Generally speaking, this clause is applicable to cloud computing services. However, in most cases, the contracts models used on the market have a final term and are not open-ended. In any case, according to a possible interpretation, in the absence of this final term, the above provision on the withdrawal rights of the parties would apply.

It is worth noting that according to some authors, the application of Article 1569 cannot be admitted because it could be in conflict with the application of the Article 1671 of the ICC.

Article 1671 of the ICC on "Unilateral withdrawal from contract" (referring to contract work contracts) states that:

"*The customer can withdraw from the contract even after the performance of the work or service has begun, provided that he compensates the contractor for the expenses sustained by him, for the work accomplished and for his lost profit*".

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and, in exchange, a price is to be paid, or the consumer actively provides counter-performance other than money in the form of personal data or any other data"(our underlining). Accordingly, the proposal established that the counter-performance of the supply of digital content can also be the provision of personal or other data.

Academics have differing opinions as to whether the application of Article 1569 to service contracts excludes the application of Article 1671[21].

The key point is to understand the rights of the parties in relation to termination and the consequences of termination.

According to a decision of the Italian Court of Cassation[22], the two Articles are both applicable to service contracts because they rule different aspects of the relationship: Article 1569 of the ICC rules the duration of the relationship, while Article 1671 rules the unilateral withdrawal of the customer[23].

If Article 1671 applies to service contracts, the consequence on cloud computing contracts could be that if the contract does not exclude a termination right, the adopter may claim to have the right to terminate the contract and only be obligated to pay the provider the expenses borne by the provider for the work performed and for any lost profit.

It is worth noting, once again, that the above provision applies only in the absence of provisions concerning termination right and the possible consequences of termination.

1.2.4 Subcontracting

Article 1656 of the ICC states:

"*A contractor cannot subcontract the performance of the work or services, unless he has been authorized to do so by the customer*".

According to some authors, the reason for this provision is that the customer appointed the contractor because the customer trusted in the contractor's capacity to perform the service (so called "*intuitus personae*")[24].

In cloud computing contracts, this provision could raise several issues as it could and does often happen that the provider subcontracts certain activities or fulfilments to other providers. Indeed, if nothing is provided on this point in the agreement, the adopter could object that the subcontract was not authorized.

In light of the above, in contracts governed by Italian law, from the provider prospective, it is important to set out in the contract whether or not the provider is authorized to subcontract its activities.

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[21] Rubino-Iudica, *Dell'Appalto in Commentario del Codice Civile*, by Scialoja-Branca, 1992, pag. 500. This author argues that the application of Articles 1569 and 1373, paragraph 2 (this latter is the Article of the ICC providing that "*In contracts for continuous or periodic performance, such power can also be subsequently exercised, but the withdrawal has no effect as to performance already made or in course*") implies that both parties may withdraw from the contract and that the compensation to be paid to the provider upon withdrawal is limited to the services already completed or in progress and that no indemnity or reimbursement of costs is due. Other authors disagree: Rubino-Sammartano argues that the two Articles may both apply without one excluding the other (Rubino-Sammartano, *Appalti di opere e contratti di servizi in diritto privato*, 1996, pag. 675). Bocchini deems that the two Articles provide a divergent ruling of the same point(Bocchini, *La somministrazione di servizi*, 1998, pag. 323).

[22] Italian Court of Cassation ruling no. 4783 of 13 June 1983, GI 1984, I, c. 806.

[23] Many authors agree with the interpretation of the Italian Court of Cassation: Musolino, *Il recesso e le altre cause di estinzione del contratto di appalto*, in RTA, 51-89; Tosi, *Il Contratto di Outsourcing di sistema informatico*, 2001, pag. 78; Bocchini, *La somministrazione di servizi*, 1998, pag. 322.

[24] Rubino-Judica, *Dell'appalto*, in *Commentario del codice civile*, by Scialoja-Branca, pag. 217.

1.2.5 Materials to perform the services

Article 1658 of the ICC provides that:

"*The materials necessary to perform the work shall be furnished by the contractor, unless otherwise agreed by the parties or provided by usage*".

This article may also apply to service contracts. With reference to cloud computing services, it could be argued that according to this provision, the provider is responsible for providing all the hardware and software necessary for the work, scope, or purposes set forth in the agreement with the adopter, such as applications or software provided by the parties.

In light of this provision, it is important that cloud computing contracts be very clear in specifying the responsibilities of the provider and those of the adopter in relation to the resources to be used to supply the services. The contract must specify, for instance, if the adopter must separately purchase a third-party license to be installed on the provider's platform or if this is up to the provider.

1.2.6 Variations

Articles 1659, 1660, 1661 of the ICC concern variations with respect to plans. The application of these Articles to service contracts (and therefore to cloud computing contracts) has been debated.

Article 1659 of the ICC (Variations agreed upon with respect to plans) provides that:

"The contractor cannot vary from the stipulated manner in which the work is to be done, unless such variations have been authorized by the customer.

Evidence of such authorization must be in writing.

Even when variations have been authorized, the contractor is not entitled to any compensation for such variations or additions if the price of the entire work has been determined in a lump sum, unless otherwise agreed."

This Article is unlikely applicable to standard cloud services, which are provided on a non-specific basis to all adopters and contain standard terms and conditions.

, Differently, the provision could apply to cloud computing services specifically designed for the adopter . However, it should be noted that the provider must ask the customer to authorize any changes in the services and that any consequent fee change must be agreed by the parties, otherwise the fee will not be due.

Those who argue that the last paragraph of Article 1659 of the ICC does not apply instead deem applicable the third paragraph of Article 1562 of the ICC, which states that: "*In periodic supply contracts, the price is paid according to the customary terms*"[25].

Article 1660 of the ICC (Necessary variations in plans) provides that:

[25] Bocchini, *La somministrazione di servizi*, 1999, pag. 197 deems that this Article is applicable to service supply contracts; Cottino, *Del Contratto estimatorio. Della somministrazione*, in Commentario del codice civile by Scialoja-Branca, 1970, pag. 219 opposes the application of Article 1660 of the ICC to service supply contracts.

"If, in order to carry out the work according to the standards of the trade, it is necessary to make variations in the plans, and the parties fail to agree in that respect, it is the duty of the court to establish what variations are to be made and the related variations in the price.

If the amount of the variations exceeds one-sixth of the total price agreed upon, the contractor can withdraw from the contract and can, according to the circumstances, receive a just indemnity.

*If the variations are of considerable importance, the customer can withdraw from the contract and is bound to pay a just indemnity***".**

The question of whether this provision also applies to service contracts or only to work contracts has led to differing opinions[26].

If we acknowledge that Article 1660 applies to service contracts, it could also apply to all cases in which cloud computing services are specifically designed for an adopter and in which in order to achieve the service levels, the purpose or the objectives agreed in the contract the services need to be changed.

With reference to cloud computing agreements and due to the uncertainty deriving from the application of the above provision, it is advisable to exhaustively regulate all issues concerning variations in the services.

Article 1661 of the ICC ("Variations ordered by customer") provides that:

"*The customer can make variations in the plan, provided that they do not involve an amount in excess of one-sixth of the total price agreed upon. The contractor is entitled to compensation for the additional work performed by him even if the price for the work has been determined in a lump sum.*

The provision of the preceding paragraph is not applicable when the variations, even though contained within the above limits, involve considerable changes in the nature of the work or in the amount of any category of work provided for in the contract for the performance of the entire work"

According to some authors, Article 1661 of the ICC is not applicable to service contracts, which, they argue, should be governed under Article 1560 of the ICC concerning supply contracts (see paragraph 1.2.1).

We agree with those authors who point out that the two Articles concern different aspects and that the application of one provision does not rule out the application of the other[27].

If nothing has been agreed by the parties on this point in the cloud computing agreement, Article 1661 of the ICC could have important consequences as it could be argued that, by means of this provision, the adopter can change the services both in the service design phase and in the service supply phase.

It is therefore advisable that the parties regulate if and to what extent the adopter can change the services.

[26] Cottino, *Del Contratto estimatorio. Della somministrazione*, in Commentario del codice civile by Scialoja-Branca, 1970, pag. 219 argues that Article 1660 of the ICC is not applicable to service contracts. Bocchini, *La somministrazione di servizi*, 1999, pag. 197 deems that Article 1660 of the ICC is applicable also to service contracts such as services subject to technology development which need to be constantly updated.

[27] Federico Tosi, *Il Contratto di Outsourcing di Sistema Informatico*, 2001, pag. 68.

1.2.7 Inspection of the services

Article 1662 of the ICC concerns the topic of "Inspection of work in progress".

This Article provides that:

"*The customer has the right to check the progress of the work and to inspect the condition thereof at his own expense.*

When, in the course of the work, it is ascertained that performance is not proceeding in accordance with the conditions established by the contract and according to the standards of the trade, the customer can establish a suitable time limit within which the contractor must conform to such conditions; if such time limits expires without results, the contract is terminated without prejudice to the right of the customer to be compensated for damages".

Some authors hold that both paragraphs apply to service contracts[28].

Other authors[29] argue that only the first paragraph applies to service contracts while the second paragraph should apply together with Article 1564 of the ICC on "Dissolution of contract" which states the following:

"*In case of non-performance of a single instalment by one of the parties , the other can request dissolution of the contract if the default is significant and is such as to reduce confidence in the punctuality of subsequent performances*"

With reference to cloud computing services (especially if there is not a separate design phase to be approved by the adopter), the second argument seems to be the most advisable.

In the absence of a provision agreed by the parties on this point, it could be argued that the adopter could have the right to inspect the electronic system of the provider to check that the provider is able to supply the services as envisioned in the agreement.

If default is committed , the adopter can request the termination of the agreement if the default is significant and is such as to reduce confidence in the supply of the cloud services on an on-going basis.

1.2.8 Default

The already-mentioned Article 1564 of the ICC provides that:

"*In case of non-performance of a single instalment by one of the parties , the other can request dissolution of the contract if the default is significant and is such as to reduce confidence in the punctuality of subsequent performances*"

This provision on default appears to be fully applicable to service contracts as well as cloud computing services, unless the parties have agreed otherwise on this point.

We note that the right to request dissolution is possible for the cloud service provider if the adopter is in material default in terms of payment , but also if the provider is in material default in terms of the supply.

[28] Bocchini, *La somministrazione di servizi*, 1991, pag. 191.
[29] Rubino-Sammartano, *Appalti di opere e contratti di servizi in diritto privato*, 1996, pag. 674.

1.2.9 Suspension of the supply

Article 1565 of the ICC provides that:

"*If the customer has failed to perform and the default is of slight importance, the supplier cannot suspend his performance of the contract without giving reasonable advance notice*".

If the parties have not clearly set out that the provider has the right to suspend the contract , the above provision could also apply to cloud computing services.

1.2.10 Price increase or reduction due to external events

Article 1664 of the ICC sets out that:

"*If as a result of unforeseeable circumstances, there have occurred such increase or reductions in the cost of the materials or of labor as to cause an increase or reduction by more than one-tenth of the total price agreed upon, the contractor or the customer can request that the price be revised. The revision can only be granted for that part of the differences which exceeds one-tenth*."

It is unclear if service supply contracts should be governed by this provision or by Article 1467 of the ICC which is a general provision on "Excessive Onerousness"[30] applying to all standard contracts.

However, we cannot exclude that in force of Article 1664, the provider could ask a review of the fees in light of any additional costs (exceeding one-tenth of the total fees) it must bear in relation to hardware or software and as a result of circumstances not foreseeable at the time the agreement was entered into.

On the other hand, the adopter could also claim that because of a reduction in software or hardware costs , the provider must reduce the price to be paid by adopter.

Because of the uncertainty of the application of above provision, it is advisable that the parties in their agreement provide that the price will be revised in light of any unforeseeable events or that it will remain unchanged regardless.

1.2.11 Warranty for defects

Article 1667[31] and 1668[32] of the ICC concerns defects and non-conformity. Generally speaking, it is safe to say that they can be applied to service contracts such as cloud computing contracts.

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[30] Article 1467 of the ICC provides that: "*In contracts for continuous or periodic performance or for deferred performance, if extraordinary and unforeseeable events make the performance of one of the parties excessively onerous, the party who owes such performances can demand dissolution of the contract, with the effects set forth in Article 1458 of the ICC.*
Dissolution cannot be demanded if the supervening onerousness is part of the normal risk of the contract.
A party against whom dissolution is demanded can avoid it by offering to modify equitably the conditions of the contract".

[31] Article 1667 of the ICC: "*Non conformity or defects in work. The contractor is bound to warrant the customer against non-conformity or defects in the work. The warranty does not apply if the customer has accepted the work and the changes or defects were known to him or were detectible, provided that such defect were not passed over in silence by the contractor in bad faith.*
The customer shall, under penalty of forfeiture, notify the contractor of the non-conformity or defects within sixty days from the discovery thereof. The notice is not necessary if the contractor acknowledged such non-conformity or defects or concealed them.

However, some authors have pointed out that cloud computing contracts normally include provisions on the quality and quantity of the services as well as on the consequences arising if the services do not comply with the contract requirements. In other words, it is very common for cloud computing contracts to already include the requirements, characteristics and metrics of the service.

Provisions on quality and quantity of services or default in correctly providing the services should generally replace the application of the above warranty for defects.

If the contract does not contain any provisions on how the services are to be provided or their characteristics, the adopter could claim that the above warranty is applicable despite the unlikelihood of applying it to cloud computing services.

The application of Article 1672 of the ICC concerning "Impossibility of performance of the work"[33] is a subject of much discussion among academics According to some authors[34] this provision is not applicable because it is not possible to have a "partial delivery of service".

With reference to cloud computing, the effective application of Article 1672 of the ICC seems quite unlikely seeing that the services are supplied on an on-going basis: in cloud computing it is not possible to clearly distinguish a "moment of the delivery" of the service or identify a partial delivery as in a contract work.

1.2.12 Provisions of the ICC not applicable to service contracts and/or cloud computing services

The ICC provides three clauses in relation to supply contracts concerning "Right of first refusal" (Article 1566), "Exclusive dealing clause in favour of supplier" (Article 1567) and "Exclusive dealing clause in favour of the customer" (Article 1568). Although, according to some authors, these Articles may also apply to service contracts, the rules included therein do not seem to apply to cloud computing services[35].

Articles 1665 of the ICC on “Testing of and payment for work” and 1666 on “Testing and payment of individual parts” are not applicable to service contracts nor to cloud computing services as a work per se is not supplied.

Article 1673 of the ICC on "Destruction or deterioration of the property" also does not apply to cloud computing services as the services are not themselves subject to destruction or deterioration.

The action against the contractor shall be prescribed [2934] in two years from the date of delivery of the work. A customer who is sued for payment can always enforce the warranty, provided that notice of the non-conformity or defects was given within sixty days from discovery thereof and within two years from delivery”.

[32] Article 1668 of the ICC: "*Contents of warranty against defects in work. The customer can demand that the non-conformity or defects be eliminated at the expense of the contractor or that the price be reduced proportionately, without affecting compensation for damages in case of fault of the contractor*.
However, if the non-conformity or defects in the work are such to render the work completely inadequate for its purpose, the customer can demand the dissolution of the contract".

[33] Article 1672 of the ICC: "*Impossibility of performance of work. If the contract is terminated because performance of the work has become impossible due to causes which cannot be imputed to either party, the customer must pay for that part of the work which has already been completed, to the extent that the work is useful to him, in proportion to the price agreed upon for the whole work*".

[34] Federico Tosi*, Il contratto di outsourcing di sistema informatico*, Giuffré, pag. 67; Bocchini, *La somministrazione di servizi*, 1991, pag. 203.

[35] Federico Tosi*, Il contratto di outsourcing di sistema informatico*, Giuffré, pag. 64.

Articles 1674 and 1675 of the ICC concerning respectively "Death of independent contractor", and "Rights and obligations of contractor's heirs". Although, generally speaking, these provisions are applicable to service contracts, they are not applicable to cloud computing services as normally these are not provided by natural persons.

Section 2: – Cloud computing contracts under German law

2.1 Classification of cloud computing contracts

Under German law, it is particularly important to classify cloud computing contracts under the applicable categories available under the Germany Civil Code (Bürgerliches Gesetzbuch – BGB), given that the business model of cloud services is typically based on high scalability and, hence, a considerable level of standardization in the contract terms. The provider of cloud services will need to consider the stringent rules applying to standard terms and conditions even in business relations (Sections 307 et seq. BGB) -with the consequence that such contractual provisions may be deemed unenforceable, that are overly onerous or significantly deviate from one of the predefined categories of contact under the BGBSection. Depending on the type of contract, these provisions impose rather strict limitations as to what the parties can agree on, in particular with respect to warranty rights and liability for damages (see item 2.2.3 below).

Cloud computing contracts do not form a separate type of contract under the BGB. Rather, cloud computing contracts can be classified as different types of contract based on the performance owed under the contract.

A provider of cloud services can be subject to the following rules depending on the nature or type of contract:

- Lease agreement (Section 535 et seq. BGB): Under a lease agreement, the lessor is obliged to grant the lessee use of the leased property for the lease period in return for payment. The lessor shall provide the leased property to the lessee in a condition suitable for use under the contract and maintain it in this condition for the lease period.

- Works contract (Section 631 et seq. BGB): Under a works contract, the contractor is obliged to provide the agreed work and the customer is obliged to pay the agreed remuneration. Warranty claims are subject to the customer's acceptance of the work.

- Services contract (Section 611 et seq. BGB): Under a services contract, the service provider is obliged to perform the agreed services independent of success for a specific purpose. The customer is obliged to pay the agreed remuneration. There are no warranty claims; the customer can only claim damages that have been caused by the service provider's fault.

The classification of cloud services is based on a leading judgment of the German Federal Court (Bundesgerichtshof – BGH) on application service providing (ASP) contracts. The BGH ruled that granting access to and use of software at the provider's server through the internet for a limited period of time and against remuneration qualifies as a lease agreement. The same applies to the provision of memory space. The BGH added that additional services such as maintenance, updates, data backup, hotline-service or training may be based on other types of contracts, but do not affect the basic qualification of the ASP-services as a lease agreement.

AS far as we are aware of, there are no judgments with regard to the classification of cloud computing contracts yet. Accordingly, it can be assumed that German courts will continue to apply the ASP-judgment and qualify cloud services as services under a lease agreement.

Whereas the pure provision of software, platform or infrastructure for use classifies as a lease agreement, cloud computing contracts that comprise additional services will often qualify as "mixed type contracts". In such contracts, each of the different services owed under the respective contract must be qualified separately. For example, the adaptation of the software to specific requirements of the respective customer might qualify as a works contract, whereas maintenance or training services might qualify as services agreements.

2.2 Consequences of classifying cloud computing contracts as lease agreements as per Section 535 et seq. of the German Civil Code (BGB)

If cloud computing contracts classify as lease agreements, the provisions set forth in the BGB for this type of contract apply.

The following paragraphs provide an overview of the Sections of the BGB that can apply to cloud computing contracts.

2.2.1 Provision of services

Under a lease agreement, the lessor owes the availability of the leased property for the entire term of the lease.

Section 535 BGB provides that:

"(*1) A lease agreement imposes on the lessor a duty to grant the lessee use of the leased property for the lease period. The lessor must provide the leased property to the lessee in a condition suitable for use under the contract and maintain it in this condition for the lease period. He must bear all charges to which the leased property is subject.*

(2) The lessee is obliged to pay the lessor the agreed rent".

If the cloud-provider does not specify the availability of its service, it owes an availability of the services for the entire term of contract without limitation or qualification (i.e. 100% 24/7). Accordingly, cloud computing contracts regularly contain Service Level Agreements ("SLAs") that further qualify the scope of service, defining permitted down-times as well as of the overall level of availability at less than 100%. Such SLAs should specify at least (i) the part of the service, (ii) the time period, and (iii) the interface the availability refers to, and provide for agreed down times during maintenance.

If a provision on service quality limits the service that the provider initially owes under the contract, such provision must be reasonable and is subject to review under Section 307 et seq. BGB. If, however, the SLA is already part of the service description itself, the German law on standard terms and conditions does not apply.

In case the actual performance does not comply with the agreed performance (including potential disruptions of the service), thus impairing the customer's use of the cloud service, the performance is defective in quality.

Section 536 para. 1 BGB provides that:

"*If the leased property at the time of surrender to the lessee has a defect which removes its suitability for the contractually agreed use, or if such a defect arises during the lease period, then the lessee is exempted for the period when suitability is removed from paying the rent. For the time when suitability is reduced, the lessee need only pay a reasonably reduced rent. A trivial reduction of suitability is not taken into account*".

A legal defect exists if the customer's use of the cloud service is impaired because of third party rights (Section 536 para. 3 BGB), e.g. in case of a third party's cease-and-desist claim based on an infringement of its rights by the cloud service provider.

2.2.2 Duration - Termination

If the parties have not specified a contract term, the lease agreement is entered into for an indefinite period.

A lease agreement with a specified term cannot be terminated for convenience.

Section 542 BGB provides that:

"(1) If the lease period is indefinite, then each of the parties may give notice of termination in accordance with the statutory provisions.

(2) A lease entered into for a definite period of time ends at the end of that period unless it

1. has been terminated for cause in legally permissible cases, or

2. is extended".

In case of cloud services that classify as a works agreement (such as individual adaptation of the software, see item 2.1 above), the customer can terminate the agreement at any time, but has to pay the contractor a compensation specified by law.

Section 649 BGB provides that:

"The customer may terminate the contract at any time up to completion of the work. If the customer terminates the contract, then the contractor is entitled to demand the agreed remuneration; however, he must allow set-off of the expenses he saves as a result of cancelling the contract or acquires or wilfully fails to acquire from other use of his performance. It is presumed that the contractor is accordingly entitled to five percent of the remuneration accounted for by the part of the work not yet provided."

In any case, the parties may at any time terminate the agreement for good cause. The law defines good cause in a very general manner, providing that good cause means if the terminating party, taking into account all the circumstances of the specific case and weighing the interests of both parties, cannot reasonably be expected to continue the contractual relationship until the agreed end or until the expiry of a notice period.

2.2.3 Warranty and Liability

Under cloud computing contracts that qualify as a lease or works agreement, the service provider is obliged to remedy defects independent of whether these are based on its fault or not. In case the cloud-provider fails to do so, the customer may reduce the remuneration or revoke (works contract) respectively terminate (lease agreement) the contract.

Further, the customer can claim reimbursement of damages arising from a defect if the damage was caused by the provider's fault (i.e. intent or negligence). Under a lease agreement, however, the provider is liable for defects already existing at the time the parties enter into the agreement independent of fault, provided that the customer was not aware of such defect when entering into the agreement.

Section 536a para. 1 BGB provides that:

"If a defect within the meaning of section 536 exists when the lease agreement is entered into, or if such a defect arises subsequently due to a circumstance that the lessor is responsible for, or if the lessor is in default in remedying a defect, then the lessee may, notwithstanding the rights under section 536, demand damages".

Section 536b sentence 1 BGB provides that:

"If the lessee knows of the defect when entering into the agreement, he may not claim the rights under sections 536 and 536a".

2.2.3.1 Warranty Rights

For cloud computing contracts that qualify as lease agreements, Section 535 et seq. BGB apply. In case of a defect, the customer may reduce the remuneration (Section 536 para. 1 BGB) and, after having set a reasonable grace period to remedy the defect, the customer may terminate the contract (Section 543 para. 1 BGB).

For cloud computing contracts that qualify as works contracts, Section 631 et seq. BGB apply. Warranty claims under a works contracts require that the customer has accepted the work pursuant to Section 640 BGB. In case of cloud computing contracts, unconditional receipt of the services might qualify as acceptance. Under a works contract, the customer may only reduce the remuneration or revoke the contract if the provider fails to remedy the defect. Accordingly, the customer first has to set a reasonable grace period.

Section 634 BGB provides that:

"If the work is defective, and provided that the requirements of the following provisions are met and to the extent not otherwise specified, the customer may

1. under Section 635, demand cure,

2. under Section 637, remedy the defect himself and demand reimbursement for required expenses,

3. under Section 636, 323 and 326 para 5, revoke the contract, or under Section 638, reduce payment, and

4. under Section 636, 280, 281, 283 and 311a, demand damages, or under Section 284, demand reimbursement of futile expenditure".

In cloud computing contracts that qualify as standard terms and conditions, any limitation of warranty rights must be reasonable and is subject to the strict limitations of Section 307 et seq. BGB. Under Section 307 BGB, the cloud-provider may not unreasonably disadvantage the customer. A provision that essentially deviates from statutory law qualifies as such unreasonable disadvantage. As a consequence, the cloud-provider may not entirely exclude the customer's warranty rights. In a lease agreement, the cloud-lprovider may not exclude the customer's right to reduce the

remuneration in case of a defect. Also, a customer's confirmation that the service is not defective when entering into the contract would be unenforceable. Hence, a provision stating that the cloud-services are offered "as is" is not enforceable under German law of standard terms and conditions.

2.2.3.2 Liability

Under German law, the injuring party is liable for all damages that the injured party can demonstrate and prove, and that have been caused by a wilful or negligent breach of a contractual or statutory duty.

Section 280 para. 1 BGB provides that:

"If the obligor breaches a duty arising from the obligation, the obligee may demand damages for the damage caused thereby. This does not apply if the obligor is not responsible for the breach of duty".

Under statutory law, damages include lost profits.

Section 252 BGB provides that:

"The damage to be compensated also comprises lost profits. Profits are considered lost if they could have been expected with probability in the normal course of events or in the special circumstances, particularly under the measures and precautions taken".

The parties cannot limit liability for wilful misconduct. In addition, in cloud computing contracts that qualify as standard terms and conditions, any limitation of liability is subject to the strict limitations of Section 307 et seq. BGB. In particular, the cloud-provider may not exclude its liability for damages resulting from its breach of a material contractual obligation ("Kardinalpflicht"). Material contractual obligations are contractual duties the fulfilment of which is essential for the proper execution of the contract, the breach of which endangers the purpose of the contract and on the fulfilment of which the customer regularly relies. The cloud-provider may only limit its liability for a breach of such material obligation up to the amount of damages as "typically foreseeable" at the time of entering into the contract. In case of cloud computing contracts, German courts have neither specified the term "material contractual obligation" nor the amount of damages "typically foreseeable" in a cloud computing contract. Based on the nature of the service, at least providing suitable levels of data security and the availability of data are likely to qualify as such "material contractual obligations" of the cloud-provider.

Pursuant to Section 309 no. 7 BGB, the cloud-provider may not exclude or limit its liability for gross negligence or for any kind of intentionally or negligently caused personal injuries.

As a consequence of the above limitations, clauses that generally exclude liability for indirect damages or lost profits are not enforceable under German law.

Section 3: – Cloud computing contracts under United Kingdom law

3.1 Classification of cloud computing contracts

Under English law[36], cloud computing contracts are classified as contracts for the supply of services.

The relationship between the supplier and customers tends to fall into two categories depending on whether the supplier is providing a paid service or a free one. This distinction is not always clear as some free services impose non-monetary obligations, such as targeted advertising, whereas others may offer a free trial period which is conditional on the customer providing payment details, which then converts into a paid contract at the end of the "free" trial period.

Nevertheless, there is a distinction between the terms and conditions found in cloud computing contracts for a paid service and those for a free/low-cost service. In a paid service contract, the terms and conditions will often stipulate the duration of the contract, its renewal period, and payment structure, and how either party may terminate the contract. Some of these contracts, such as Amazon's web services terms and conditions, will state that the contract will last indefinitely until terminated.[37] In service contracts for a free/low-cost service, however, there is no periodic payment structure and, therefore, there is often no fixed term. Nevertheless, the contracts will often include ways in which the supplier can bring the relationship to an end so that it does not have to host customer data indefinitely. An example of such a provision can be seen in Dropbox's terms and conditions, whereby Dropbox reserves the right to close accounts which have not been accessed for 90 days.[38]

Consumer contracts

Cloud computing contracts may include both a mix of services and digital content. Digital content is defined as "data which are produced and supplied in digital form" (section 5 of the Consumer Contracts (Information, Cancellation and Additional Charges) Regulations 2013 (SI 2013/3134) ("**CCRs**") and section 2 of the Consumer Rights Act 2015 ("**CRA**")). The CRA Explanatory Note includes digital content which is supplied under contract from a trader to a consumer and which is largely or wholly stored and processed remotely, such as software supplied via cloud computing.

The CRA states that where the contract is for a mix of services and digital content, the service element of the contract attracts service rights and remedies whilst the digital content elements attract the digital content rights and remedies. However, the CCRs require that a contract is categorised as either a sales contract, services contract or an online digital content contract; it does not cater for mixed contracts. Classification is important as it impacts the following matters: (i) which contracts are in scope, (ii) the pre-contract information required, (iii) the confirmation requirements, (iv) the calculation of the cancellation period, and (v) the rules on supplying the product during the cancellation period.

It can be difficult to differentiate contracts for online digital content and services. Recital 19 to the Consumer Rights Directive (2011/83/EU) provides the following definition of digital content: "Digital content means data which are produced and supplied in digital form, such as computer programs, applications, games, music, videos or texts, irrespective of whether they are accessed through downloading or streaming, from a tangible medium *or through any other means*".

[36] UK law consists of the law of England and Wales, the law of Scotland and the law of Northern Ireland. This note sets out the English law position. Scots law can have significant variations from English law. Northern Irish law is closer to the law of England and Wales.

[37] Service description is found at http://aws.amazon.com/ and terms and conditions are found at http://aws.amazon.com/terms/.

[38] Service description is found at https://www.dropbox.com/features and terms and conditions are found at http://www.dropbox.com/terms.

The Department for Business Innovation & Skills ("**BIS**") CRA Digital Content guidance provides further direction stating that digital content provisions extend to cloud computing to the extent that digital content is supplied to the consumer[39]. Where digital content is not supplied to the consumer, for example where a consumer buys access to remote storage of its own digital content and the consumer retrieves that digital content, the consumer is buying a service. Accordingly, whether or not digital content provisions apply in consumer cloud computing contracts will depend on the extent that digital content is supplied to the consumer under the contract.

3.2 Consequences of classifying cloud computing contracts

As cloud computing contracts are service contracts, different implied terms are imposed into the contracts depending on which statute or regulation it is governed by. The legislation that governs a contract will depend on whether it is a business-to-business contract or a consumer contract.

The Supply of Goods and Services Act 1982 (the "**SGSA**") governs business-to-business and consumer-to-consumer contracts for the supply of services as well as business-to-consumer contracts entered into before 1 October 2015. Business-to-consumer service contracts formed on or after 1 October 2015 are now governed by, amongst others, the CRA and CCRs.

This note focuses on the implied terms imposed into business-to-business and business-to-consumer contracts as they currently stand following the introduction of the CRA.

3.2.1 Provision of services

Business-to-business contracts

Pursuant to section 13 of SGSA, a supplier that acts in the course of business must carry out the service with reasonable care and skill. There is no implied term that a particular standard or result is achieved, rather, the supplier simply has to carry out the work with requisite skill and care. A supplier's liability depends on whether it can be shown that the supplier failed to exercise the reasonable care and skill expected of an ordinarily competent member of their profession or trade[40].

In accordance with section 14(1) of SGSA, where the supplier of services is "acting in the course of a business," and the time for the service to be performed is not "fixed by the contract, left to be fixed in a manner agreed by the contract or determined by the course of dealing between the parties," the supplier "will carry out the service within a reasonable time." What a "reasonable time" means is a question of fact (section 14(2) SGSA).

Where the consideration for the service is not "determined by the contract, left to be determined in a manner agreed by the contract or determined by the course of dealing between the parties", the party contracting with the supplier "will pay a reasonable charge" (section 15(1) SGSA). What constitutes a "reasonable charge" is, again, a question of fact (section 15(2) SGSA).

Business-to-consumer contracts

The CCRs require suppliers to provide certain information to the consumer before he/she is bound by the contract (Part 2, CCRs). The information provided is treated as a term of the contract and cannot be amended without the consumer's express consent. There is also an implied term that the supplier has provided the relevant information. The type of pre-contractual information required

[39] BIS CRA Digital Content Guidance, September 2015, page 5
[40] Bolan v Friern Hospital [1957] 1 WLR 583

(and how and when it is provided) differs depending on where the contract is concluded; nevertheless, by way of example, all types of contracts should include the: (i) main characteristics of the services, (ii) payment, delivery and performance arrangements, (iii) details of after-sales and commercial guarantees and (iv) digital content's functionality, technical protection and compatibility.

Pursuant to section 49 of the CRA, every services contract includes "a term that the trader must perform the service with reasonable care and skill".

Each service contract will on a statutory basis include a contractual term regarding the pre-contractual statements or information about the services if these are (a) "taken into account by the consumer when deciding to enter into the contract", or (b) are "taken into account by the consumer when making any decision about the service after entering into the contract" (section 50, CRA). Nevertheless, such statements or information can be qualified by the trader or changed (if agreed to by the consumer).

If the contract price has not been paid or is not fixed in the contract, then the contract will include an implied term that the consumer must pay "a reasonable price for the service, and no more" (section 51, CRA). What constitutes a "reasonable price" is a question of fact (section 51(3), CRA).

If the time for performance is not fixed by contract, the trader must perform the contract within a "reasonable time" (section 52, CRA). As with the other provisions, what constitutes is a reasonable time is a question of fact (section 52(3), CRA).

A trader cannot limit its liability for failing to provide services with reasonable skill and care and within a reasonable time (where none has been agreed) or for ensuring services comply with information provided at a pre-contractual stage at less than the price of the services. Any such liability cap will be subject to the fairness test.

3.2.2 Quantity of services

Business-to-business contracts

This is a commercial term that will be negotiated and agreed between the parties, and which will subsequently be reflected in the cloud computing contract. There are no statutory restrictions on what can be commercially agreed in this context.

Business-to-consumer contracts

The quantity to be provided, as suggested in the Commission guidance on the Unfair Terms Directive (2005/29/EC), is a main characteristic of a consumer contract.

Therefore, in accordance with the CRA, any changes to the quantity of products (as advised in pre-contract information provided to the consumer) must be expressly agreed by the consumer, whether the changes are to be made before or after the contract is concluded.

3.2.3 Duration - Termination

Business-to-business contracts

This is a commercial term that will be negotiated and agreed between the parties, and which will subsequently be reflected in the cloud computing contract. There are no statutory restrictions on what can be commercially agreed in this context.

Business-to-consumer contracts

Under the CCRs, a consumer has a right to cancel a distance or off-premises contract any time during the cancellation period. This period normally expires 14 days after the delivery of the services and digital content, after the contract has been concluded. The consumer does not have to provide a reason for cancelling and must be given a full refund which includes the costs of standard delivery; however, the consumer can be made liable for some costs, including the cost of return as well as certain other specified costs.

Special cancellation rules apply to the supply of digital content not on a tangible medium. In accordance with regulation 37(1) of CCRs, the trader must not begin the supply of the digital content before the end of the cancellation period unless: (i) the consumer has given her/his express consent to the supply beginning during the cancellation period; and (ii) the consumer has acknowledged that, due to the fact that the supply has started, his/her rights to cancel will be lost.

If a trader complies with the obligation in regulation 37(1) of CCRs, the consumer will have no right to cancel (regulation 37(2), CCRs). The Commission Guidance states that the consent and acknowledgement can be combined to fulfil the requirement; however, the consent must involve some positive action by the customer, such as ticking a box on the website. In addition, if a trader provides a web link to launch streaming or downloading, the right to withdraw by the consumer would only be lost once activating this link.

On withdrawal or cancellation, the trader must reimburse the sums due to the consumer without undue delay and in no event later than the end of 14 calendar days after the day the trader is informed of the consumer's decision to withdraw the offer or cancel the contract (regulation 34(6), CCRs).

3.2.4 Sub-contracting/Assignment

Business-to-business contracts

This is a commercial term that will be negotiated and agreed between the parties, and which will subsequently be reflected in the cloud computing contract. There are no statutory restrictions on what can be commercially agreed in this context.

Business-to-consumer contracts

Assignment by the trader

The trader's right to assign or transfer his/her rights or obligations which might result in a reduction of the protection for a consumer is considered potentially unfair under the CRA (paragraph 19 Schedule 2, CRA). According to paragraph 5.28 of the Competition and Markets Authority ("**CMA**") Unfair terms guidance, the consumer should be consulted and assignment (or transfer) permitted only if one of the following apply:

- The consumer consents.
- The consumer has a penalty-free right to exit if he/she objects.
- Assignment is only made in circumstances that ensure that a consumer's rights under the contract are not prejudiced.

Assignment by the consumer

The CMA Unfair terms guidance states that terms which restrict a consumer's right to assign can be scrutinised for fairness (paragraph 5.33 of the CMA Unfair terms guidance). It is likely that a

prohibition on assignment is more likely to be found fair if valid reasons as to why consent might be withheld are explicitly set out. Generally, the CMA Unfair terms guidance disapproves of terms which merely commit the trader to act reasonably.

3.2.5 Materials to perform the services

Business-to-business contracts

This is a commercial term that will be negotiated and agreed between the parties, and which will subsequently be reflected in the cloud computing contract. There are no statutory restrictions on what can be commercially agreed in this context.

Business-to-consumer contracts

There is no consumer legislation which specifically looks at this provision.

3.2.6 Variations

Business-to-business contracts

This is a commercial term that will be negotiated and agreed between the parties, and which will subsequently be reflected in the cloud computing contract. There are no statutory restrictions on what can be commercially agreed in this context.

Business-to-consumer contracts

Changes to the main characteristics of products (as advised in pre-contract information provided to the consumer) must be expressly agreed by the consumer, whether they are to be made before or after the contract is concluded (section 50(4), CRA).

Terms which provide traders with the unilateral right to change the terms of a contract or the characteristics of the product supplied, or the price payable under the terms of the contract, are viewed as being unfair. In addition, a requirement that all variations be made in writing is potentially unfair as it may have the effect of limiting the trader's obligation to respect oral commitments made by it or its staff (paragraph 5.25 of the CMA Unfair terms guidance).

Minor technical variations

In accordance with paragraphs 5.21 to 5.23 of the CMA Unfair terms guidance, reserving the right to make technical adjustments to products which do not have a real impact on the customer, or changes which are required by law or necessity, may be acceptable. The CMA suggests that the consumer's consent may not be needed for this type of change. Nevertheless, if the trader is aware of the types of changes it may have to make, then it should explain their impact to consumers.

Significant changes

If the trader suspects that he might have to make more significant changes, then paragraph 5.22 of the CMA Unfair terms guidance suggests doing the following:

- Take steps to ensure that the consumer fully understands and agrees to the change in advance.[41] The pre-contract information given to the consumer should state clearly what variation might be made, and in what circumstances, and define how far it can go.
- Give the consumer valid reasons why a change may have to be made. Only changes prompted by bona fide external circumstances are likely to be viewed as fair. The pre-contract information provided to the consumer should enable him to foresee the incidence, nature and extent of any changes.
- Include a provision in the contract for the consumer to receive reasonable notice of any changes which will be made before they affect him/her. The consumer should also have a meaningful right to cancel and receive a refund if he/she is unhappy with the changes. A "meaningful" right, in this instance, is a right to cancel which can be exercised freely, and where the exercise of the right does not leave the consumer in a worse situation. In the case of RWE[42], giving a consumer the right to terminate which could not in reality be exercised (because there were no alternative gas traders) was insufficient.
- Avoid including a requirement that variations be recorded in writing.

In relation to changes in the price of the products, paragraph 5.23 of the CMA Unfair terms guidance states that:

- Specifying the level and timing of price increases (within narrow limits) in the pre-contract information, in essence makes such changes part of the agreed price and is, therefore, acceptable.
- Linking changes in prices to the RPI index is likely to be acceptable, provided that this is clearly drawn to the consumer's attention. It is unclear whether linking means passing on changes or adjusting prices by reference to RPI plus a specified uplift.
- In principle, any change may be fair if the consumer can terminate the contract (without being left in a worse situation) before the change comes into effect.
- The above rules do not apply to passing on an increase in Value Added Tax (this is acceptable).

Updates to digital content

The BIS CRA Digital Content Guidance emphasise the importance of highlighting likely updates in the pre-contractual information provided to the consumer. If the pre-contractual information about the digital content is worded to cover anticipated updates (which includes providing as much information about their impact as possible), and the wording would not permit changes which are deemed unfair, there will be no need for the trader to obtain the consumer's consent to specific updates as they are made.

3.2.7 Inspection of the services

Business-to-business contracts

This is a commercial term that will be negotiated and agreed between the parties, and which will subsequently be reflected in the cloud computing contract. There are no statutory restrictions on what can be commercially agreed in this context.

Business-to-consumer contracts

There is no consumer legislation which specifically looks at this provision.

[41] Case C-92/11: RWE Vertrieb AG v Verbraucherzentrale Nordrhein-Westfalen eV.
[42] Ibid.

3.2.8 Default

Business-to-business contracts

This is a commercial term that will be negotiated and agreed between the parties, and which will subsequently be reflected in the cloud computing contract.

However, where cloud services are provided in a business context on standard terms which are not negotiated by the parties then the Unfair Contract Terms Act 1977 provisions relating to exclusions of liability are applicable. The Act provides that where the party contracts on the other's written standard terms of business the other party cannot exclude or restrict any liability except insofar as the exclusion or restriction satisfies the "requirement of reasonableness".

This requires that the exclusion clause is "a fair and reasonable one to be included having regard to the circumstances which were, or ought reasonably to have been, known to or in the contemplation of the parties when the contract was made." For financial limits of liability "regard shall be had in particular to:

(a) the resources which [the person seeking to restrict liability] could expect to be available to him for the purpose of meeting the liability should it arise; and

(b) how far it was open to him to cover himself by insurance.

Business-to-consumer contracts

The CMA Unfair terms guidance states that it the exclusion of liability for delay or non-performance can be permitted in the following circumstances only (a) where non-performance is genuinely due to an event outside the trader's control (paragraph 5.9 of the CMA Unfair terms guidance), (b) if the trader takes reasonable steps to prevent or minimise delay, and (iii) where there is a risk that the delay will be substantial, the consumer is given a penalty-free right to terminate.

3.2.9 Suspension of supply

Business-to-business contracts

This is a commercial term that will be negotiated and agreed between the parties, and which will subsequently be reflected in the cloud computing contract. There are no statutory restrictions on what can be commercially agreed in this context.

Business-to-consumer contracts

Suspension for technical or operational reasons

In accordance with the CMA Unfair terms guidance, a term should only allow a trader to suspend provision of any significant benefit under the contract for legitimate purposes and should be drafted narrowly so that it may not be used in any other situation (paragraph 5.10 of CMA Unfair terms guidance). Legitimate purposes include dealing with technical problems or other circumstances which are outside the trader's control, protecting the interests of other innocent third parties, or providing enhanced products to the consumer (however, the majority of such changes will need to be agreed by the consumer).

Moreover, the trader should give the consumer notice of the suspension as well as a penalty-free right to terminate before it takes effect. A term which states that the consumer will have to continue to pay when the benefit of the contract is not provided, could be viewed as being potentially unfair

(paragraph 5.12 of the CMA Unfair terms guidance). In reality, suppliers might instead state that consumers do not have to pay for products while they are suspended unless the suspension is very short. Alternatively, the supplier might extend the contract period by the period of suspension at no additional cost to the consumer.

Suspension for non-payment or other breach

Paragraph 5.10.4 of the CMA Unfair terms guidance states that (a) there is no need for a trader to include the right to suspend if there is a serious breach of the contract as general law already provides for the right to terminate (but not suspend) and (b) any term that would allow the trader to withhold a significant benefit under a contract which would not otherwise be allowed by general law is likely to be viewed as unfair.

3.2.10 Price increase or reduction due to external events

Business-to-business contracts

This is a commercial term that will be negotiated and agreed between the parties, and which will subsequently be reflected in the cloud computing contract.

Business-to-consumer contracts

For the supply of services and digital content it is a requirement under the CCRs that a trader provide the consumer with the following information in relation to price before the consumer is bound by the contract:

- The total price of the products inclusive of taxes or (if the nature of the product means that the price cannot reasonably be calculated in advance) the manner in which the price is calculated.
- All additional delivery charges and any other costs (for example, postage, packing or insurance) or, where those charges cannot reasonably be calculated in advance, the fact that such additional charges may be payable.
- In the case of a contract of unspecified duration or a contract containing a subscription, the total costs per billing period or (where such contract is charged at a fixed rate) the total monthly costs.
- The cost of using the means of distance communication for concluding the contract where that cost is calculated in a way other than at the basic rate.

In accordance with regulation 40(1) of CCRs, no payment is payable in addition to the remuneration agreed for the trader's main obligation unless, prior to the consumer becoming bound by the contract, the trader obtained the consumer's express consent to such additional payment. In addition, the trader cannot rely on the consumer not changing a default option; for example, a pre-ticked box on a website to demonstrate that the consumer has consented to the additional payment (regulation 40(2), CCRs).

The consumer contract will contain an implied term that the trader will reimburse any payment made in breach of these rules to the consumer.

A provision that a consumer must pay interest on late payments under a contract may be considered unfair if the rate of interest is excessive, because any term requiring the consumer (who has failed to fulfil an obligation) to pay an excessively high sum in compensation is potentially unfair (paragraph 6, Schedule 2, CRA). According to the CMA Unfair terms guidance, a rate disproportionately above

the clearing banks' base rates is likely to be regarded as unfair (paragraph 5.14.2 of the CMA Unfair terms guidance).

Traders should not impose excessive surcharges for the use of any given means of payment. Under The Consumer Rights (Payment Surcharges) Regulations 2012, traders cannot charge consumers excessive payment surcharges but can recover the costs of processing payments.

3.2.11 Warranty for defects

Business-to-business contracts

This is a commercial term that will be negotiated and agreed between the parties, and which will subsequently be reflected in the cloud computing contract.

Section 3.2.1 above comments that pursuant to section 13 of SGSA, a supplier that acts in the course of business must carry out the service with reasonable care and skill. There is no implied term that a particular standard or result is achieved, rather, the supplier simply has to carry out the work with requisite skill and care.

Business-to-consumer contracts

The producer/manufacturer or trader is under no obligation to offer a guarantee but if it does, it must comply with certain rules. The definition of a guarantee varies between the CRA and CCRs.

The CRA defines a "guarantee" as "an undertaking to the consumer given without extra charge by a person acting in the course of the person's business (the "guarantor") that, if the goods do not meet the specifications set out in the guarantee statement or in any associated advertising— (a) the consumer will be reimbursed for the price paid for the goods, or (b) the goods will be repaired, replaced or handled in any way" (section 30(2), CRA).

The CCRs define a "commercial guarantee" as follows "in relation to a contract, means any undertaking by the trader or producer to the consumer (in addition to the trader's duty to supply goods that are in conformity with the contract) to reimburse the price paid or to replace, repair or service goods in any way if they do not meet the specifications or any other requirements not related to conformity set out in the guarantee statement or in the relevant advertising available at the time of the contract or before it is entered into" (regulation 5, CCRs).

Both of these definitions appear to be goods-specific however, in reality, traders often offer assurances in respect of the services and digital content they provide. Such offers may not qualify as a guarantee under the CRA or CCRs but an offer to re-perform might be seen as an "after-sales service" for the purpose of the CCRs whereas an offer to refund might be enforceable as part of the contract or as a collateral contract.

Any guarantee must be in plain and intelligible language as all terms of the consumer contract must meet the transparency requirement as set out in the CRA. Pursuant to section 61(4) of the CRA, third party manufacturers' guarantees will be consumer notices, which will also be subject to the transparency requirement. There are no specific language requirements but the intelligible language aspect of the transparency requirement suggests that the English language should be used for products sold in the UK. Both the unfair terms rules apply and the guidance on guarantees as set out in the UK Code of Non-Broadcast Advertising, Sales Promotion and Direct Marketing (CAP Code) apply to the guarantee.
If the guarantee provider is the trader, pursuant to the CCRs, the trader must supply information about the after-sales services it provides (schedule 1, paragraph (h), schedule 2, paragraph (q),

CCRs), and the trader will be legally bound by the guarantee. Where the guarantee is provided by a third party producer/manufacturer rather than the trader it could be enforceable as a unilateral contract accepted by the purchase of the product from a retailer.[43] The information about the after-sales services must be made available before the contract is formed as part of the pre-contract information requirements.

Section 4: – Cloud computing contracts under French law

4.1 Classification of cloud computing contracts under French law

Due to the variety of cloud services, a proper classification of cloud computing contracts between sales contract, lease, license agreement and service contract is an issue of ongoing debates under French law.

Some authors consider cloud computing contracts as sales contracts. According to article 1582 of the French civil code (FCC), *"sale is contract whereby a person obligates himself to deliver a thing and the other to pay its price*". This opinion should be set aside to the extent a cloud computing contract does not transfer any ownership to customers, which do not even control the resources made available to them as part of the of the agreement (software, platform or infrastructure)

Others argue that cloud computing contracts might be classified as a lease in accordance with article 1709 of the FCC that defines lease as "*a contract by which one party binds himself to provide the enjoyment of a thing to the other for a certain time, in return for a certain price*". As a consequence of the provision of a data storage space, they consider that a cloud computing contract is a lease (license). Nevertheless, most of cloud contracts may not be considered as a license only because of the provision of additional services to the hosting (computing resources, application development platforms, access to software functionalities etc…).

Most of the authors consider cloud computing contracts as a service contract as defined in article 1710 of the FCC: "*a contract whereby one of the parties binds himself to do a certain thing for the other for a price they agreed upon*." This interpretation seems to be the most appropriate for cloud services and takes into account the variety of the benefits provided by cloud computing contracts including the provision of data storage space or additional services as maintenance tasks or training. As the pricing for cloud computing contracts is usually on a "pay as you go" mode, this interpretation is all the more relevant compared to the qualification of a lease agreement where the fee is paid in return of the making available of a tangible or tangible asset for a certain period of time (month/ year). However, many Cloud contracts are billed based on a fixed monthly or yearly amount (within certain levels of usage) which could lead to qualify such contracts as lease contracts especially where they mainly consist in the provision of virtual storage capacity (IaaS).

While some Cloud contracts may qualify as lease contract or be considered as "hybrid" or "composite" (i.e mixing lease and services), we take the view that most cloud computing contracts should fall into the scope of service contracts. Although few provisions set forth in the FCC apply to this type of contract, the consequences of classifying cloud computing contracts as service contracts should be the followings:

- provisions related to sales contracts should not apply (retention of title clause, warranty for latent defects);

[43] Carlill v Carbolic Smoke Ball Company [1892] EWCA Civ 1 (07 December 1892

- the cloud provider shall be independent and not be entrusted with the representation of the customer.

The definition of service contract is quite broad under the FCC according to article 1710, it may include services contracts as well as agency agreements or employment agreements. Therefore, French authors consider that an agreement qualifies as a service contract when three criteria are met:

- the customer is paying for a work performed by the contractor, which can be tangible or intangible work;
- the work provided by the contractor is strictly independent;
- therefore, there shall be no subordinate relationship between the customer and the contractor.

Specific features of cloud computing contracts are not only governed by French Contract Law, but also by regulatory provisions to be taken into account in cloud computing services contracts, such as Data Protection laws. The French Data Protection Authority, the CNIL, sets forth "Recommendations for companies planning to use Cloud computing services". Those guidelines are intended to help companies drafting cloud computing contracts by providing a list of clauses that must be inserted in the service contracts. According to the CNIL, essential elements that should appear in a cloud computing service contract are the followings:

- information on processing (subcontracting, processing means, …);
- warranties put in place by the service provider (retention period for the data, destruction and restitution of the data, ….);
- location and transfers;
- Formalities with CNIL;
- security and confidentiality.

Therefore, the following paragraphs will provide an overview of the essential provisions of cloud computing contracts in France under French Service Contracts, License and general Contract Law.

4.2 Consequences of classifying cloud computing contracts as service contracts as per Article 1710 of French Civil Code

The parties should take into account that Articles 1710 and subs. of the FCC will apply if the terms of contract do not set forth otherwise, under the control of the common intention of the parties performed by a judge as the case may be.

4.2.1 The definition of the services

There is no specific standard model contract under French contract law or services contracts law. However, it results from article 1710 of FCC that the cloud computing contracts as each service contract shall at least define the purpose of the agreement, e.g., the definition of the services to be provided by the contractor to the customer.

Furthermore, there is no specific provision under French services contract law with regards to the way of providing the services. The parties should therefore specify in the terms of the agreement if the way of providing services shall be a performance obligation ("obligation de résultat") or a "reasonable efforts obligation ("obligation de moyens"). This distinction, which mainly depends on the context and on the parties determination, will have consequence of the interpretation of the terms of the agreement and the potential liability of the contractor.

This liability of the cloud services provider cannot be excluded but can be limited (unless gross negligence). The reasonable skill and care of the provider will be appreciated on a case by case basis.

Also in light of this observation under French Law, it would be advisable for the parties to always set out the service levels applicable to the cloud services in order to avoid an inappropriate interpretation of the undefined cloud computing services by the judge.

4.2.2 The payment of the price by the customer

Pursuant to French Law, the price of the services does not have to be fixed at the time of the agreement for the service contract to be valid, contrary to sales of goods agreements. Still, the judge may control the reasonableness of the price, in the light of the quality of the services provided if no clue on the prices were provided in the contract.

As for the payment modalities, the cloud services will usually be provided and paid "as you go" and consequently, will not be "fixed" at the time of the agreement.

4.2.3 The information obligation of the provider and the cooperation obligation of the customer

Depending on the specificity of the cloud computing contract and on the level of qualification of the parties (especially the customer), these obligations defined by French Courts for IT contracts shall be applicable to cloud computing services:

- the service provider shall inform, advise and warn the client before and during the performance of the service (this liability cannot be excluded but can be limited and is minored if the client has particular IT skills)[44] ;
- the client shall cooperate with the service provider before and during the performance of the service[45] (the liability cannot be excluded but can be limited).

4.2.4 Subcontracting

Subcontracting is one of the consequences of classifying cloud computing contracts as service contracts under FCC. However, French provisions on subcontracting are not set forth in the FCC but in an independent law which provisions are matters of public policy.

Article 3 of the French law on subcontracting states:

"*Contractors planning to execute a contract using one or more subcontractors must, when the contract is concluded and throughout its duration, have all subcontractors accepted and the conditions of payment for each subcontract approved by the client; the main contractor shall be bound to provide the client with the subcontract(s) upon request.*"

The reason for this provision under French as well as under Italian Law is that the customer appointed the contractor because the customer trusted in the contractor's capacity to perform the service (so called "intuitus personae").

[44] Cour de cassation – Chambre commerciale, July 11, 2006 – Société CDA c/ Société Téléfil – decision no 04-17093 and Cour de cassation – Chambre commerciale – June 19, 2007 – Société Faiveley c/ Société ATEME – decision no 06-13868 ;

[45] Cour de cassation – Première Chambre civile – July 8, 2003 – Sociétés HD et TT c/ Société CWD – decision no 98-20475

In cloud computing contracts, this provision could raise several issues as it could and does often happen that the provider subcontracts certain activities or fulfilments to other providers. Indeed, if nothing is provided on this point in the agreement, the adopter could object that the subcontract was not authorized.

In light of the above, in contracts governed by French Law as well as Italian Law, from the provider perspective, it is important to set out in the contract whether or not the provider is authorized to subcontract its activities.

4.3 Consequences of classifying cloud computing contracts as license contracts as per Article 1710 of French Civil Code

As under Italian Law and generally speaking, it is safe to say that French statutory warranties for latent defects and compliant delivery of the services applicable to licence contracts can be applied to cloud computing contracts.

4.3.1 The compliant delivery of services by the contractor

The compliant delivery encompasses the satisfactory quality of the delivery of the services as defined[46]. This is an essential obligation under French Law which cannot be excluded nor limited if the limitation undermines the significance of this essential obligation or in case of gross negligence or fraud.

Provisions on quality and quantity of services or default in correctly providing the services should generally replace the application of the above obligation for the contractor to perform compliant delivery of services by the contractor.

If the contract does not contain any provision on how the services are to be provided or their characteristics, the adopter could claim that the above warranty is applicable despite the unlikelihood of applying it to cloud computing services.

4.3.2 Warranty for latent defects

This warranty being very specific to the provisions of goods may be applicable where the cloud computing agreement include renting of goods[47], such as hardware, and eventually software and may be a consequence under French Law for that kind of cloud computing agreement.

Under this legal warranty, the goods shall fit to their normal intended use. It can be excluded or limited only if both contracting parties have the same business specialty and provided the contractor was not aware of the defect.[48]

4.4 Other general consequences under French contract law

The following general provisions under French contract law shall be considered to be applicable to cloud computing contracts as well.

4.4.1 Default

[46] Article 1720 of the FCC

[47] Artcile 1721 of FCC

[48] this warranty may be applicable to the defect of a software only if the object of the contract is an IT system where the defect of the software, as a result, implies the defect of the whole IT system – Cour de cassation – Chambre commerciale –January 4, 2005 – Société Vieules c/ Société Technic – decision no 03-17119.

Under French contract Law, in case of non-performance of an obligation under the agreement, the other party may[49]:

- deny to perform or suspend the performance of its own obligation;
- request the specific performance of the obligation;
- request a reduction of the price;
- claim for the termination of the contract;
- claim for damages for breach of contract .

These possibilities listed and detailed in the FCC, are applicable to any agreement, including cloud computing contracts, if no other provisions appear in the agreement to this respect.

4.4.2 Suspension of the supply

The upcoming reform of the FCC, coming into force in October 2016 provides for such possibility:

"A party can suspend the performance of its obligation once it is obvious that its contractor will not perform its own obligation on due date and that the consequences of such nonperformance are sufficient for that party. This suspension shall be notified with as much prior notice as possible."[50]

This general provision shall be applicable to cloud computing contracts as well. If the parties have not clearly set out that the provider has the right to suspend the contract, the above provision could also apply to cloud computing services.

4.4.3 Duration – Termination

As a general principle under French contract law, the perpetual term contracts are forbidden and should necessarily be considered as undetermined term contracts which may be terminated by either the party at any time following a reasonable notice period.[51]

With regards to the liability of the parties in the absence of an express term in a cloud computing services contract, it is likely that French Courts will consider that the service provider would have to carry out the service within a reasonable time (subject to a test of reasonableness).

4.4.4 Materials to perform the services: intellectual property

In cloud computing contracts, especially SaaS, the contractor provides software to adopters. Most of the time, it is not the right holder of the software.

According to general principle of French intellectual property law and the French intellectual property code, cloud providers planning to conclude a cloud computing contract providing software shall be granted a license from the right holder covering the use of the software by adopters.

The contract should specify that the cloud provider has the right to market the use of the software and to implement it on its servers.

4.4.5 Inspection of the services

[49] New article 1217 of the FCC, after the upcoming reform of the FCC coming into force in October 2016.
[50] New article 1220 of the FCC.
[51] This general principle will be codified within the upcoming FCC reform, coming into force in October 2016 (new article 1210 and 1211 of the FCC).

Even if such provision is advisable, French contract law does not impose specific provisions on the inspection of the services.

4.4.6 Price increase or reduction due to external events

French law denies that a price increase or reduction due to external events may impact on the contract except if parties agreed.

However, the reform of the French civil code will introduce a new article 1195, coming into force on October 2016, which states:

"*If a change of circumstances that was unforeseeable at the time of the conclusion of the contract renders performance excessively onerous for a party who had not accepted the risk of such a change, that party may ask the other contracting party to renegotiate the contract. The first party must continue to perform his obligations during renegotiation.*

In the case of refusal or the failure of renegotiations, the parties may terminate the contract, as from a date and subject to such conditions as they shall determine or may by common agreement ask the court to set about the adaptation of the contract. In the absence of their doing so, a party may ask the court to terminate the contract, as from a date and subject to such conditions as it shall determine."

The new article will allow a party to ask the court to terminate the cloud computing contract or to rebalance its price if the abovementioned conditions are fulfilled. Parties should take it into account when drafting the service contract.

Section 5: – Cloud computing contracts under Greek law

The importance of the early adoption of Cloud Computing (CC) is a key factor for the competitiveness of the Greek economy. As per a recent economic study"[52] until 2020 CC can save almost € 5 billion of expenditure for Greek businesses and the public sector under baseline assumptions of adoption. Increased scalability and reduced barriers to entry due to timely adoption may add € 5 billion of income to the Greek economy in the next decade. Combined with the spill-over effects from increased intermediate demand and household income, the overall cloud dividend could exceed € 16 billion. Up to 38,000 new jobs can be created while the cloud dividend can reach € 21 billion with substantial employment gains over the medium term. In contrast, if technophobia and indolence prevail, the cloud dividend will extend to about € 5 billion with very little, if any, employment gains.

5.1 Classification of cloud computing contracts

Most legal commentators in Greece [53] have addressed cloud computing under the information security, software licensing, jurisdictional[54], copyright[55] and data protection aspects[56]. Various

[52] Cloud Computing : A Driver for Greek Economy Competitiveness : Study by Danchev, Tsaganikas, Ventouris for the Foundation for Economic & Industrial Research, Athens (IOBE), November 2011 (in English) available at http://iobe.gr/docs/research/en/RES_05_F_25112011.pdf

[53] Legal dimensions of cloud computing : Afrodite Kouspouni, Pantazoloulou, Legal Library (Nomiki Vivliothiki) 2012. . Marinos, A./ Briscoe, G., Community cloud computing, Cloud Computing (2009). in: DEST 09, Third IEEE International Conference on Digital Ecosystems and Technologies, IEEE, 2009. Kitsios, P./Pappa, P. «Personal Data Protection in the era of cloud computing. New challenges for European regulators», 2011.

academic works [57] have also examined under a technical compliance perspective, cloud SLAs and outsourcing services.

There is indeed very little literature directly dealing with the legal qualification of cloud computing contracts under Greek law. However, the proper legal qualification of cloud services, defined as the storing, processing and use of data on remotely located computers accessed over the internet within the existing legal framework is of paramount importance, as it may determine which legal provisions are applicable on cloud contracts and how the rights of the parties are effectively balanced towards facilitating cloud adoption.

5.2 Greek legislation applicable on the cloud

The main sources of Greek Law applicable on cloud contracts and cloud SLAs are:

- **The Greek Civil Code (GCC**) which is applicable on any kind of contract including cloud contracts and cloud SLAs. Depending on their nature (public, private, hybrid), cloud computing contracts (IaaS, SaaS, PaaS) may qualify under Greek civil law as "lease contracts", "service contracts", "sale contracts", or constitute a mixture of different contract types. For each type of contract a set of warranties and liability is provided,as specified below.

- **Data protection legislation** (law 2472/1997, transposing the EU Data Protection Directive 95/46/EC, and law 3471/2006 on data protection in the telecommunications sector transposing the EU Directive 2012/58/EC). This law defines the rights and obligations of both the data controller (cloud customer) and the data processor (cloud service provider) in cloud transactions involving data transfers. Such transfers to the US are considered illegal, if based on the Safe Harbour rules, that have been rendered invalid by the landmark ruling of the Court of Justice of the European Union (CJEU) of 6 October 2015 in the Maximilian Schrems v Data Protection Commissioner case (C-362- 14) [58]. Those transfers shall be ruled by the EU-US Privacy Shield Agreement, when finalized. Greekdata protection rules, adopted following the Directive 95/46/EC shall be abolished in spring 2018, with the entry into force of the recently adopted EU General Data Protection Regulation 2016/679 of 27 April 2016 "on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC"

- **Consumer protection Law** 2251/1994, as amended, which regulates several aspects of remote business to consumer (B2C) and business to business (B2B) contracts, including

[54] Jurisdictional Issues in the Cloud in Greece and the E.U,. Vasileios Koutsompinas Nikolaos Lakoutsis, Master's Thesis, 2014 (in English) available at https://pure.ltu.se/ws/files/97460049/LTU-EX-2014-97447296.pdf, Cloud Computing in Eastern Europe, Survey of regulatory frameworks, page 67 Greece http://kdrs.si/wp-content/uploads/2014/12/Cloud-Computing-in-Eastern-Europe-DPS.pdf

[55] EU Copyright Law: A Commentary, Irini Stamatoudi, Paul Torremans, Elgar Commentaries, UK, 2014

[56] Cloud computing technology and data protection, Maria Ionanidou. PhD Thesis, Thesalloniki 2013 (in Greek), available at http://docplayer.gr/11204664-Tehnologies-ypologistikoy-nefoys-prostasia-prosopikon-dedomenon.html

[57] Cloud computing: issues of contracting and compliance for legal advisors, Ahmed Shahab, Antigoni Papanikolaou, article in DIMEE, June 2014, pages 570-576, abstract available at http://www.nbonline.gr/journals/3/volumes/285/issues/1273/lemmas/4878700
See also Papanikolaou Antigoni, speech on cloud computing in State, economy and business, 24th Panhellenic Congress on Commercial law, Ioannina 2015

[58] See press release of the Hellenic data Protection Authority (www.dpa.fr) and section 5.8 below.

cloud contracts, although not expressly mentioned therein. Such law implements various EU Directives (e.g. Directive 1999/44/EC on Consumer Sales, Directive 93/13/EEC on Unfair Terms in Consumer Contracts, Directive 2005/29/EC, transposed through Law 3587/2007, prohibiting unfair commercial practices in all sectors including the ICT environment.

- **Electronic commerce legislation**, namely Presidential Decree 131/2003 that has implemented in Greece the EU electronic commerce Directive 2000/31. Such statute regulates the formalities of electronic contract conclusion, defines minimum information to be provided by the cloud provider, such as trade name, physical seat, terms of service etc. It also applies on the liability of intermediary service providers by providing for exoneration in case of simple transmission -"mere conduit", together with the automatic, intermediate and temporary storage of the information in case of "caching" and "hosting" services.

- **Copyright legislation** (law 2121/1993, as subsequently amended, which protects "original" intellectual works stored in the cloud such as computer software, music, video, audio, databases (recognizing a "sui generis" right to protect investment), information compilations, by also defining licensing conditions while forbidding unauthorized copying of protected materials .

- **Unfair competition legislation** (law 146/1914 which remains still valid by containing a general clause which prohibits practices in all commercial, industrial and agricultural transactions, not excluding the ICT sector, undertaken for competition purposes, which are contrary to business morals and ethics),

- **Confidentiality of communications** (law 3115/2003, as amended, which created, by virtue of art. 19 par 2 of the Hellenic Constitution, the "Hellenic Authority for Communication Security and Privacy", (ADAE in Greek). This is an independent specialized administrative body to monitor confidentiality of postal and electronic communications together with network and IT security) also applicable on the cloud environment. The ADAE regulations define specific security requirements for communication suppliers not excluding those providing cloud services to the public.

- **Criminal law provisions** of the Greek Penal Code such as Articles 252, 370A, 370B, 371, 390 which incriminate unfair practices, acts or negligence, of unauthorized access, hacking and copying of computer programs, data, security breach, disclosure of confidential information, violation or trade secrets of public and private entities, industrial property, inventions, designs, copyright infringement and breach of trust. Offenders risk imprisonment and pecuniary sanctions.

- **International Cybercrime Conventions** such as the Council of Europe Budapest Cybercrime Convention of 23 November 2001 signed (2001) but not yet ratified by Greece. This Convention addresses procedural legal issues for the appropriate law enforcement authorities to conduct specific investigations specific to consumer crime offenses such as expedited preservation and partial disclosure of traffic data, production orders, real time search, interception and seizure of computer data.

- Finally, legislation on **public procurement**, specific laws regulating **public supplies**, services and works, as well as **electronic invoicing**, **electronic signature/authentication and tax rules** should also be applicable on the cloud environment.

To the extent Greek legislation is in line with EU law, we consider that cloud contracts may be regulated by reference to standard model contracts as the ones provided by SLALOM with the necessary adjustments to the local rules and case law.

5.3. Cloud computing contracts under a civil law perspective

The GCC introduces a complete liability regime. Liability under Greek law is both subjective (based on the injuring party's- in our case cloud provider or cloud adopter- fault) and objective (initiated regardless of the person's fault), as for instance regards liability of cloud provider's representatives or subcontractors. Liability is also, contractual (as for instance for non performance or defective supply of services within a cloud agreement or for SLA violation by the cloud provider, warranties, remedies for faulty performance, withdrawal, suspension or termination of service, indemnification, renewal, governing law and jurisdiction) and extra-contractual (criminal liability for security breaches, non protection of confidential business information or pre-contractual liability during the negotiations phase of the cloud contract).

The GCC provisions on tort, personal injury and compensation apply, without any distinction, on cloud contracts and services, including "IaaS, PaaS" and SaaS" provided in Greece or to Greek clients by remote cloud providers. Should provider fail to comply with those rules, it will be held liable by the competent Greek courts for compensation of the cloud adopter seated in the country.

The main sources of compensation for failure, inadequate performance, faulty service provision, unauthorized or inappropriate use, security breach, data loss, unauthorized access to copyrighted original content, trade secrets, inventions and confidential information, reside on the Greek Civil Code's provisions on contractual liability (articles 330, 334, 335, 336 and 382 of GCC) as well as for tortuous liability and wrongful acts (articles 914-938 of GCC).

The general rule of Article 914 of the GCC which applies on cloud SLAs encapsulates the basic rule on tortuous liability and wrongful acts. It provides that "whoever causes harm to another person contrary to the law and with fault or negligence is liable to compensate him". Accordingly, a claim for compensation in the cloud context (service credits, positive damage, loss of business etc) may only flourish if the following concurring elements are invoked and proven by the claimant, cloud provider or cloud adopter:

- **an unlawful act**, behavior or omission on the part of the wrongdoer, the term" unlawful" referring to an act, behavior or omission that is contrary to or violates the legislation in force, i.e. national laws, presidential and ministerial decrees, public authorities' circulars, European legislation, international treaties to which Greece is a party, customary law, moral and market standards and so on,
- **fault or negligence** on the part of the wrongdoer, including intentional acts, gross negligence and reckless behavior, as well as "common" negligence,
- **harm or damage** caused to the claimant, and
- **a causality link** between the act, behavior or omission and the harm or damage sustained by the claimant .

It is typical, in the terms and conditions of cloud providers, to include an overall cap on the extent of any damages for which the cloud provider will be liable which is related to the value of the contract. This can be expressed, for example, as the value of the lifetime of the contract or as the amount of

the fees paid by the institution in the twelve months prior to the event giving rise to the liability. In cases where a cloud provider limits its legal responsibility to a specific amount, the figure stated will depend on the nature of the cloud service and the type of users for such service.

5.3.1. Burden of the proof

Under Greek law the service provider is liable for any damage on assets or moral he caused illegally and culpably, with an action or omission, during the provision of the services to the consumer. Vice versa an end user may also be liable vis-a- vis the cloud provider for failure to comply with provider's Accepted Usage Policy by allowing unauthorized access of the cloud service by third parties which allows provider to suspend their accounts on grounds of material violations significantly threatening the cloud providers IT system integrity.

From a procedural viewpoint, one the one hand, the plaintiff, natural or legal person suffering damage must prove the loss and the causal connection between the provision of the service and the loss. It may request service credits, positive damage incurred, negative damage (loss of business) as well as any moral prejudice incurred by faulty performance, data loss or system failure (reputation of the company).

On the other hand, the defendant, has the burden of proof for the absence of his offense and liability. In the cloud context, liability exoneration might fpor instance arise from the fact that provider has provided all reasonable warranties ("best effort" SLA) and met all the reasonable security standards in relation to the type of data stored.

In principle a civil claim for compensation can be brought against any person who by an act or omission has caused personal injury or death to a third person. Any such claimant can apply before the Greek civil courts for recovery of all damages sustained, including pecuniary and non-pecuniary losses.

5.3.2. Warranties and liability

As a general rule, the person who must pay compensation to the claimant is the person primarily responsible for the damage, injury or death (article 914 GCC mentioned above).

Vicarious Liability: Pursuant to article 922 GCC a master or other person who has assigned to another the task of performing a service (sub-contractor of a cloud provider e.g. data center manager) is liable for the damage caused by his servant/employee to a third party (cloud adopter), unlawfully and during the course of his service/employment. In such cases both the servant/employee and the master/employer are jointly and fully liable towards the victim.

Joint and several liability: In case the damage was caused by the act/omission of more than one person or more than one persons are liable concurrently, all of them are jointly liable. The same applies if more than one persons have acted simultaneously or successively and it cannot be ascertained whose act or omission caused the damage (article 926 GCC).

This effectively means that a claimant has the right to apply for redress from only one or more of such jointly liable persons (cloud provider, sub-contractors, insurance company), as well as that payment of compensation in full by one of the liable persons releases all persons that are jointly liable from the respective duty.

The person who has paid the compensation in its entirety, is entitled to seek recourse from the others. The court decides how the liability is distributed among them, depending on the measure of their fault, otherwise, if this cannot be established, the damage is equally divided among them (article 927 GCC).

5.3.3. Timeframe for actions for compensation

The general rule is set by article 937 GCC which provides that "Any claim deriving from a wrongful act is prescribed after lapse of five years from the date the claimant has acquired knowledge of the damage and the party liable to pay compensation.

In any event the claim is prescribed after the lapse of twenty years from the date the wrongful act was committed. If the wrongful act is also an act that is punishable under the penal law and under that law the prescription is longer, then this longer prescription is also applicable for the claim for compensation.

5.4. Consequences for the parties from the classification of cloud contracts

Except for general liability rules described above which apply on all types of contracts, specific legal provisions may apply depending on the cloud contract qualification as "Infrastructure as a Service-IaaS", "Platform as a Service -PaaS" and "Software as a Service- SaaS" Consequences for the parties may vary depending on contract qualification.

5.4.1. Cloud agreements as contracts for works

The GCC provisions on contracts for works (articles 681-702) can be applicable for those cloud contracts where the cloud provider has agreed to supply specific (non standard) services to the master of work (cloud customer), for instance in case of customizations of the service, creation of tailor-made virtualized storage solutions etc.

Under this legal qualification scenario, the work agreement should contain specific terms and conditions for contract execution by the cloud provider, such as rules on the description of the cloud service, quality, quantity, delivery time, amount of remuneration to be paid by client upon delivery, the non possibility of substitution of the cloud provider unless expressly stated in the contract (art 684), the provider's obligations to perform the work in a timely fashion and without defects, the split of non performance or faulty performance risk between parties. Such risk remains with the cloud service provider until the service delivery time and with the client after official delivery date (art 698).

Moreover, the aforementioned legal provisions provide for the parties' rights for minor or major defects The master of work may ask for repair or proportionate reduction of the agreed remuneration (art. 688), by virtue of rules on sales which apply in this case(arts 541, 546-549, 551-553) while in case of major defects (art. 689) the master of work may, on top of the rights mentioned above, withdraw from the service contract .

Finally, the GCC also contains provisions on early contract termination by the master of work against compensation of the cloud provider (art. 700) together with the cloud adopter rights. The latter is entitled to contract rescission in cases of faulty performance. Prescription of the claims of the master of work against cloud provider for defaults occurs within ten years form delivery for fixed assets or within six months.

5.4.2 Cloud contracts as contracts for lease

GCC provisions regarding lease contracts (articles 574-618) may equally be applicable under specific circumstances, on cloud contracts, as for instance, in a PaaS model, where the cloud provider offers hosting services which are likely seen as the lease of computer space. Such operating provisions may also apply in an IaaS model where the lessor (cloud provider) conveys to the lessee (cloud user), in return of series of payments (rentals), the right to use an asset (cloud computing infrastructure) for an agreed period of time.

Under Greek e-commerce law (art 13 of P.D 131/2006), hosting providers can only benefit from the liability exemption introduced by the EU E-commerce directive when they are "not aware of facts or circumstances from which the illegal activity or information is apparent" (when it concerns civil claims for damages) or they "do not have actual knowledge of illegal activity or information" (when it concerns other claims). Said statute differentiates the level of knowledge, depending on the type of claim asserted against the service provider. Furthermore, service providers must expeditiously remove, or block access to, such information once they are aware of their unlawful nature.

According to the general liability clause of art. 332 liability exemption provisions are void when they preclude liability not only for intentional (willful) conduct but also for gross negligence. However, it should be noted that it is likely that in case more services are offered than the mere lease of computing space, the contract could be legally qualified otherwise.

5.4.3. Cloud contracts as contracts for sale of goods

As per articles 513 – 571 GCC regulations on sales of goods apply on tangible movable items, however, they could exceptionally apply to a cloud computing context in case, for instance, the necessary software is sold in a tangible medium such as in a disc.

The GCC, as amended, incorporates the Directive 1999/44/EC of the European Parliament and of the Council on certain aspects of the sale of consumer goods and associated guarantees[59]. The Greek legislator considered[60] that the provisions of said Directive on certain aspects of the sale of consumer goods could be generalized and, hence, applicable to the sale of any good, movable and immovable; so, instead of amending the consumer protection legislation[61].

The provisions of the General Part of the Law of Obligations of the GCC on the irregular development of the obligation (non performance) should also apply on cloud contracts. The provisions of the General Part of the Law of Obligations (arts 332 and 334 § 2) define the sanctions for faulty contract performance by the debtor with the intention to protect the weaker party.

Concrete liability provisions exist for the cloud product or service seller for inherent defects and lack of agreed qualities of the cloud products. The prescription period for the actions against the seller for inherent defects and lack of agreed qualities of the goods is of two years for movables and to five years for immovables.

5.4.4. Service credits

[59] For this reform by law 3043/2002 see P. FILIOS, *Enochiko Dikaio, Eidiko Meros* (= Law of Obligations, Special Part), vol I/1, 5th ed, Ant. N. Sakkoulas, Athens-Komotini 2002, § 5 B, p36; P. KORNILAKIS, *Eidiko Enochiko Dikaio* (= Law of Obligations, Special Part), vol I, Sakkoulas Editions, Athens-Thessaloniki 2002, § 21 4, pp94-103 and §§ 38 1 - 51 14, pp218-319; P. A. PAPANIKOLAOU- KL. ROUSSOS-K. CHRISTODOULOU-ANT.KARABATZOS, *To neo dikaio tis efthinis tou politi* (= The new Law of the Seller's Liability), Ant. N. Sakkoulas, Athens-Komotini 2003.

[60] See relatively the Explanatory Note on the draft of the l. 3043/2002, ch. A΄, I 3.

[61] Law 2251/1994 on consumer protection as amended.

Under cloud computing contracts that qualify as a lease or works agreement, the service provider is obliged to remedy defects independent of whether these are based on its fault or not. In case the cloud-provider fails to do so, the customer may reduce the remuneration or terminate the works contract or the lease agreement.

In case of faulty performance, customer may also request service credits form cloud service provider. In practice, the common forms of service level measures in IT service provision contracts include availability targets and various response time targets. Availability service levels are particularly applicable for infrastructure and service provision arrangement, such as IT outsourcing, software as a service (SaaS) and cloud service arrangements, where a continuous IT service is provided and can be measured on a continuous basis. It is now relatively common for availability measures to be recorded by the service provider through IT tools which continuously measure the 'uptime' of the IT service provision[62]. Under Greek law, service credits are considered to provide a pre-specified financial remedy in the event of poor performance; in other words, they are a form of liquidated damages. In order for the service credits to be enforceable by the customer, they must not exceed a reasonable pre-estimate of the customer's likely losses in the event of poor performance defined by market rules.

5.4.5. Jurisdictional issues

Cloud computing services offer low barriers to entry and easy scaling opportunities. “Click wrap agreements” are legally enforceable in Greece under the conditions described below. Many publicly available cloud computing contracts limit liability of hosting provider to a level which is not proportionate to the potential risk. They resemble typical software licenses although the risk is significantly higher.

For instance, under a simplified business scenario the cloud service provider may be located in Greece and exclusively serve Greek clients. In such a case Greek law would apply across the entire contractual value chain. Under a more common scenario, the cloud provider may be located outside Greece serving Greek cloud adopters together with other customers across Europe and internationally. Contracts by large providers often specify they are governed by the law of the service provider’s home country and grant local courts exclusive jurisdiction over contract-related disputes.

However, Greek public institutions (e.g. ministries, social security institutions, universities, hospitals) or professional associations (lawyers, accountants, doctors etc.) often have significant domestic law and professional ethical restrictions to consent to such provisions and would require national law and “home court” jurisdiction.

Moreover, the cloud adopter might outsource via sub-contracting some services covered in the contract to third parties, such as data centers managers located in Asia. During contract lifetime cloud provider could become insolvent, in which default case cloud adopter would be entitled to contact termination. Cloud provider might also end up under different ownership after a merger or acquisition. In such a case, contract might continue under specific conditions (cession of rights, prior approval of the adopter, data portability, compliance of new entity with the MSA obligations etc) or be terminated according to the applicable Master Service Agreement (MSA) provisions.

[62] See in this regard: Dimitri Folinas: Outsourcing Management for Supply Chain Operations and Logistics Service, Chapter 3, IGI Global, 2013

On the cloud adopter end, customers might also choose to work either directly with a cloud provider or through a cloud broker. Client organizations that are new to cloud computing may engage third parties for assistance in making the complex transition to the cloud by integrating the existing customer infrastructure into the cloud environment. No matter how the customer proceeds, the MSA should provide the cloud adopter with adequate warranties and contractual safeguards to face its business needs.

Before contracting potential clients need to review both the MSA and its attachments in order to identify the provider's obligations, as a well as the associated risks and liabilities, thoroughly understand the roles of any third parties and ensure that their responsibilities are effectively addressed in the contract.

The most important factor at the pre-contractual stage of any cloud computing project is for end user to understand the architecture of the vendor's system, how it keeps data and what tools are available for e-discovery. Moreover, user should ensure that the cloud provider will take reasonable steps to meet the institution's existing legal duties while providing the service.

5.5. Criminal liability for cloud contracts

As already explained, the Greek Penal Code provides criminal liability for misuse or disclosure of state, scientific, professional or business secrets to complement the more general protection is found in the Greek Civil Code which includes general tort provisions.

In case the wrongful act, omission or behavior (e.g. data loss, unauthorized access to confidential information, patent- trademark- or copyright infringement) that resulted to personal injury simultaneously constitutes a "criminal act" pursuant to the Greek Penal Code, penal liability may also apply against offenders. Greek law does not provide for criminal liability of legal entities (cloud provider as a company) but only of their board and managers as natural persons.

For instance, article 370B of the Penal Code provides that: "1. Whoever, acting in an unfair manner, copies, imprints, uses, discloses to a third party, or in any way violates data or computer programs, which constitute State, scientific or professional secrets, or secrets of an enterprise of the public or private sector, is punished by imprisonment for a term of at least three months. As secret is also considered any information which its legal owner, out of reasonable interest, treats as confidential, especially when he has taken measures in order to prevent third parties to take knowledge of it.

In such cases both civil liability and criminal charges are activated against the responsible person, the injured person or the family of the deceased are entitled to intervene in the criminal proceedings as "civil claimants" in support of the criminal charge, which reinforces their liability claims before the civil courts.

5.6. Violation of trade secrets

Trade secrets are protected the Greek Law of Unfair Competition which can be used to bring proceedings against any person for unauthorized use or disclosure of secrets, if the plaintiff can show:

(a) the existence of a secret of which the offender has knowledge, either through disclosure by an employee or through his own illegal or unfair act; (b) the unauthorized use or disclosure of the secret to a third party; and (c) intention on behalf of the offender to compete with the owner.

The remedies provided under civil law are: (a) a cease and desist order (interim injunctions are also available); (b) damages (under the Greek Civil Code, the plaintiff is entitled to recover his full loss; and (c) unjust enrichment (under Greek law the plaintiff is entitled to seek the infringer's profits as well as damages).

The cloud provider's criminal liability may be engaged if a cloud provider employee (e.g. data center engineer, programmer) discloses secrets during the term of his employment. In such as case, his employer (cloud provider) that will be bound to compensate the cloud adopter may commence legal proceedings to recover the damage if he can show the existence of a secret which has come to the attention of the employee. There must be a causal link between his employment and his obtaining knowledge of the secret. Secondly, the employer must show disclosure of the secret during the term of the employee's employment to a third party without authorization. Intention must also be shown - either to compete with the employer or to damage the owner (cloud adopter). Vive versa cloud adopter' s criminal liability may also be engaged in cease of AUP violation that has resulted into damages of the provider's IT systems and infrastructure.

Criminal liability is punishable as a misdemeanor by imprisonment of up to five years and/or a fine. A plaintiff may obtain an ex parte order to search premises for misappropriated data. However, in practice it is difficult to obtain such an order as the plaintiff must prove extreme urgency. A more effective way is for the plaintiff to file a criminal complaint and ask the police to conduct searches for evidence.

5.7. Liability under consumer protection law

Law 2251/1994 on the Protection of Consumers, as amended by Ministerial Decision YA Z1-629/2005 and Law 3587/2007, is the core law for consumer protection in Greece. As explained, such law implements the relevant EU consumer protection Directives into Greek Law (Directive 2011/83/EU on consumer rights, Services Directive 2006/123/EC, Directive 2005/29/EC on unfair commercial practices and so on).

It regulates various related consumer issues such as general terms and conditions of consumer contracts, unfair contract terms, distance selling, doorstep selling, misleading and comparative advertising, distance marketing of consumer financial services, product liability etc.

Except from the aforementioned Law, a set of sector acts on payments, credit institutions, product safety etc. supplement the legislative regime as regards consumer protection in Greece. Regarding distance selling contracts, such as the cloud services, the consumer (cloud adopter) should be provided with certain information prior to the conclusion of such contract (e.g. the identity of the supplier, the main characteristics of the goods or services, any delivery costs, the price of goods or services including all taxes, withdrawal rights etc).

Consumer legislation also comprises clauses on the liability of the manufacturer of defective products (art.6) and of the provider of services (art. 8) respectively, which provide for a quasi-strict liability regime of the cloud provider towards its customers.

Claims about defective products or services may be raised within three years from the date the victim has or should have acquired knowledge about the damage, the defect and the identity of the manufacturer; all rights are extinguished after the lapse of ten years from the date the product circulated in the market.

To this end, the victim is not required to prove a wrongful act or omission. The manufacturer of the goods or the cloud service provider may exonerate himself from the liability only if it may refer to specific exoneration clauses specifically enumerated in the law. However, any claim for non-pecuniary losses must be based on the GCC provisions on wrongful acts mentioned above.

5.7.1. Pre-contractual information

Greek consumer legislation implements the relevant European Directives regulating the area of pre-contractual information which should also be applicable in cloud services. Such rules provide for a number of pre-contractual requirements (art 2 of law 2251/1994), such as clear mention of the general terms for transactions allowing the consumer to acquire knowledge of their content while they forbid abusive contractual clauses on contract signature, undue restrictions on responsibilities of suppliers, uneven contract termination notice periods, leave the price vague or allow too high price increases, undue restrictions of the supplier's responsibility for hidden flaws, reversal of the burden of proof and so on.

In case of doubt, general transactions terms set forth unilaterally by the supplier, or by any third party acting on his behalf, are interpreted in favor of the consumer. Consumer rights, data protection aspects and liability were considered as important elements of pre-contractual information. As regards data protection, cloud providers should be obliged to inform the customer for which kind of data processing (e.g. the processing of sensitive data) the offer was not suitable or of any additional safeguards or security measures undertaken with regard to such data.

5.7.2. Availability of the service

Availability of the service" under Greek law and jurisprudence could include several parameters such as time to respond, time to repair, availability of the service in percentage per month and scheduled/unscheduled maintenance.

Different levels of the availability of the service should be associated with paid or unpaid services and/or with critical data (in healthcare, banking, financial, taxation sectors) and non-critical services within discrete user environments.

A key consideration for SMES as cloud users is the link between the description of the availability of the service and the corresponding consequences/remedies for non-performance as well as between availability of the service and transparency of the information.

In real life availability of the service covers at least the availability of the actual service, the possibility to access data and the possibility of re-using data in accordance with the service level guarantees.

For consumers a key consideration might not be the permanent access to their data but rather access when they effectively need such cloud- stored data.

5.7.3. Transparency of the contract

Under Greek consumer law, the transparency and control of fairness of terms, is of paramount importance. However, these issues are not specific to cloud computing contract but to all contracts which involved digital products.

The importance of control of fairness of contractual terms (force majeure and clauses excluding liability) privacy policies (especially for free products) and the general interplay between the fairness

legislation and data protection rules is expected to be evaluated by courts when such case law arises.

As a general rule, Greek courts tend to consider null and void unfair contractual terms by protecting the consumer that is generally at a disadvantage compared to the specialist such as a cloud provider.

5.8. Cloud contracts under data protection law

Applicable Greek data protection law 2472/1997, transposing the EU Data Protection Directive 95/46/EC, and law 3471/2006 on data protection in the telecommunications sector transposing the EU Directive 2012/58/EC were adopted in pre-Internet area, when centralized and limited processing was the rule. As mentioned, the enactment of the EU General Protection Regulation will replace those statutes as of spring 2018.

Greek legislation, in line with all relevant European hard-laws, requires the explicit prior consent of the data subject prior to data processing. It also requires data processors to submit a declaration to the Data Protection Authority as a condition for lawful processing. Greek law differentiates the data controller as the party that defines the purpose and the means of processing and the data processor as the dumb performer.

This distinction is key to decide on who is responsible, the data controller is liable towards the “data subjects” and therefore needs to choose appropriate data processors and must seek adequate contractual protection from them.

Data transfer is unrestricted in Europe and subject to the “equivalent protection” rule for transfer to non EU countries. Following the landmark ruling of the Court of Justice of the European Union (CJEU) of 6 October 2015 in the Maximilian Schrems v Data Protection Commissioner case (C-362-14), the EU data protection authorities assembled in the Article 29 Working Party have discussed the first consequences to be drawn at European and national level. In line with the EU official position, the Hellenic Data Protection Authority informed all data processors that data transfers to the US under the Safe Harbour are no longer legal.

As a result, different rules may apply, under Greek law, for remote data processing and trans-border data flows, depending on the location of the cloud provider in the EU, EEA, US or in a third country.

To face the new technological and market challenges, the General Data Protection reform l, strongly opposed by global cloud providers,[63] is expected to resolve in a uniform way across Europe issues such as the definition of the data controller the rules which apply for transfer outside the EU and the applicable law.

5.8.1. Data location and data security

Data location is closely linked to matters such as law enforcers' access, data security and transparency. Other related subjects are the protection of professional rules and secrets. For example, lawyers or accountants may want to know who has access to their cloud-stored data since they may be held liable by their own customers. Storing and processing of illegal data may engage

[63] EU's new data protection rules will "kill cloud computing" in Europe, warn Amazon, Cisco, IBM and SAP article available at http://www.computing.co.uk/ctg/news/2413109/eus-new-data-protection-regulations-will-kill-cloud-computing-warn-amazon-cisco-ibm-and-sap

the cloud provider's liability, under the restrictions of the E-commerce Directive (no liability for simple storage or for lack of knowledge on their illegal nature). Should provider be noticed of such illegal data storage, it has to proceed to their immediate take down. However, the procedure of notice and takedown varies in each context and needs to be standardized at a pan- European level.

If the confidentiality of privileged information and communication cannot be guaranteed by the cloud provider, this may inhibit the uptake of cloud computing services.

What is important is not only where data is located but also from where data is accessible and who is guaranteeing the security of the cloud service. Data location is important to determine the applicable law and define risks. Knowing where the infrastructure is located (e.g. to be provided in a list of locations) or the structure of the company would be more important than the exact location of the data at a specific time (e-discovery).

Under the transparency requirements of Greek law, consumers should be made aware of how the process worked, who operates the data centers and who has access to them. Unlimited copying of data in long sub-processing chains would be considered by courts and the competent regulatory authorities as a major privacy risk.

From a security point of view, it is important to know when the data is inside or outside the EU and the European Economic Area. In principle, data should be stored in the EU or in another place with the same security standards. However, it is practically very difficult to control the location of the data due to the free movement of data and the implication of several subcontractors.

5.8.2.. Switching of cloud providers and data portability

In case of contract modification by a cloud provider which implies termination or expiration of the validity of the contract, the other party has the right under Greek law, to switch to another provider within a reasonable timeframe.

In an open and competitive cloud market, it is important to guarantee the possibility of switching from one provider to another while ensuring full data portability. This implies the deletion or retention of data (copies and backups) by the old service provider, which is extremely important from both a business and data protection point of view. Such possibility should be explicitly provided n the contract. Another important issue to be contractually tackled is the retention of metadata created by the cloud user.

Business practices related to cloud data have to be aligned with the EU Court of Justice of April 2014 Judgment in Joined Cases C-293/12 and C-594/12 "Digital Rights Ireland and Seitlinger and Others", that has declared invalid the Data Retention Directive (2006/24/EC). Such ruling introduced "a right to be forgotten" which is also enforceable in both the public and private cloud context.

From a practical perspective, switching from one provider to another or transferring data remains technically a difficult issue and that not all service providers have the necessary infrastructure.

Switching depends often on the features of the operating system. Under Greek law the portability obligation should not only cover the portability of the data but also the format and the structure of the data transfer to the new cloud provider. To this end, cloud providers should disclose their technical infrastructure (like an open source) through proper documentation for customers and competitors.

5.9. Security regulations

The "Hellenic Authority for Communication Security and Privacy", (ADAE www.adae.gr) created by the Constitution is the body competent for monitoring the confidentiality of communications. ADAE has the right to perform audits both in cloud providers and telecommunication companies to ensure safeguard of the applicable security policies (acceptable use, physical and remote access, password protection, network security and so on) as described in a series of regulations (Regulation No 165/2011 for the Assurance of Secrecy of electronic communications and Joint ADAE/Data Protection Authority Act 01/2013). applicable on security in fixed, wireless and satellite networks.

The ADAE compliance control on cloud service providers reveals the importance of managing risk by ensuring that third-party processors place internal controls in their framework to ensure due diligence for audits and industry and regulatory compliance.

The aforementioned regulations would oblige cloud providers installed in Greece create, approve and apply concrete security policies (secure storage sites, access control, password protection policies, perimeter security procedures etc) which provide reasonable assurance that:

• Provider's employees are aware of their responsibilities related to the confidentiality, integrity, and availability of data and information systems;

• IT systems and services are available to customers in accordance with the controlling Service Level Agreements;

• Installation of services is properly partitioned and configures to ensure contractual obligations are met;

• Confidential and/or personal client data including system access credentials are protected (e.g., encrypted) from unauthorized interception when transmitted over open networks such as the Internet or when switching cloud providers.

Failure to comply with such regulations entails civil, administrative and penal liability against providers.

5.10. Intellectual property

Cloud data "ownership" should also be considered from an intellectual property law perspective. Law 2121/1993 protects "original" works stored in cloud services and prohibits unauthorized copies of copyrighted works such as computer programs, databases, music, films, photographs, multimedia compilations and any other type of intellectual creation. Licensing of the cloud provider as regards the authorized data processing (backups, reproduction and copying to remote servers etc), the by the legitimate data owner(s) is key to ensure legality of the operation. National courts (Athens District court 8084/2009, Kilkis Court 965/2010),[64] have examined the compatibility of copyright infringements by ISPs with the free speech provisions of the Greek Constitution[65]. That is one of the main questions that were answered by the ruling of the District Court of Athens of May 16th, 2012.

[64] Tatiana Synodinou at http://kluwercopyrightblog.com/2011/03/08/greece-no-criminal-liability-for-copyright-infringement-by-a-greek-website-providing-links-to-copyrighted-material/

[65] Greek courts have opted for the inclusion of ISPs in the concept of "intermediaries" in article 64 A of Law 2121/1993 by following the Court of Justice of European Union (CJUE)'s case law and more particularly the decision of 19th February 2009 in the case LSG-Gesellschaft v. Leistungsschutzrechten v. Tele2 TeleKommunication Gmbh, (C-557/07). This ruling said that "access providers which merely provide users with Internet access, without offering other services such as email, FTP or file-sharing services or exercising any control, whether de iure or de facto, over the services which users make use of, must be regarded as

However, in national laws contradictions exist between contractual clauses and intellectual property rights: while it is common to find clauses granting a global license over content created by consumers, under Greek law, it is not possible to grant licenses over future intellectual creations.

Regarding "ownership of digital content" the term of "ownership" may be problematic from a contractual perspective as there are various rights involved. Professional confidentiality (e.g. in lawyers' relations with their clients) and trade secrets are important issues in relation to "ownership". This is particularly relevant for B2B cloud contracts.

Intellectual property rules do not cover these aspects of B2B relations. Some data (statistics or business data) might be protected neither by intellectual property nor by data protection rules and would thus fall into a loophole.

The question whether data aggregated by cloud providers would fall under the scope of the Directive on the Legal Protection of Databases and considered it an important under Greek law. An equally important issue is whether the cloud provider acquired rights over metadata generated via cloud services.

5.11. Dispute resolution - Enforcement of court judgments

During the execution of the cloud contract, disputes may arise among the parties. The SLALOM model contract rightly provides for an amicable settlement of disputes. This is a preferable, quick and least costly dispute resolution mechanism. Greek law also provides for mediation (e.g. Consumer Ombudsman) or arbitration. Should those mechanisms of Alternative Dispute Resolution fail, parties may refer the case before the competent national courts, Greek or foreign ones, depending on the choice of law contract provisions, the location and the legal seat of each party.

As a general rule, litigation outside the party's home country may turn costly and cumbersome. If a Greek entity (cloud provider, adopter, intermediary, other) obtains a national judgment or court order, under the rules of the Hellenic Civil Procedure Code, it can enforce it, through a costly procedure as compared with national law, in a foreign jurisdiction where the judgment debtor has assets or is located.

From a Greek procedural law perspective, the methods of enforcing abroad largely depend on the nature of the judgment or order and where it is to be enforced.

Council Regulation 44/2001 of 22 December 2000 "On jurisdiction and the recognition and enforcement of judgments in civil and commercial matters", which replaced the numerous bipartite conventions between member states of the European Union as well as the Brussels Convention "On jurisdiction and the enforcement of judgments in civil and commercial matters" was incorporated by Greek law 1814/1988, as subsequently amended by law 2004/1992.

Foreign countries where the cloud provider may be seated may be: a) countries that have signed the Brussels Convention and Council Regulation 44/2001, which replaced it b) countries with Greece has a reciprocal bilateral agreement in place c) countries for which none of the above apply such as India, the US, China or Japan.

'intermediaries' within the meaning of Article 8(3) of Directive 2001/29". After confirming that ISPs are considered as intermediaries, the Court ordered the Greek ISPs to block Internet access to the infringing websites/ see Tatiana Synodinoy at http://kluwercopyrightblog.com/2012/11/21/a-greek-premiere-greek-isps-ordered-to-block-access-to-infringing-websites/

From a foreign procedural law perspective, a foreign judgment may equally be enforced against a Greek entity (cloud provider or cloud adopter). Articles 905 and 323 of the Code of Civil Procedure lay down the general rules of enforceability of foreign judgments and orders. Greek courts recognize and enforce foreign judgments and orders by means of an easy, quick and inexpensive process set out in the Greek Code of Civil Procedure. Moreover, they have been consistently applying the Brussels Convention and Council Regulation 44/2001.

Given that council regulations are binding and immediately enforceable in EU member states without any legislative intervention, Council Regulation 44/2001 has introduced an autonomous system of recognition and enforcement of foreign judgments and orders which prevails over the equivalent provisions of Greek law. Regarding foreign judgments originating from third (i.e. non EU) countries, for which the provisions of Regulation 44/2001 do not apply, the Greek Code of Civil Procedure introduces a simple and flexible system which is quite similar to the one of Regulation 44/2001.

In order that a foreign judgment be declared enforceable, the defeated party must not have been deprived of the right to defense and generally of the right to participation in the trial, except if this deprivation is based on a law provision that is also valid for the citizens of the State a court of which has issued the judgment (article 323 no 3, 905 par. 3 Code of Civil Procedure).

Section 6: – Conclusions

The legislations of Italy, Germany, UK, France and Greece provide different criteria and principles to classify cloud computing contracts. Accordingly, it is not possible to provide an unique classification for all such jurisdictions as the types of contracts are differently ruled in each of the concerned country.

Generally speaking, in most of the examined countries, it is possible to note that we have not a clear classification of these contracts either by the legislations or by the case law.

Nonetheless, according to the prevailing interpretations of the authors, cloud computing contracts, in most of the cases, may be considered as contracts for the supply of service or lease contracts.

The table below summarizes the outcome of the survey included in this Deliverable providing for each of the concerned jurisdictions the main information on the classification of cloud computing contracts.

Country	Classification
Italy	- the legislation does not provide a clear classification of cloud computing contracts; - there are no decisions under the case law concerning the classification of cloud computing contract; - the authors provide different interpretations. According to the majority of them, cloud computing contracts may be considered as service contract in accordance with Section 1677 of Italian Civil Code.
Germany	- the legislation does not provide a clear classification of cloud computing contracts;

	- in line with a decision of the German Federal Court concerning ASP (Application Service Provider), it can be argued that cloud computing contracts may be considered as lease agreements; - if the provider is also committed to a specific adaptation for an adopter, it can be argued that the contract is a mixed contract including a lease contract and a work contract.
United Kingdom	- the legislation does not provide a clear classification of cloud computing contracts; - there are no decisions under the case law concerning the classification of cloud computing contract; - according the authors, cloud computing contracts may be classified as contracts for the supply of services.
France	- the legislation does not provide a clear classification of cloud computing contracts; - there are no decisions in the case law concerning the classification of cloud computing contract; - most of the authors consider the cloud computing contract as service contract, according to article 1709 of the FCC.
Greece	- the legislation does not provide a clear classification of cloud computing contracts; - there are no decisions in the case law concerning the classification of cloud computing contract; - according to authors: i) with reference to cloud contracts where the cloud provider has agreed to supply specific (non standard) services to the master of work, we can consider the cloud computing contract as contract for works (articles 681-701 of GCC); ii) with reference to Paas or hosting services, this contract could be considered as a lease agreement; iii) in the exceptional case in which the software enabling the cloud computing service has been sold on a tangible medium such as in a disc, the contract could be considered as a sale of goods.

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