

#### **Google Cloud Mapping**

This document is designed to help banks supervised by the Reserve Bank of India ("regulated entity") to consider the <u>Guidelines on Managing Risks and Code of Conduct in Outsourcing of Financial Services by banks</u> (the "framework") in the context of Google Cloud Platform ("GCP") and the Google Cloud Financial Services Contract.

We focus on the following requirements of the framework: Section 5.4 (Evaluating the Capability of the Service Provider), Section 5.5 (The Outsourcing Agreement), Section 5.6 (Confidentiality and Security), Section 5.8 (Business Continuity and Management of Disaster Recovery Plan), Section 5.9 (Monitoring and Control of Outsourced Activities) and and Section 7 (Off-shore outsourcing of Financial Services). For each paragraph, we provide commentary to help you understand how you can address the requirements using the Google Cloud Services and the Google Cloud Financial Services Contract.

#	Framev	work reference		Google Cloud Financial Services Contract reference
1.	5.4	Evaluating the Capability of the Service Provider		
2.	5.4.1	In considering or renewing an outsourcing arrangement, appropriate due diligence should be performed to assess the capability of the service provider to comply with obligations in the outsourcing agreement. Due diligence should take into consideration qualitative and quantitative, financial, operational and reputational factors. Banks should consider whether the service providers' systems are compatible with their own and also whether their standards of performance including in the area of customer service are acceptable to it. Banks should also consider, while evaluating the capability of the service provider, issues relating to undue concentration of outsourcing arrangements with a single service provider. Where possible, the bank should obtain independent reviews and market feedback on the service provider to supplement its own findings.	Google recognizes that you need to conduct due diligence and perform a risk assessment before deciding to use our services. To assist you, we've provided the information for each of the areas you need to consider below and in the rows that follow.  Compatibility  There are a number of ways to integrate our services with your systems.  Cloud Console allows you to find and check the health of all your Google Cloud resources in one place, including virtual machines, network settings, and data storage.  Cloud APIs allow you to access Google Cloud products from your code and automate your workflows by using your preferred programming language.	N/A
			Standards of performance	
			The SLAs provide measurable performance standards for the services and are available on our <u>Google Cloud Platform Service Level Agreements.</u>	Services
			Concentration risk	
			To manage concentration risk, you can choose to use Anthos to build, deploy and optimize your applications in both cloud and on-premises environments. Anthos provides a platform to develop, secure and manage applications across hybrid and multi-cloud environments.	N/A



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3.	5.4.2		ence should involve an evaluation of all available information about the provider, including but not limited to:-		
4.		•	Past experience and competence to implement and support the proposed activity over the contracted period;	<u>Qualifications and competencies</u> : Google Cloud has been named as a leader in several reports by third party industry analysts. You can read these on our <u>Analyst Reports</u> page.	N/A
				<u>Principals</u> : Information about Google Cloud's leadership team is available on our <u>Media Resources</u> page.	
				<u>Customer references</u> : Information about our referenceable customers (including in the financial services sector) is available on our <u>Google Cloud Customer</u> page	
5.		•	Financial soundness and ability to service commitments even under adverse conditions;	You can review information about Google's financial condition on <u>Alphabet's Investor</u> <u>Relations</u> page.	N/A
6.		•	Business reputation and culture, compliance, complaints and outstanding or potential litigation;	Reputation	N/A
			outstanding or potential intigation,	For more information on Google's business reputation, refer to Row 4.	
				Culture	
				You can review information about our mission, philosophies and culture on Alphabet's Investor Relations page. It also provides information about our organizational policies e.g. our Code of Conduct.	N/A
				Compliance	
				Google will comply with all laws, regulations and binding regulatory guidance applicable to it in the provision of the Services. You can review information about how Google addresses key compliance requirements at our <a href="Google Cloud Compliance Resource">Google Cloud Compliance Resource</a> Center.	Representation and Warranties
				Potential litigation	



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		Information about material pending legal proceedings is available in our <u>annual reports</u> page	N/A
7.	<ul> <li>Security and internal control, audit coverage, reporting and monitoring environment, Business continuity management;</li> </ul>	Security and internal controls and audit coverage  Google recognizes that regulated entities need to review our internal controls, systems	Certifications and Audit Reports
		and data security and privacy protections for the services as part of their risk assessment. To assist, Google undergoes several independent third-party audits on at least an annual basis to provide independent verification of our operations and internal	
		controls. Google commits to comply with the following key international standards during the term of our contract with you:	
		<ul> <li>ISO/IEC 27001:2013 (Information Security Management Systems)</li> <li>ISO/IEC 27017:2015 (Cloud Security)</li> <li>ISO/IEC 27018:2014 (Cloud Privacy)</li> <li>PCI DSS</li> <li>SOC 1</li> <li>SOC 2</li> <li>SOC 3</li> </ul>	
		You can review Google's current <u>certifications and audit reports</u> at any time.	
		Monitoring	
		You can monitor Google's performance of the Services (including the SLAs) on an ongoing basis using the functionality of the Services.	Ongoing Performance Monitoring
		For example:	
		The <u>Status Dashboard</u> provides status information on the Services.	



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		<ul> <li>Google Cloud Operations is an integrated monitoring, logging, and diagnostics hosted solution that helps you gain insight into your applications that run on GCP.</li> </ul>	
		<ul> <li>Access Transparency is a feature that enables you to review logs of actions taken by Google personnel regarding your data. Log entries include: the affected resource, the time of action, the reason for the action (e.g. the case number associated with the support request); and data about who is acting on data (e.g. the Google personnel's location).</li> </ul>	
		Reporting	
		Google will make information about developments that materially impact Google's ability to perform the Services in accordance with the SLAs available to you. More information is available on our <a href="Incidents &amp; the Google Cloud dashboard">Incidents &amp; the Google Cloud dashboard</a> page.	
		In addition, Google will notify you of data incidents promptly and without undue delay. More information on Google's data incident response process is available in our <a href="Data">Data</a> incident response whitepaper.	Data Incidents ( <u>Cloud Data Processing</u> <u>Addendum</u> )
		Business continuity management	
		Google will implement a business continuity plan for the Services, review and test it at least annually and ensure it remains current with industry standards. Regulated entities can review our plan and testing results.	ID ain and Continuity and Discater Decayany
		In addition, information about how customers can use our Services in their own contingency planning is available in our <u>Disaster Recovery Planning Guide</u> .	



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8.			To provide you with a fast, reliable, robust and resilient service, Google may store and process your data where Google or its subprocessors maintain facilities.	Data Transfers ( <u>Cloud Data Processing</u> <u>Addendum</u> )
			<ul> <li>Information about the location of Google's facilities and where individual GCP services can be deployed is available <u>here</u>.</li> </ul>	
			<ul> <li>Information about the location of Google's subprocessors' facilities is available here.</li> </ul>	Data Casuritus Culturus assaura (Claud Data
			Google provides the same contractual commitments and technical and organizational measures for your data regardless of the country / region where it is located. In particular:	Data Security; Subprocessors (Cloud Data Processing Addendum)
			<ul> <li>The same robust security measures apply to all Google facilities, regardless of country / region.</li> </ul>	
			<ul> <li>Google makes the same commitments about all its subprocessors, regardless of country / region.</li> </ul>	
			Google provides you with choices about where to store your data. Once you choose where to store your data, Google will not store it outside your chosen region(s).	
			You can also choose to use tools provided by Google to enforce data location requirements. For more information, see our <u>Data residency</u> , <u>operational transparency</u> , <u>and privacy for customers on Google Cloud Whitepaper</u> .	Data Transfers ( <u>Cloud Data Processing</u> <u>Addendum</u> )
9.			Google conducts background checks on our employees where legally permissible to provide a safe environment for our customers and employees.	N/A
10.	5.5	The Outsourcing Agreement		
11.	5.5.1	The terms and conditions governing the contract between the bank and the service provider should be carefully defined in written agreements and vetted by bank's legal counsel on their legal effect and enforceability. Every such	The terms and conditions governing the relationship between the parties are set out in the Google Cloud Financial Services Contract.	N/A

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#	Framework refere	ence		Google Cloud Financial Services Contract reference
	agreeme appropri appropri should a whether	ent should address the risks and risk mitigation strategies. The ent should be sufficiently flexible to allow the bank to retain an late level of control over the outsourcing and the right to intervene with late measures to meet legal and regulatory obligations. The agreement also bring out the nature of legal relationship between the parties – i.e. agent, principal or otherwise. Some of the key provisions of the would be:		
12.	•	The contract should clearly define what activities are going to be outsourced including appropriate service and performance standards.		Definitions Services
13.	•	The bank must ensure it has the ability to access all books, records and information relevant to the outsourced activity available with the service provider.		Customer Information, Audit and Access
14.	•		You can monitor Google's performance of the Services (including the SLAs) on an ongoing basis using the functionality of the Services. For more information, refer to Row 7.	Ongoing Performance Monitoring
15.	•	A termination clause and minimum periods to execute a termination provision, if deemed necessary, should be included.	You can elect to terminate our contract for convenience with advance notice, including if necessary to comply with law or if directed by a supervisory authority.  In addition, regulated entities may terminate our contract with advance notice for Google's material breach after a cure period.	Term and Termination
16.	•	Controls to ensure customer data confidentiality and service providers' liability in case of breach of security and leakage of confidential customer related information.	This is addressed in the Cloud Data Processing Addendum where Google makes	Confidentiality  Data Security; Security Measures (Cloud Data Processing Addendum)



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#	Framework reference	Google Cloud commentary	Google Cloud Financial Services Contract reference
		Refer to your Google Cloud Financial Services Contract.	Liability
17.	Contingency plans to ensure business continuity.	Google will implement a business continuity plan for the Services, review and test it a least annually and ensure it remains current with industry standards. Regulated entities can review our plan and testing results.  In addition, information about how customers can use our Services in their own contingency planning is available in our <a href="Disaster Recovery Planning Guide">Disaster Recovery Planning Guide</a>	•
18.	The contract should provide for the prior approval/con bank of the use of subcontractors by the service provid part of an outsourced activity.	Sent by the ler for all or sub-contracting. We also want to provide you and all our customers with the most reliable, robust and resilient service that we can. In some cases there may be clear benefits to working with other trusted organizations e.g. to provide 24/7 support.  To enable regulated entities to retain oversight of any sub-outsourcing and provide choices about the services they use, Google will:  • provide information about our subcontractors; • provide advance notice of changes to our subcontractors; and • give regulated entities the ability to terminate if they have concerns about a new subcontractor.  Google will oversee the performance of all subcontracted obligations and ensure our subcontractors comply with our contract with you.	Google Subcontractors
19.	Provide the bank with the right to conduct audits on provider whether by its internal or external auditors, or appointed to act on its behalf and to obtain copies of a review reports and findings made on the service conjunction with the services performed for the bank.	by agents any audit or Google recognizes that regulated entities must be able to audit our services effectively	r

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#	Framework referen	ence	Google Cloud commentary	Google Cloud Financial Services Contract reference
			auditor appointed by the regulated entity.	
			Audit reports	
			Google recognizes that you expect independent verification of our security, privacy and compliance controls. Google undergoes several independent third-party audits on a regular basis to provide this assurance. For more information on the third-party audit reports that Google provides refer to Row 7.	Certifications and Audit Reports
20.	•			Regulator Information, Audit and Access Customer Information, Audit and Access
21.	•	Outsourcing agreement should also include clause to recognise the right of the Reserve Bank to cause an inspection to be made of a service provider of a bank and its books and account by one or more of its officers or employees or other persons.		N/A
22.	•	In cases where the controlling/Head offices of foreign banks operating in India outsource the activities related to the Indian operations, the Agreement should include clauses to allow the RBI or persons authorized by it to access the bank's documents, records of transactions and other necessary information given or stored or processed by the service provider within a reasonable time as also clauses to recognise the right of RBI to cause an inspection to be made of a service provider and its books and accounts by one or more of its officers or employees or other persons.		Regulator Information, Audit and Access
23.	•	The outsourcing agreement should also provide that confidentiality of customer's information should be maintained even after the contract expires or gets terminated.	Google's commitments to protect customer data in the Cloud Data Processing Addendum remain in effect until the data is deleted.	Duration (Cloud Data Processing Addendum)



#	Framev	work reference	Google Cloud commentary	Google Cloud Financial Services Contract reference
			In addition, Google's confidentiality obligations survive expiry or termination of the contract.	Survival
24.		<ul> <li>The outsourcing agreement should provide for the preservation of documents and data by the service provider in accordance with the legal/regulatory obligation of the bank in this regard.</li> </ul>	Google provides functionality to enable customers to access, rectify, and restrict processing of their data as well as retrieve or delete data.  On termination of the contractual relationship, Google will comply with your instruction to delete Customer Data from Google systems.	Data Deletion (Cloud Data Processing Addendum)
			For more information about deletion refer to our <u>Deletion on Google Cloud Platform</u> <u>whitepaper</u> .	
25.	5.6	Confidentiality and Security		
26.	5.6.1	Public confidence and customer trust in the bank is a prerequisite for the stability and reputation of the bank. Hence the bank should seek to ensure the preservation and protection of the security and confidentiality of customer information in the custody or possession of the service provider.	The confidentiality and security of a cloud service consists of two key elements:  (1) Security of Google's infrastructure  Google manages the security of our infrastructure. This is the security of the hardware, software, networking and facilities that support the Services.  Given the one-to-many nature of our service, Google provides the same robust security for all our customers.  Google provides detailed information to customers about our security practices so that customers can understand them and consider them as part of their own risk analysis.  More information is available at:  Our infrastructure security page Our security whitepaper Our cloud-native security whitepaper Our infrastructure security design overview page Our security resources page	Confidentiality  Data Security; Security Measures (Cloud Data Processing Addendum)



#	Framework reference	Google Cloud commentary	Google Cloud Financial Services Contract reference
		(2) Security of your data and applications in the cloud	
		You define the security of your data and applications in the cloud. This refers to the security measures that you choose to implement and operate when you use the Services.	
		(a) Security by default	
		Although we want to offer you as much choice as possible when it comes to your data, the security of your data is of paramount importance to Google and we take the following proactive steps to assist you:	
		Encryption at rest. Google encrypts customer data stored at rest by default, with no additional action required from you. More information is available at: https://cloud.google.com/security/encryption-at-rest/default-encryption.	
		Encryption in transit. Google encrypts and authenticates all data in transit at one or more network layers when data moves outside physical boundaries not controlled by Google or on behalf of Google. More information is available at <a href="https://cloud.google.com/security/encryption-in-transit">https://cloud.google.com/security/encryption-in-transit</a> .	
		(b) Security products	
		In addition to the other tools and practices available to you outside Google, you can choose to use tools provided by Google to enhance and monitor the security of your data. Information on Google's security products is available on our <u>Cloud Security Products</u> page.	
		(c) <u>Security resources</u>	
		Google also publishes guidance on:	
		<ul> <li>Security best practices</li> <li>Security use cases</li> </ul>	



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27.	5.6.2	Access to customer information by staff of the service provider should be on 'need to know' basis i.e., limited to those areas where the information is required in order to perform the outsourced function.	The "Managing Google's Access to your Data" section of our <a href="Trusting your data with GCP">Trusting your data with GCP</a> <a href="whitepaper">whitepaper</a> explains Google's data access processes and policies.  In addition, you can also monitor and control the limited actions performed by Google personnel on your data using these tools:  • Access Transparency is a feature that enables you to review logs of actions	N/A
			<ul> <li>taken by Google personnel regarding your data. Log entries include: the affected resource, the time of action, the reason for the action (e.g. the case number associated with the support request); and data about who is acting on data (e.g. the Google personnel's location).</li> <li>Access Approval is a feature that enables you to require your explicit approval before Google support and engineering teams are permitted access to your customer content. Access Approval provides an additional layer of control on top of the transparency provided by Access Transparency.</li> </ul>	
28.	5.6.3	The bank should ensure that the service provider is able to isolate and clearly identify the bank's customer information, documents, records and assets to protect the confidentiality of the information. In instances, where service provider acts as an outsourcing agent for multiple banks, care should be taken to build strong safeguards so that there is no comingling of information/documents, records and assets.	To keep data private and secure, Google logically isolates each customer's data from that of other customers. Refer to Row 26 for more information on Google's security measures.	Security Measures; Data Storage, Isolation and Logging (Cloud Data Processing Addendum)
29.	5.6.4	The bank should review and monitor the security practices and control processes of the service provider on a regular basis and require the service provider to disclose security breaches.		N/A
			Security breaches Google will notify you of data incidents promptly and without undue delay. More information on Google's data incident response process is available in our <a href="Data incident response whitepaper">Data incident response whitepaper</a> .	Data Incidents (Cloud Data Processing Addendum)

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#		Framew	vork reference		Google Cloud Financial Services Contract reference
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,	30.	5.6.5	The bank should immediately notify RBI in the event of any breach of security and leakage of confidential customer related information. In these eventualities, the bank would be liable to its customers for any damage.		N/A
[;	31.	5.8	Business Continuity and Management of Disaster Recovery Plan		
,	32.	5.8.1	A bank should require its service providers to develop and establish a robust framework for documenting, maintaining and testing business continuity and recovery procedures. Banks need to ensure that the service provider periodically tests the Business Continuity and Recovery Plan and may also consider occasional joint testing and recovery exercises with its service provider.	Google will implement a business continuity plan for the Services, review and test it at least annually and ensure it remains current with industry standards. Regulated entities can review our plan and testing results.  In addition, information about how customers can use our Services in their own contingency planning is available in our <u>Disaster Recovery Planning Guide</u> .	
	33.	5.8.2	In order to mitigate the risk of unexpected termination of the outsourcing agreement or liquidation of the service provider, banks should retain an appropriate level of control over their outsourcing and the right to intervene with appropriate measures to continue its business operations in such cases without incurring prohibitive expenses and without any break in the operations of the bank and its services to the customers.	Google recognizes that regulated entities need to be able to exit our Services without undue disruption to their business, without limiting their compliance with regulatory requirements and without any detriment to the continuity and quality of their service to their own clients. To help regulated entities achieve this, upon request, Google will continue to provide the Services for 12 months beyond the expiry or termination of the contract.	Transition Term
				Google will enable you to access and export your data throughout the duration of our contract and during the post-termination transition term. You can export your data from the Services in a number of industry standard formats. For example:  • Google Kubernetes Engine is a managed, production-ready environment that allows portability across different clouds as well as on premises environments.  • Migrate for Anthos allows you to move and convert workloads directly into containers in Google Kubernetes Engine.	Data Export (Cloud Data Processing Addendum)



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		<ul> <li>You can export/import an entire VM image in the form of a .tar archive. Find more information on images and storage options on our <u>Compute Engine</u> <u>Documentation</u> page.</li> </ul>			
34.	5.8.3 In establishing a viable contingency plan, banks should consider the availability of alternative service providers or the possibility of bringing the outsourced activity back in-house in an emergency and the costs, time and resources that would be involved.	Refer to Row 33 for more information about how you can retrieve your data from the services.  In addition, as part of your contingency planning, you can choose to use <a href="Anthos">Anthos</a> build, deploy and optimize your applications in both cloud and on-premises environments. Anthos provides a platform to develop, secure and manage applications across hybrid and multi-cloud environments.			
35.	5.8.4 Outsourcing often leads to the sharing of facilities operated by the service provider. The bank should ensure that service providers are able to isolate the bank's information, documents and records, and other assets. This is to ensure that in adverse conditions, all documents, records of transactions and information given to the service provider, and assets of the bank, can be removed from the possession of the service provider in order to continue its business operations, or deleted, destroyed or rendered unusable.	that of other customers. For more information on Google's security, refer to Row 26.	N/A		
36.	5.9 Monitoring and Control of Outsourced Activities				
37.	5.9.1 The bank should have in place a management structure to monitor and control its outsourcing activities. It should ensure that outsourcing agreements with the service provider contain provisions to address their monitoring and control of outsourced activities.	You can monitor Google's performance of the Services (including the SLAs) on an ongoing basis using the functionality of the Services.  For example:  • The Status Dashboard provides status information on the Services.	Ongoing Performance Monitoring		



#	Framew	vork reference	Google Cloud commentary	Google Cloud Financial Services Contract reference		
			<ul> <li>Google Cloud Operations is an integrated monitoring, logging, and diagnostics hosted solution that helps you gain insight into your applications that run on GCP.</li> </ul>			
			<ul> <li>Access Transparency is a feature that enables you to review logs of actions taken by Google personnel regarding your data. Log entries include: the affected resource, the time of action, the reason for the action (e.g. the case number associated with the support request); and data about who is acting on data (e.g. the Google personnel's location).</li> </ul>			
38.	5.9.2	A central record of all material outsourcing that is readily accessible for review by the Board and senior management of the bank should be maintained. The records should be updated promptly and half yearly reviews should be placed before the Board.	This is a customer consideration.	N/A		
39.	5.9.3	Regular audits by either the internal auditors or external auditors of the bank should assess the adequacy of the risk management practices adopted in overseeing and managing the outsourcing arrangement, the bank's compliance with its risk management framework and the requirements of these guidelines.	Google grants audit, access and information rights to regulated entities and their appointees. This includes the regulated entity's internal audit department or a third party auditor appointed by the regulated entity.			
40.	5.9.4	Banks should at least on an annual basis, review the financial and operational condition of the service provider to assess its ability to continue to meet its outsourcing obligations. Such due diligence reviews, which can be based on all available information about the service provider should highlight any deterioration or breach in performance standards, confidentiality and security, and in business continuity preparedness.	Google will make information about developments that materially impact Google's ability to perform the Services in accordance with the SLAs available to you. More information is available on our <a href="Incidents &amp; the Google Cloud dashboard">Incidents &amp; the Google Cloud dashboard</a> page.  For more information on due diligence reviews, refer to Rows 2 to 9.			
41.	5.9.5	In the event of termination of the agreement for any reason, this should be publicized so as to ensure that the customers do not continue to entertain the service provider.	This is a customer consideration.	N/A		
42.	7	Off-shore outsourcing of Financial Services				



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43.	7.1	The engagement of service providers in a foreign country exposes a bank to country risk - economic, social and political conditions and events in a foreign country that may adversely affect the bank. Such conditions and events could prevent the service provider from carrying out the terms of its agreement with the bank. To manage the country risk involved in such outsourcing activities, the bank should take into account and closely monitor government policies and political, social, economic and legal conditions in countries where the service provider is based, during the risk assessment process and on a continuous basis, and establish sound procedures for dealing with country risk problems. This includes having appropriate contingency and exit strategies. In principle, arrangements should only be entered into with parties operating in jurisdictions generally upholding confidentiality clauses and agreements. The governing law of the arrangement should also be clearly specified.	Service location  To provide you with a fast, reliable, robust and resilient service, Google may store and process your data where Google or its subprocessors maintain facilities.  Information about the location of Google's facilities and where individual GCP services can be deployed is available here.  Information about the location of Google's subprocessors' facilities is available here.  Google provides the same contractual commitments and technical and organizational measures for your data regardless of the country / region where it is located. In particular:  The same robust security measures apply to all Google facilities, regardless of country / region.  Google makes the same commitments about all its subprocessors, regardless of country / region.  Google provides you with choices about where to store your data. Once you choose where to store your data, Google will not store it outside your chosen region(s).	Data Transfers (Cloud Data Processing Addendum)  Data Security; Subprocessors (Cloud Data Processing Addendum)
			You can also choose to use tools provided by Google to enforce data location requirements. For more information, see our <u>Data residency</u> , operational transparency, and privacy for customers on Google Cloud Whitepaper.  Governing Law  Refer to your Google Cloud Financial Services Contract.	Data Transfers (Cloud Data Processing Addendum)  Governing Law
44.	7.2	The activities outsourced outside India should be conducted in a manner so as	Google will fully cooperate with supervisory authorities exercising their audit, information and access rights regardless of the service location.	Enabling Customer Compliance



#	Frame	work reference	1	Google Cloud Financial Services Contract reference
45.	7.3	· · · · · · · · · · · · · · · · · · ·	You can review information about how Google addresses global outsourcing requirements at our Google Cloud Compliance Resource Center.	N/A