Statement of Compliance with the IOSCO Principles for Financial Benchmarks July 17, 2025

The Federal Reserve Bank of New York is the Benchmark Administrator¹ of the following benchmark rates (the "Benchmarks"):

- the <u>Effective Federal Funds Rate ("EFFR"</u>) and the <u>Overnight Bank Funding Rate ("OBFR"</u>) the EFFR and the OBFR will herein be referred to as the "Unsecured Benchmarks";
- the <u>Tri-party General Collateral Rate ("TGCR")</u>, the <u>Broad General Collateral Rate ("BGCR")</u>, and the <u>Secured Overnight Financing Rate ("SOFR")</u> - the TGCR, BGCR, and SOFR will herein be referred to as the "Repo Benchmarks," and the Unsecured Benchmarks and Repo Benchmarks together will be referred to as the "Overnight Benchmarks";
- <u>30-day Average SOFR, 90-day Average SOFR, and 180-day Average SOFR</u> collectively the "SOFR Averages"; and
- the <u>SOFR Index</u>.

The Federal Reserve Bank of New York's <u>Audit Group</u> has independently reviewed the internal control structure used to administer the Benchmarks and has determined that they are in compliance with the <u>Principles</u> for <u>Financial Benchmarks</u> ("the Principles") published by the International Organization of Securities Commissions (IOSCO). The purpose of this statement is to increase transparency surrounding the administration of these Benchmarks in a manner consistent with the Principles.

In 2013, IOSCO published the Principles, which have been <u>endorsed by the Financial Stability Board</u> as being standards of best practice for Benchmark administration. Because the Federal Reserve Bank of New York is a component of the Federal Reserve System and administers the Benchmarks for public policy purposes, the Benchmarks are not within the scope of the Principles. However, as a matter of policy, the Federal Reserve Bank of New York is committed to administering the Benchmarks in a manner consistent with the Principles.

Governance: The Federal Reserve Bank of New York has primary responsibility for all aspects of the determination of the Benchmarks and has <u>Ethics and Conflicts of Interest</u> policies in place, as well as additional policies for staff involved in the production of the Benchmarks. Control frameworks have been implemented that define the roles and responsibilities of the Administrator in the production of the Benchmarks and an Oversight Committee has been established to periodically review and challenge the Benchmark production process.

Quality of the Benchmark:

Unsecured Benchmarks: The EFFR is intended to be an accurate and reliable representation of overnight transaction activity in the federal funds market. The OBFR is intended to be an accurate and reliable representation of overnight activity across the markets for federal funds, Eurodollars, and wholesale unsecured deposits that are economically equivalent to Eurodollar transactions, herein referred to as "selected deposits". The calculation of each of the <u>Unsecured Benchmarks</u> is anchored in observable, arm's length transactions. Data exclusion policies that permit the removal of erroneous transaction data from Benchmark calculations have been implemented. The Unsecured Benchmarks are <u>published each business day</u> with accompanying statistics, including the underlying transaction volumes and volume-weighted percentile rates. Data contingency processes have been developed in the event that the primary data source of the Unsecured Benchmarks were unavailable.

¹ "Administrator" and "Benchmark" are terms defined by IOSCO in the Glossary of Key Terms in Annex A of the <u>Principles for</u> <u>Financial Benchmarks</u>.

Repo Benchmarks: The TGCR, the BGCR and the SOFR are intended to be accurate and reliable representations of overnight transaction activity in different segments of the Treasury repo market. The calculation of each <u>Repo Benchmark</u> is anchored in observable, arm's length transactions. Data exclusion policies that permit the removal of erroneous transaction data from the Benchmark calculations have been implemented. The Repo Benchmarks are <u>published each business day</u> with accompanying statistics, including the underlying transaction volumes and volume-weighted percentile rates. Data contingency processes have been developed for the Repo Benchmarks in the event that a primary data source of one or more of the Repo Benchmarks were unavailable.

SOFR Averages and SOFR Index: The SOFR Averages and SOFR Index are intended to be accurate and reliable representations of SOFR compounded over various tenors. The SOFR Averages and SOFR Index are calculated using only the historical series of SOFR values. The Federal Reserve Bank of New York has published details and formulas regarding the <u>SOFR Averages and SOFR Index</u>.

Quality of the Methodology: The Overnight Benchmarks are calculated as volume-weighted median rates. All data collected and used in the production of the Overnight Benchmarks are subject to internal controls. The SOFR Averages are calculated as compounded averages of SOFR and the SOFR Index is calculated as the cumulative impact of compounding the SOFR on a unit of investment over time. The production of the SOFR Averages and SOFR Index is also subject to internal controls. Any material change to the methodology of, or decision to terminate, a Benchmark will be communicated to the public and public comment will be solicited, to the extent reasonable.

Accountability: The Federal Reserve Bank of New York has developed a process for receiving and addressing complaints, has an internal Audit Group that reviews the quality of the Benchmark production process, and maintains a robust audit trail of all actions taken in the production of the Benchmarks.

The below table provides additional detail regarding the compliance of the Benchmarks with each of the IOSCO Principles, where applicable.

Principle	Overview	Assessment	Comment
Principle 1. Overall Responsibility of the Administrator	 Overview The Administrator should retain primary responsibility for all aspects of the Benchmark determination process. For example, this includes: a) Development: The definition of the Benchmark and Benchmark Methodology; b) Determination and Dissemination: Accurate and timely compilation and publication and distribution of the Benchmark; c) Operation: Ensuring appropriate transparency over significant decisions affecting the compilation process, including contingency measures in the event of absence of or insufficient inputs, market stress or disruption, failure of critical infrastructure, or other relevant factors; and d) Governance: Establishing credible and transparent governance, oversight function accountability procedures for the Benchmark determination process, including an identifiable oversight function accountable for the Benchmark. 	Assessment Compliant	 The Federal Reserve Bank of New York is the Administrator of the Effective Federal Funds Rate (EFFR), the Overnight Bank Funding Rate (OBFR), the Tri-party General Collateral Rate (TGCR), the Broad General Collateral Rate (BGCR), the Secured Overnight Financing Rate (SOFR), the SOFR Averages, and the SOFR Index, and has primary responsibility for all aspects of the Benchmark determination process, including the development, dissemination, operation, and governance of the Benchmarks. a) The definitions and descriptions of the Benchmarks are available on the Federal Reserve Bank of New York public website. Further detail is provided on the Additional Information pages for the Unsecured Benchmarks, the Repo Benchmarks, the SOFR Averages, and the SOFR Index. b) Each of the Benchmarks is calculated in a controlled internal application and is disseminated on the Federal Reserve Bank of New York public website. The TGCR, the BGCR, the SOFR, the SOFR Averages, and the SOFR Index are published at approximately 8:00 A.M. ET each morning, while the EFFR and OBFR are published at approximately 9:00 A.M. ET. In the case of a delay in the publication of a Benchmark, subscribers will be notified of the delay by email. c) Data contingency policies for the Unsecured Benchmarks and for the Repo Benchmarks define
	 Benchmark Methodology; b) Determination and Dissemination: Accurate and timely compilation and publication and distribution of the Benchmark; c) Operation: Ensuring appropriate transparency over significant decisions affecting the compilation of the Benchmark and any related determination process, including contingency measures in the event of absence of or insufficient inputs, market stress or disruption, failure of critical infrastructure, or other relevant factors; and d) Governance: Establishing credible and transparent governance, oversight and accountability procedures for the Benchmark determination process, including an identifiable oversight function accountable for the development, issuance and operation of the 		 <u>SOFR Averages, and the SOFR Index</u>, and has primary responsibility for all aspects of the Benchmark determination process, including the development, dissemination, operation, and governance of the Benchmarks. a) The definitions and descriptions of the Benchmarks are available on the Federal Reserve Bank of New York public website. Further detail is provided on the Additional Information pages for the <u>Unsecured Benchmarks</u>, the <u>Repo Benchmarks</u>, the <u>SOFR Averages</u>, and the SOFR Index. b) Each of the Benchmarks is calculated in a controlled internal application and is disseminated on the Federal Reserve Bank of New York public website. The TGCR, the BGCR, the SOFR, the SOFR Averages, and the SOFR Index are published at
			9:00 A.M. ET. In the case of a delay in the publication of a Benchmark, subscribers will be

			 using only the historical series of SOFR values, there is no separate contingency source for these Benchmarks. d) An Oversight Committee periodically reviews and provides challenge on the Benchmark production process. The internal control structure used to administer the Benchmarks is audited by an independent internal auditing body within the Federal Reserve Bank of New York and an oversight body within the Federal Reserve Bank of New York's other operations.
2. Oversight of Third Parties	 Where activities relating to the Benchmark determination process are undertaken by third parties - for example collection of inputs, publication or where a third party acts as Calculation Agent - the Administrator should maintain appropriate oversight of such third parties. The Administrator (and its oversight function) should consider adopting policies and procedures that: a) Clearly define and substantiate through appropriate written arrangements the roles and obligations of third parties who participate in the Benchmark determination process, as well as the standards the Administrator expects these third parties to comply with; b) Monitor third parties' compliance with the standards set out by the Administrator; c) Make Available to Stakeholders and any relevant Regulatory Authority the identity and roles of third parties who participate in the Benchmark determination process; and d) Take reasonable steps, including contingency plans, to avoid undue operational risk related to the participation of third parties in the Benchmark determination process. 	Not Applicable	All aspects of the Benchmark production process are carried out by the Federal Reserve Bank of New York. Third parties are not involved in the collection of inputs to the Benchmarks, as the Federal Reserve Bank of New York sources all data directly from either the counterparties to the trades underlying the Benchmarks or the intermediaries on whose systems those trades are cleared and settled.

	This Principle does not apply in relation to a third party from whom an Administrator sources data if that third party is a Regulated Market or Exchange.		
3. Conflicts of Interest for Administrators	To protect the integrity and independence of Benchmark determinations, Administrators should document, implement and enforce policies and procedures for the identification, disclosure, management, mitigation or avoidance of conflicts of interest. Administrators should review and update their policies and procedures as appropriate. Administrators should disclose any material conflicts of interest to their users and any relevant Regulatory Authority, if any. The framework should be appropriately tailored to the level of existing or potential conflicts of interest identified and the risks that the Benchmark poses and should seek to ensure:	Compliant	The Federal Reserve Bank of New York enforces policies and procedures to mitigate and avoid conflicts of interest in the production of the Benchmarks. These policies and procedures are periodically reviewed by an Oversight Committee. In the event that new conflicts arise, the Oversight Committee, in conjunction with the Ethics Office of the Federal Reserve Bank of New York, will develop amendments to the conflicts of interest policies. Additionally, the Federal Reserve Bank of New York maintains a Code of Conduct for staff. Staff are subject to ethics training on a periodic basis and the Ethics Office requires all Federal Reserve Bank of New York staff to complete an annual certification to attest that they have read and will adhere to the Code of Conduct.
	 a) Existing or potential conflicts of interest do not inappropriately influence Benchmark determinations; b) Personal interests and connections or business connections do not compromise the Administrator's performance of its functions; c) Segregation of reporting lines within the Administrator, where appropriate, to clearly define responsibilities and prevent unnecessary or undisclosed conflicts of interest or the perception of such conflicts; d) Adequate supervision and sign-off by authorized or qualified employees prior to releasing Benchmark determinations; e) The confidentiality of data, information and other inputs submitted to, received by or produced by the Administrator; f) Effective procedures to control the exchange of information between staff engaged in activities involving a risk of conflicts of interest or between 		 a) The Federal Reserve Bank of New York is tasked with implementing monetary policy through open market operations to maintain the federal funds rate within the target range set by the Federal Open Market Committee. This task, however, is independent from the process of calculating the EFFR. As for each of the Benchmarks, the calculation methodology for the EFFR provides for staff discretion in the form of excluding potentially erroneous or anomalous transactions in extraordinary circumstances, and dual approval by two staff members involved in the daily Benchmark production is required to both exclude transactions from a calculation and to calculate and publish the EFFR. b) The Federal Reserve Bank of New York has Ethics and Conflicts of Interest policies in place and, as Administrator of the Benchmarks, has implemented additional policies to mitigate and avoid conflicts of

	 staff and third parties, where that information may reasonably affect any Benchmark determinations; and g) Adequate remuneration policies that ensure all staff who participate in the Benchmark determination are not directly or indirectly rewarded or incentivized by the levels of the Benchmark. An Administrator's conflict of interest framework should seek to mitigate existing or potential conflicts created by its ownership structure or control, or due to other interests the Administrator's staff or wider group may have in relation to Benchmark determinations. To this end, the framework should: a) Include measures to avoid, mitigate or disclose conflicts of interest that may exist between its Benchmark determination business (including all staff who perform or otherwise participate in Benchmark production responsibilities), and any other business of the Administrator or any of its affiliates; and b) Provide that an Administrator discloses conflicts of interest and any relevant Regulatory Authority in a timely manner. 		 interest related to the Benchmarks. Staff involved in Benchmark production are prohibited from taking direct investment exposure to the Benchmarks they produce, are prohibited from making investment decisions or placing orders during the time of rate production, and are prohibited from engaging in borrowing activity tied to the Benchmarks they produce during the time period of rate production. c) The Federal Reserve Bank of New York does not have any affiliates or aspects of its organizational structure that carry additional conflicts of interest. The Federal Reserve Bank of New York, a corporate instrumentality of the United States government, has no parent company. d) The production of Benchmarks requires that all calculations and uses of judgment be subject to dual approval by two staff members and that Benchmark production be supervised by an Officer of the Federal Reserve Bank of New York. All uses of staff expert judgment, such as exclusions of data from the Benchmark calculations, are subject to a separate periodic review by an Oversight Committee, in line with Principle 5.
4. Control Framework for Administrators	An Administrator should implement an appropriate control framework for the process of determining and distributing the Benchmark. The control framework should be appropriately tailored to the materiality of the potential or existing conflicts of interest identified, the extent of the use of discretion in the Benchmark setting process and to the nature of Benchmark inputs and outputs. The control framework should be	Compliant	

documented and available to relevant Regulatory Authorities,	
if any. A summary of its main features should be Published or	a) Conflicts of Interest: In line with Principle 3, the
Made Available to Stakeholders.	Federal Reserve Bank of New York, as
	Administrator of the Benchmarks, has implemented
This control framework should be reviewed periodically and	a Conflicts of Interest Policy. It requires dual
updated as appropriate. The framework should address the	approval by two staff members for all actions
following areas:	involved in the production of the Benchmarks,
	prohibits staff involved in the production of the rates
a) Conflicts of interest in line with Principle 3 on	from having direct investment exposure to the
conflicts of interests;	Benchmarks, prohibits staff from making
b) Integrity and quality of Benchmark determination:	investment decisions or placing orders during the
b) integrity and quanty of Benchmark determination.	time of rate production, and prohibits staff from
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i. Arrangements to ensure that the quality and	engaging in borrowing activity tied to the
integrity of Benchmarks is maintained, in line	Benchmarks they produce during the time period of
with principles 6 to 15 on the quality of the	rate production. Additionally, an Oversight
Benchmark and Methodology;	Committee meets on at least a quarterly basis and is
ii. Arrangements to promote the integrity of	responsible for reviewing all uses of staff judgment
Benchmark inputs, including adequate due	in the Benchmark production process during each
diligence on input sources;	quarter, including exclusions of submitted data and
iii. Arrangements to ensure accountability and	the use of contingency policies. This Committee is
complaints mechanisms are effective, in line with	also responsible for reviewing existing Conflicts of
principles 16 to 19; and	Interest policies, as well as new conflicts of interest
iv. Providing robust infrastructure, policies and	as they arise.
procedures for the management of risk, including	
operational risk.	b) Integrity and quality of Benchmark determination:
	The providers of the data for the FR 2420 Report of
c) Whistleblowing mechanism:	Selected Money Market Rates which underlie the
c) whisteorowing meenanism.	Unsecured Benchmarks, and Bank of New York
Administrators should establish an effective	Mellon (BNYM), which provides transaction-level
whistleblowing mechanism to facilitate early	data on triparty Treasury repo transactions
awareness of any potential misconduct or	underlying the Repo Benchmarks, are required to
irregularities that may arise. This mechanism should	submit their data in a timely manner to the Federal
allow for external reporting of such cases where	Reserve Bank of New York each day. The Federal
appropriate.	Reserve Bank of New York also collects, on behalf
	of the U.S. Department of the Treasury's Office of
d) Expertise:	Financial Research ("OFR"), transaction-level GCF
	Repo data and FICC-cleared bilateral repo data
i. Ensuring Benchmark determinations are made by	underlying the BGCR and SOFR. Consistent with
personnel who possess the relevant levels of	Principle 15, the data collected for each of the

Admin a) b)	expertise, with a process for periodic review of their competence; and ii. Staff training, including ethics and conflicts of interest training, and continuity and succession planning for personnel. a Benchmark is based on Submissions: istrators should promote the integrity of inputs by: Ensuring as far as possible that the Submitters comprise an appropriately representative group of participants taking into consideration the underlying Interest measured by the Benchmark; Employing a system of appropriate measures so that, to the extent possible, Submitters comply with the Submission guidelines, as defined in the Submitter Code of Conduct and the Administrators' applicable quality and integrity standards for Submission; Specifying how frequently Submissions should be made and specifying that inputs or Submissions should be made for every Benchmark determination; and Establishing and employing measures to effectively monitor and scrutinize inputs or Submissions. This should include pre-compilation or pre-publication monitoring to identify and avoid errors in inputs or Submissions, as well as ex-post analysis of trends and outliers.	 Benchmarks are submitted to the Federal Reserve through secure data collection mechanisms. Prior to being used to calculate the Benchmarks, the data are validated and stored by the Federal Reserve Bank of New York. Policies are in place defining the responsibilities of staff involved in the Benchmark production process, including the use of a Benchmark calculation application, daily review of the data included in the Benchmarks, and the calculation and dissemination of the Benchmarks. Data contingency policies for the <u>Unsecured Benchmarks</u> and for the <u>Repo Benchmarks</u> specify contingency data sources in the case that the FR 2420 data or one or more data sources for the Repo Benchmarks will be calculated and disseminated in the case that there is a problem with the standard production processes. The Federal Reserve Bank of New York maintains robust contingency tools and policies to mitigate operational risk, which include the ability to calculate and disseminate the Benchmarks from offsite locations while maintaining a robust audit trail. c) Whistleblowing mechanism: The Federal Reserve Bank of New York maintains an internal whistleblowing mechanism to address the internal reporting of misconduct. Additionally, The Federal Reserve Bank of New York maintains a <u>Tips and Complaints</u> mechanism for general external complaints, as well as an email address (rateproduction @ny.frb.org) to accept complaints related to the Benchmarks. Any complaint received is reviewed by an Oversight Committee.
		 d) Staff expertise: All roles involved in the calculation of the Benchmarks are performed by staff with knowledge of the underlying markets and training in

			 the Benchmark calculation process. Staff involved in the production of Benchmarks are subject to periodic reviews of competency. Consistent with Principle 14, the Benchmarks are based entirely on observable transactions, as opposed to submissions or estimates.
5. Internal	Administrators should establish an oversight function to	Compliant	An Oversight Committee reviews and provides challenge on the Bonehmark production process. Internal policies are in
Oversight	 review and provide challenge on all aspects of the Benchmark determination process. This should include consideration of the features and intended, expected or known usage of the Benchmark and the materiality of existing or potential conflicts of interest identified. The oversight function should be carried out either by a separate committee, or other appropriate governance arrangements. The oversight function and its composition should be appropriate to provide effective scrutiny of the Administrator. Such oversight function could consider groups of Benchmarks by type or asset class, provided that it otherwise complies with this Principle. An Administrator should develop and maintain robust procedures regarding its oversight function, which should be documented and available to relevant Regulatory Authorities, if any. The main features of the procedures should include: a) The terms of reference of the oversight function; b) Criteria to select members of the oversight function; c) The summary details of membership of any committee or arrangement charged with the oversight function, along with any declarations of conflicts of interest and processes for election, nomination or removal and replacement of committee members. 		 the Benchmark production process. Internal policies are in place defining the responsibilities of the Committee and the details of its membership. The Committee consists of members from across the Federal Reserve Bank of New York organizational structure who are not involved in the daily production of the Benchmarks, and includes the Chief Risk Officer, senior staff from various control areas of the Federal Reserve Bank of New York, and representatives of the Reserve Bank Operations and Payments Systems Division of the Federal Reserve Board of Governors. A representative of the U.S. Department of the Treasury's Office of Financial Research (OFR) also participates in the oversight of the Repo Benchmarks, the SOFR Averages, and the SOFR Index. The Oversight Committee meets on at least a quarterly basis to provide effective oversight and challenge to the Federal Reserve Bank of New York Benchmark production process. The Committee's responsibilities include reviewing: a) Benchmark design: The definition and methodology of the Benchmarks; General issues and risks regarding the Benchmarks; The underlying interest of the Benchmarks; and The calculation methodology of the Benchmarks, and any proposed changes to a methodology.
	a) Oversight of the Benchmark design:		framework:

 i. Periodic review of the definition of the Benchmark and its Methodology; ii. Taking measures to remain informed about issues and risks to the Benchmark, as well as commissioning external reviews of the Benchmark (as appropriate); iii. Overseeing any changes to the Benchmark Methodology, including assessing whether the Methodology continues to appropriately measure the underlying Interest, reviewing proposed and implemented changes to the Methodology, and authorizing or requesting the Administrator to undertake a consultation with Stakeholders where known or its Subscribers on such changes as per Principle 12; and 	
 iv. Reviewing and approving procedures for termination of the Benchmark, including guidelines that set out how the Administrator should consult with Stakeholders about such cessation. 	
b) Oversight of the integrity of Benchmark determination and control framework:	
 i. Overseeing the management and operation of the Benchmark, including activities related to Benchmark determination undertaken by a third party; ii. Considering the results of internal and external audits, and following up on the implementation of remedial actions highlighted in the results of these audits; and iii. Overseeing any exercise of Expert Judgment by 	
the Administrator and ensuring Published Methodologies have been followed. Where conflicts of interests may arise in the Administrator due to its ownership structures or	

- Audit findings related to the Benchmark production process;
- Any use of non-standard procedures in the production of the Benchmarks, including the use of staff expert judgment or contingency data sources;
- Existing and potential conflicts of interest and related policies imposed on staff; and
- Complaints or inquiries received by the Federal Reserve Bank of New York regarding the Benchmarks.

The Federal Reserve Bank of New York has put in place sufficient controls to prevent material conflicts of interest related to the production of all Benchmarks, and consults both the Federal Reserve Board of Governors and the Federal Open Market Committee, as appropriate, on issues related to the calculation and production of the Unsecured Benchmarks. Representatives from both the OFR and the Federal Reserve Board of Governors are included in the oversight of the Repo Benchmarks, the SOFR Averages, and the SOFR Index.

Consistent with Principle 14, the Benchmarks are based entirely on observable transactions, as opposed to submissions or estimates.

	controlling interests, or due to other activities conducted by any entity owning or controlling the Administrator or by the Administrator or any of its affiliates: the Administrator should establish an independent oversight function which includes a balanced representation of a range of Stakeholders where known, Subscribers and Submitters, which is chosen to counterbalance the relevant conflict of interest.		
	Where a Benchmark is based on Submissions: the oversight function should provide suitable oversight and challenge of the Submissions by:		
	 a) Overseeing and challenging the scrutiny and monitoring of inputs or Submissions by the Administrator. This could include regular discussions of inputs or Submission patterns, defining parameters against which inputs or Submissions can be analyzed, or querying the role of the Administrator in challenging or sampling unusual inputs or Submissions; b) Overseeing the Code of Conduct for Submitters; c) Establishing effective arrangements to address breaches of the Code of Conduct for Submitters; and d) Establishing measures to detect potential anomalous or suspicious Submissions and in case of suspicious activities, to report them, as well as any misconduct by Submitters of which it becomes aware to the relevant Regulatory Authorities, if any. 		
6. Benchmark Design	The design of the Benchmark should seek to achieve, and result in an accurate and reliable representation of the economic realities of the Interest it seeks to measure, and eliminate factors that might result in a distortion of the price, rate, index or value of the Benchmark. Benchmark design should take into account the following generic non-exclusive features, and other factors should be	Compliant	The Federal Reserve Bank of New York has designed the EFFR with the goal of creating an accurate and reliable representation of the overnight federal funds market and the OBFR with the goal of creating an accurate and reliable representation of the combined overnight federal funds, Eurodollar, and wholesale, unsecured, "selected deposit" markets. Each of the Unsecured Benchmarks provides a reliable measure of market activity and, in line with
	considered, as appropriate to the particular Interest:		Principle 7, the data underlying the Unsecured Benchmarks are representative samples of transactions in federal funds,

 a) Adequacy of the sample used to represent the Interest; b) Size and liquidity of the relevant market (for example whether there is sufficient trading to provide observable, transparent pricing); c) Relative size of the underlying market in relation to the volume of trading in the market that references the Benchmark; d) The distribution of trading among Market Participants (market concentration); e) Market dynamics (e.g., to ensure that the Benchmark reflects changes to the assets underpinning a Benchmark). 	 Eurodollars, and "selected deposits" by U.S. bank offices. The FR 2420 reporting panel is regularly updated to capture shifts in the entities active in these markets. The Repo Benchmarks are intended to create accurate and reliable representations of different segments of the Treasury repo market. The TGCR is intended to measure rates on overnight, tri-party Treasury general collateral (GC) repo transactions where the counterparties know each other's identity at the time of the trade. The BGCR is intended to measure rates on overnight, Treasury GC repo transactions, including those transactions underlying the TGCR and blind-brokered interdealer repo trades in the GCF Repo market. The SOFR is intended to be a broad measure of the
	general cost of financing Treasury securities overnight, including those transactions underlying the BGCR and trades in the FICC-cleared bilateral repo market. The providers of the data underlying the Repo Benchmarks submit all of the transactions that occur on their respective platforms and meet the reporting criteria.
	Each of the Overnight Benchmarks is calculated as a volume-weighted median, which, as noted in a <u>Technical</u> <u>Note</u> regarding the EFFR, is more resilient to outlier and erroneous transactions than other commonly used central tendency measures, such as the volume-weighted average. Data can be excluded from the Overnight Benchmark calculations in circumstances deemed necessary by expert staff opinion and Officer oversight. These circumstances include when staff identify one or more submitted
	 transactions as potentially anomalous or erroneously reported, and the reporting institution cannot revise the data or cannot be contacted to confirm the accuracy of the data in time for the publication of the Benchmarks, or if a transaction appears to be conducted between affiliated entities. The SOFR Averages and SOFR Index are intended to create accurate and reliable representations of the SOFR

			 compounded over various tenors. The SOFR Averages incorporate all the SOFR values starting exactly 30-, 90-, and 180-calendar days before the publication date. The SOFR Index measures the cumulative impact of compounding the SOFR on a unit of investment over time, with the initial value set to 1.00000000 on April 2, 2018 and compounded by the value of each SOFR thereafter. The Federal Reserve Bank of New York publishes details and formulas regarding the <u>SOFR Averages and SOFR Index</u>. The design of the Benchmarks and their underlying data are assessed on a regular basis, and, in line with Principle 12, could be modified in the case of market evolution to more accurately reflect the underlying interest.
7. Data Sufficiency	 The data used to construct a Benchmark determination should be sufficient to accurately and reliably represent the Interest measured by the Benchmark and should: a) Be based on prices, rates, indices or values that have been formed by the competitive forces of supply and demand in order to provide confidence that the price discovery system is reliable; and b) Be anchored by observable transactions entered into at arm's length between buyers and sellers in the market for the Interest the Benchmark measures in order for it to function as a credible indicator of prices, rates, indices or values. 	Compliant	The Benchmarks are anchored in observable transactions that are priced based on the competitive forces of supply and demand and are conducted at arm's length. <u>The FR 2420 Report of Selected Money Market Rates</u> , which is the form that reporters complete to provide the data that is used to calculate the Unsecured Benchmarks, collects a broad sample of transactions in the markets for federal funds, Eurodollars, and "selected deposits". Reporting entities are required to exclude indicative prices and transactions conducted between affiliated entities from the FR 2420 data underlying the Benchmarks. The FR 2420 report is reviewed by the Office of
	This Principle requires that a Benchmark be based upon (i.e., <i>anchored in</i>) an active market having observable <i>Bona Fide</i> , Arms-Length Transactions. This does not mean that every individual Benchmark determination must be constructed solely of transaction data. Provided that an active market exists, conditions in the market on any given day might require the Administrator to rely on different forms of data tied to observable market data as an adjunct or supplement to transactions. Depending upon the Administrator's Methodology, this could result in an individual Benchmark determination being based predominantly, or exclusively, on		Management and Budget for renewal at least every three years and can be amended, if deemed necessary, to capture a representative share of transactions in the unsecured wholesale U.S. dollar funding markets. The Repo Benchmarks are anchored in arm's length transactions. Transactions between affiliated institutions in which neither institution is operating in a fiduciary capacity are removed, where possible and applicable (such exclusions are not relevant for blind-brokered transactions). A <u>trim</u> <u>applied to the bilateral repo data</u> automatically removes low

	 bids and offers or extrapolations from prior transactions. This is further clarified in Principle 8. Provided that subparagraphs (a) and (b) above are met, Principle 7 does not preclude Benchmark Administrators from using executable bids or offers as a means to construct Benchmarks where anchored in an observable market consisting of <i>Bona Fide</i>, Arms-Length transactions. This Principle also recognizes that various indices may be designed to measure or reflect the performance of a rule-based investment strategy, the volatility or behavior of an index or market or other aspects of an active market. Principle 7 does not preclude the use of non-transactional data for such indices that are not designed to represent transactions and where the nature of the index is designed to measure. For example, certain volatility of an index of securities transactions, rely on non-transactional data, but the data is derived from and thus "<i>anchored</i>" in an actual functioning securities or options market. 		rate transactions that are likely not solely motivated by the desire to finance Treasury securities from the calculation of the SOFR, and staff may use expert judgment to remove any high rate or high volume outlier trades. The SOFR Averages and SOFR Index are calculated using only the historical series of SOFR values as an input; these Benchmarks are thus anchored in arm's length transactions. The Federal Reserve Bank of New York publishes details and formulas regarding the <u>SOFR Averages and SOFR</u> <u>Index</u> .
8. Hierarchy of Data Inputs	 An Administrator should establish and Publish or Make Available clear guidelines regarding the hierarchy of data inputs and exercise of Expert Judgment used for the determination of Benchmarks. In general, the hierarchy of data inputs should include: a) Where a Benchmark is dependent upon Submissions, the Submitters' own concluded arms-length transactions in the underlying interest or related markets; b) Reported or observed concluded Arm's-length Transactions in the underlying interest; c) Reported or observed concluded Arm's-length Transactions in related markets; d) Firm (executable) bids and offers; and e) Other market information or Expert Judgments. 	Compliant	The Overnight Benchmarks are based on their primary data sources whenever possible. If the primary data sources are insufficient or not available on a given day, or if other circumstances prevent the normal production of one or more of the Overnight Benchmarks, the Benchmark(s) will be produced using contingency data sources. In the case that both the primary data and contingency data are insufficient to calculate an Overnight Benchmark, the prior day's Benchmark value will be published. Any use of an alternative data source for an Overnight Benchmark will be disclosed on the Federal Reserve Bank of New York public website. The SOFR Averages and SOFR Index are calculated using only the historical series of SOFR values; whether an underlying SOFR value is calculated with a contingency methodology does not affect its inclusion or weight in the

	Provided that the Data Sufficiency Principle is met (i.e., an		calculation of the SOFR Averages and SOFR Index.
	active market exists), this Principle is not intended to restrict		Accordingly, there is no separate contingency source for the
	an Administrator's flexibility to use inputs consistent with the		SOFR Averages and SOFR Index.
	Administrator's approach to ensuring the quality, integrity,		
	continuity and reliability of its Benchmark determinations, as		The contingency data for the Unsecured Benchmarks are
	set out in the Administrator's Methodology. The		received from brokers in the unsecured wholesale funding
	Administrator should retain flexibility to use the inputs it		markets and consist of brokered transactions in federal
	believes are appropriate under its Methodology to ensure the		funds, Eurodollars and "selected deposits". These data,
	quality and integrity of its Benchmark. For example, certain		which are based on actual transactions, do not represent the
	Administrators may decide to rely upon Expert Judgment in		entire market that is captured by the FR 2420 report, but are
	an active albeit low liquidity market, when transactions may		a sizeable portion of the overall market and have historically
	not be consistently available each day. IOSCO also recognizes		tracked the FR 2420 data closely. In the case that brokered
	that there might be circumstances (e.g., a low liquidity		data are used for the EFFR and the OBFR, the Benchmarks
	market) when a confirmed bid or offer might carry more		will be calculated as volume-weighted medians of the
	meaning than an outlier transaction. Under these		contingency data sets.
	circumstances, non-transactional data such as bids and offers		
	and extrapolations from prior transactions might predominate		For the Repo Benchmarks, contingency data are derived
	in a given Benchmark determination		from a daily survey of the Federal Reserve Bank of New
			York's primary dealers. The dealers submit their total
			volume of daily borrowing in various segments of the repo
			market, a subset of which corresponds to the primary data
			sources used for Repo Benchmark calculation, as well as the
			volume-weighted average rate of their activity in each
			segment. As these data do not represent all of the activity
			that is transacted in the market, but rather only the cash
			borrowing activity of the primary dealers, the data are not
			used directly in the calculation of the rates, but are used to
			adjust the most recently available primary source data to
			reflect market movements, during contingent scenarios when
			primary source data are unavailable. This method generates
			results which are historically much closer to the true values
			of the Repo Benchmarks than a median calculation using the
			survey data.
9.	The Administrator should describe and publish with each	Compliant	The volume and several volume-weighted percentile rates of
J. Transparency	Benchmark determination, to the extent reasonable without	Compnant	transactions underlying the Overnight Benchmarks are
of Benchmark	delaying an Administrator publication deadline:		published on a daily basis. On a quarterly basis, summary
	dona, ing an i kaninistrator publication deadine.		statistics reflecting the trailing 12 months lagged by one
Determinations	a) A concise explanation, sufficient to facilitate a		quarter are published which are calculated using any
	Stakeholder's or Market Authority's ability to		quarter are published which are calculated using any
	Stakeholder 5 of Market Hamonity 5 ability to		1

	 understand how the determination was developed, including, at a minimum, the size and liquidity of the market being assessed (meaning the number and volume of transactions submitted), the range and average volume and range and average of price, and indicative percentages of each type of market data that have been considered in a Benchmark determination; terms referring to the pricing Methodology should be included (i.e., <i>transactionbased, spread-based</i> or <i>interpolated/extrapolated</i>); b) A concise explanation of the extent to which and the basis upon which Expert Judgment if any, was used in establishing a Benchmark determination. 		submissions received subsequent to the publication of the daily Overnight Benchmarks. The SOFR Averages are compounded historical averages of SOFR while the SOFR Index allows for the calculation of compounded average rates over custom time periods; while summary statistics are not provided, the volumes underlying SOFR over the relevant period are the ultimate anchor of these Benchmarks. The Federal Reserve Bank of New York publishes details and formulas regarding the <u>SOFR</u> <u>Averages and SOFR Index</u> . As stated in the Data Exclusions policies for the <u>Unsecured Benchmarks</u> and for the <u>Repo Benchmarks</u> , available on the Federal Reserve Bank of New York website, staff involved in the Benchmark production process reviews the data each morning prior to the calculation of the Benchmarks. During circumstances in which potential errors or other anomalies are discovered and the reporting institution or data provider is not able to confirm or revise its submission, staff judgment may be used to exclude such transactions. Any use of staff judgment is subject to dual approval by staff members, is supervised by an Officer of the Federal Reserve Bank of New York, and is subsequently reviewed by an Oversight Committee.
			In the event that the primary data are deemed insufficient to
			calculate one or more of the Benchmarks on a given date, in line with Principle 8, staff will use contingency data to calculate the Benchmark(s). Any use of a contingency data source will be disclosed on the Federal Reserve Bank of
10. Periodic	The Administrator should periodically review the conditions	Compliant	 calculate one or more of the Benchmarks on a given date, in line with Principle 8, staff will use contingency data to calculate the Benchmark(s). Any use of a contingency data source will be disclosed on the Federal Reserve Bank of New York public website. Federal Reserve staff monitor U.S. dollar funding markets,
10. Periodic Review	in the underlying Interest that the Benchmark measures to	Compliant	 calculate one or more of the Benchmarks on a given date, in line with Principle 8, staff will use contingency data to calculate the Benchmark(s). Any use of a contingency data source will be disclosed on the Federal Reserve Bank of New York public website. Federal Reserve staff monitor U.S. dollar funding markets, including the markets for federal funds, Eurodollars,
	in the underlying Interest that the Benchmark measures to determine whether the Interest has undergone structural	Compliant	 calculate one or more of the Benchmarks on a given date, in line with Principle 8, staff will use contingency data to calculate the Benchmark(s). Any use of a contingency data source will be disclosed on the Federal Reserve Bank of New York public website. Federal Reserve staff monitor U.S. dollar funding markets, including the markets for federal funds, Eurodollars, "selected deposits", and repo markets underlying the
	in the underlying Interest that the Benchmark measures to determine whether the Interest has undergone structural changes that might require changes to the design of the	Compliant	 calculate one or more of the Benchmarks on a given date, in line with Principle 8, staff will use contingency data to calculate the Benchmark(s). Any use of a contingency data source will be disclosed on the Federal Reserve Bank of New York public website. Federal Reserve staff monitor U.S. dollar funding markets, including the markets for federal funds, Eurodollars, "selected deposits", and repo markets underlying the Benchmarks, and how the dynamics in these markets affect
	in the underlying Interest that the Benchmark measures to determine whether the Interest has undergone structural	Compliant	 calculate one or more of the Benchmarks on a given date, in line with Principle 8, staff will use contingency data to calculate the Benchmark(s). Any use of a contingency data source will be disclosed on the Federal Reserve Bank of New York public website. Federal Reserve staff monitor U.S. dollar funding markets, including the markets for federal funds, Eurodollars, "selected deposits", and repo markets underlying the

	functioning such that it can no longer function as the basis for a credible Benchmark. The Administrator should Publish or Make Available a summary of such reviews where material revisions have been made to a Benchmark, including the rationale for the revisions.		 quarterly basis, and, in line with Principle 12, could deem it necessary that changes be made to the composition or calculation methodology of one or more Benchmarks. Consistent with Principle 12, any changes to the methodology of a Benchmark will be reviewed by an Oversight Committee, and the Federal Reserve Bank of New York will develop a plan for notifying and consulting with relevant stakeholders, including soliciting public comment, in a manner appropriate and proportionate to the circumstances.
11. Content of the Methodology	 The Administrator should document and Publish or Make Available the Methodology used to make Benchmark determinations. The Administrator should provide the rationale for adopting a particular Methodology. The Published Methodology should provide sufficient detail to allow Stakeholders to understand how the Benchmark is derived and to assess its representativeness, its relevance to particular Stakeholders, and its appropriateness as a reference for financial instruments. At a minimum, the Methodology should contain: a) Definitions of key terms; b) All criteria and procedures used to develop the Benchmark, including input selection, the mix of inputs used to derive the Benchmark, the guidelines that control the exercise of Expert Judgment by the Administrator, priority given to certain data types, minimum data needed to determine a Benchmark, and any models or extrapolation methods; c) Procedures and practices designed to promote consistency in the exercise of Expert Judgment between Benchmark determinations; d) The procedures which govern Benchmark determination in periods of market stress or disruption, or periods where data sources may be absent (e.g., theoretical estimation models); 	Compliant	As described in the Data and Calculation Methodology policies for the <u>Unsecured Benchmarks</u> and for the <u>Repo</u> <u>Benchmarks</u> , and in line with Principle 6, a volume- weighted median calculation methodology is used in the production of each of the Overnight Benchmarks. A volume- weighted median, as noted in a <u>Technical Note regarding the</u> <u>EFFR</u> , is more resilient to outlier and erroneous transactions than other commonly used central tendency measures, such as a volume-weighted average. The SOFR Averages and SOFR Index are <u>compounded</u> in line with broader money market and derivatives conventions in order to reflect the time value of money as accurately as possible. The definitions and descriptions of the <u>Unsecured</u> <u>Benchmarks</u> , the <u>Repo Benchmarks</u> , and the <u>SOFR</u> <u>Averages</u> , and the <u>SOFR Index</u> are available on the Federal Reserve Bank of New York public website. In line with Principle 9, Data Exclusions and Data Contingency policies have been implemented for the <u>Unsecured Benchmarks</u> and for the <u>Repo Benchmarks</u> , describing the use of expert judgment in excluding potentially erroneous transactions and the use of contingency data sources in the calculation of the Overnight Benchmarks, respectively. For the Repo Benchmarks, consistent with Principle 7, expert judgment is used to

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	e) The procedures for dealing with error reports,		remove transactions where possible and applicable between
	including when a revision of a Benchmark would be		affiliated institutions, in which neither institution is
	applicable;		operating in a fiduciary capacity (such exclusions are not
	f) Information regarding the frequency for internal		relevant for blind-brokered transactions)
	reviews and approvals of the Methodology. Where		
	applicable, the Published Methodologies should also		Rate Revisions policies for the <u>Unsecured Benchmarks</u> and
	include information regarding the procedures and		for the <u>Repo Benchmarks</u> state that, if transaction data are
	frequency for external review of the Methodology;		revised or an error is discovered in the calculation process
	g) The circumstances and procedures under which the		subsequent to the rate publication at 9:00 A.M. ET and 8:00
	Administrator will consult with Stakeholders, as		A.M. ET respectively on the same day, the affected rate or
	appropriate; and		rates will be revised at approximately 2:30 P.M. ET. These
	h) The identification of potential limitations of a		revisions will only take place if the change in the published
	Benchmark, including its operation in illiquid or		rate exceeds one basis point. The SOFR Averages and
	fragmented markets and the possible concentration of		SOFR Index will be revised if the SOFR is revised or if a
	inputs.		calculation error is discovered. There will not be a revision
			to a prior day's Benchmark, except in extraordinary
	Where a Benchmark is based on Submissions, the		circumstances. Any revisions to a Benchmark will be clearly
	additional Principle also applies:		indicated on the public website.
	The Administrator should clearly establish criteria for		An Oversight Committee meets on at least a quarterly basis
	including and excluding Submitters. The criteria should		to provide effective oversight and challenge to the
	consider any issues arising from the location of the Submitter,		Benchmark production process.
	if in a different jurisdiction to the Administrator. These		
	criteria should be available to any relevant Regulatory		In line with Principles 12 and 13, any proposed changes to
	Authorities, if any, and Published or Made Available to		the methodology of a Benchmark will be reviewed by the
	Stakeholders. Any provisions related to changes in		Oversight Committee. The Federal Reserve Bank of New
	composition, including notice periods should be made clear.		York will communicate any such changes to the public and
			will seek public comment, to the extent reasonable, before
			implementing changes.
			Consistent with Principle 14, the Benchmarks are based
			entirely on observable transactions, as opposed to
			submissions or estimates.
12. Changes to	An Administrator should Publish or Make Available the	Compliant	The Federal Reserve Bank of New York may seek to revise
the	rationale of any proposed material change in its Methodology,	-	the composition or calculation methodology for one or more
Methodology	and procedures for making such changes. These procedures		Benchmarks. An Oversight Committee, charged with
	should clearly define what constitutes a material change, and		periodically reviewing the calculation methodology of the
	the method and timing for consulting or notifying Subscribers		Benchmarks to ensure that they continue to properly reflect
	(and other Stakeholders where appropriate, taking into		

	account the breadth and depth of the Benchmark's use) of changes.		their underlying interests, will review and approve any such proposed revisions.
	Those procedures should be consistent with the overriding objective that an Administrator must ensure the continued integrity of its Benchmark determinations. When changes are proposed, the Administrator should specify exactly what these changes entail and when they are intended to apply. The Administrator should specify how changes to the		If a proposed change is deemed by the Oversight Committee to be necessary and material in the context of the affected Benchmark(s), the Federal Reserve Bank of New York will develop a plan for notifying and consulting with relevant stakeholders in a manner appropriate and proportionate to the circumstances. The Oversight Committee's evaluation of a potential change, and its decisions regarding the
	Methodology will be scrutinized, by the oversight function. The Administrator should develop Stakeholder consultation procedures in relation to changes to the Methodology that are deemed material by the oversight function, and that are appropriate and proportionate to the breadth and depth of the Benchmark's use and the nature of the Stakeholders. Procedures should:		appropriate consultation plan, will take into account relevant factors such as the uses of the affected Benchmark(s) and the breadth and depth of those uses, the type of changes being proposed, and any risks posed by delays in implementing those changes. The Federal Reserve Board of Governors may be legally required to engage in a formal notice-and-comment process for some types of changes and the Federal Reserve may decide to use such a formal process even when not legally required, but in other cases comments
	 a) Provide advance notice and a clear timeframe that gives Stakeholders sufficient opportunity to analyze and comment on the impact of such proposed material changes, having regard to the Administrator's assessment of the overall circumstances; and b) Provide for Stakeholders' summary comments, and the Administrator's summary response to those comments, to be made accessible to all Stakeholders after any given consultation period, except where the commenter has requested confidentiality. 		may be sought through more informal means. Any notification of a change to the composition or calculation process for a Benchmark will describe the rationale for the change, what the change entails, and when it would apply.
13. Transition	Administrators should have clear written policies and procedures, to address the need for possible cessation of a Benchmark, due to market structure change, product definition change, or any other condition which makes the Benchmark no longer representative of its intended Interest. These policies and procedures should be proportionate to the estimated breadth and depth of contracts and financial instruments that reference a Benchmark and the economic and	Compliant	The Federal Reserve Bank of New York may terminate a Benchmark in certain extraordinary circumstances, including, but not limited to, if a Benchmark no longer represented, and could not be modified to represent, its underlying interest, or if market liquidity in the underlying interest declined to the extent that the underlying interest no longer functioned as an active market. In line with Principle 12, the Federal Reserve Bank of New York periodically reviews the Benchmarks with the goal of ensuring that they

Regulatory and National Authorities in determining what	Benchmarks to promote their accuracy. Such efforts could
policies and procedures are appropriate for a particular	include identifying additional data sources and modifying
Benchmark.	the Benchmark methodologies to account for market
	evolution.
These written policies and procedures should be Published or	
Made Available to all Stakeholders.	Any termination or discontinuation of a Benchmark would
Finde Tranuble to an Stateholders.	be evaluated by an Oversight Committee, which would
Administrators should encourage Subscribers and other	approve a public consultation plan and a process for the
Stakeholders who have financial instruments that reference a	discontinuation of the Benchmark that would include a
Benchmark to take steps to make sure that:	timeline for the discontinuation, a public notification
benchmark to take steps to make sure that.	
	strategy, and steps that could be taken to mitigate the effects
a) Contracts or other financial instruments that reference	of the discontinuation on Benchmark users. Any notification
a Benchmark, have robust fallback provisions in the	of the termination of a Benchmark would describe the
event of material changes to, or cessation of, the	rationale for the decision and when the Benchmark would be
referenced Benchmark; and	discontinued. If appropriate, these steps could include the
b) Stakeholders are aware of the possibility that various	Federal Reserve Bank of New York convening a committee
factors, including external factors beyond the control	of external stakeholders to consult on the appropriate
of the Administrator, might necessitate material	process and taking steps to assist the market in identifying
changes to a Benchmark.	and transitioning to an alternative Benchmark.
Administrators' written policies and procedures to address the	
possibility of Benchmark cessation could include the	
following factors, if determined to be reasonable and	
appropriate by the Administrator:	
a) Criteria to guide the selection of a credible, alternative	
Benchmark such as, but not limited to, criteria that	
seek to match to the extent practicable the existing	
Benchmark's characteristics (e.g., credit quality,	
maturities and liquidity of the alternative market),	
differentials between Benchmarks, the extent to which	
an alternative Benchmark meets the asset/liability	
needs of Stakeholders, whether the revised	
Benchmark is investable, the availability of	
transparent transaction data, the impact on	
Stakeholders and impact of existing legislation;	
b) The practicality of maintaining parallel Benchmarks	
(e.g., where feasible, maintain the existing	
(0.5., where reastore, manual the existing	

necessary, will make efforts to amend one or more

account the views of Stakeholders and any relevant

	 Benchmark for a defined period of time to permit existing contracts and financial instruments to mature and publish a new Benchmark) in order to accommodate an orderly transition to a new Benchmark; c) The procedures that the Administrator would follow in the event that a suitable alternative cannot be identified; d) In the case of a Benchmark or a tenor of a Benchmark that will be discontinued completely, the policy defining the period of time in which the Benchmark 		
	 will continue to be produced in order to permit existing contracts to migrate to an alternative Benchmark if necessary; and e) The process by which the Administrator will engage Stakeholders and relevant Market and National Authorities, as appropriate, in the process for selecting and moving towards an alternative Benchmark, including the timeframe for any such action commensurate with the tenors of the financial instruments referencing the Benchmarks and the adequacy of notice that will be provided to Stakeholders. 		
14. Submitter Code of Conduct	 Where a Benchmark is based on Submissions, the following additional Principle also applies: The Administrator should develop guidelines for Submitters ("Submitter Code of Conduct"), which should be available to any relevant Regulatory Authorities, if any and Published or Made Available to Stakeholders. The Administrator should only use inputs or Submissions from entities which adhere to the Submitter Code of Conduct and the Administrator should appropriately monitor and record adherence from Submitters. The Administrator should require Submitters to confirm adherence to the Submitter Code of Conduct submitter Code of Conduct and whenever a change to the Submitter Code of Conduct has occurred. 	Compliant	 The objectives and functions of this Principle have been addressed in an alternative manner to the extent applicable. The Benchmarks are each based entirely on observable transactions, as opposed to submissions or estimates. For the Unsecured Benchmarks, the FR 2420 is an information collection authorized by sections 9 and 11 of the Federal Reserve Act (12 U.S.C. §§ 324 and 248(a)) and by section 7(c)(2) of the International Banking Act (12 U.S.C. § 3105(c)(2)) and may be made mandatory under those provisions. For the Repo Benchmarks, the tri-party repo data collected from BNYM are collected pursuant to supervisory authority of the Federal Reserve Board of Governors.

The A	dministrator's oversight function should be responsible	For the BGCR and the SOFR, the GCF Repo data and
	continuing review and oversight of the Submitter Code	FICC-cleared bilateral repo data are collected under the
of Con	e e	statutory data-collection authority of the OFR. Prior to
		January 24, 2022, the data collected under the OFR's
The Su	bmitter Code of Conduct should address:	authority were obtained from DTCC Solutions LLC, an
	ionnitor code of conduct should didness.	affiliate of the Depository Trust & Clearing Corporation,
a)	The selection of inputs;	under a commercial agreement.
	Who may submit data and information to the	under a commercial agreement.
	Administrator;	For the SOFR Averages and SOFR Index, the Federal
c)	Quality control procedures to verify the identity of a	Reserve Bank of New York owns and maintains the
()	Submitter and any employee(s) of a Submitter who	historical series of SOFR values.
	report(s) data or information and the authorization of	instolled solles of soll k values.
	such person(s) to report market data on behalf of a	The Federal Reserve monitors the FR 2420 report
	Submitter;	submissions and repo data obtained from BNYM and the
(b	Criteria applied to employees of a Submitter who are	OFR for inaccurate or misleading data. Institutions that
	permitted to submit data or information to an	submit late, false, or misleading FR 2420 reports are subject
	Administrator on behalf of a Submitter;	to enforcement under federal law. The data provided by
e)	Policies to discourage the interim withdrawal of	BNYM are obtained through the Federal Reserve's
	Submitters from surveys or Panels;	supervisory authority, and the data received in connection
f)	Policies to encourage Submitters to submit all	with the OFR's statutory authority to collect centrally
	relevant data; and	cleared repo data are obtained by the Federal Reserve Bank
g)	The Submitters' internal systems and controls, which	of New York pursuant to a Memorandum of Understanding
	should include:	between the Federal Reserve Board of Governors and the
		OFR.
	i. Procedures for submitting inputs, including	
	Methodologies to determine the type of eligible	Because these factors mitigate the risks that are intended to
	inputs, in line with the Administrator's	be addressed by a Submitter Code of Conduct under the
	Methodologies;	Principles, the Federal Reserve Bank of New York does not
	ii. Procedures to detect and evaluate suspicious	maintain a Submitter Code of Conduct for any of its
	inputs or transactions, including inter-group	Benchmarks.
	transactions, and to ensure the Bona Fide nature	
	of such inputs, where appropriate;	
	iii. Policies guiding and detailing the use of Expert	
	Judgment, including documentation requirements;	
	iv. Record keeping policies;	
	v. Pre-Submission validation of inputs, and	
	procedures for multiple reviews by senior staff to	
	check inputs;	

	vi. Training, including training with respect to any		
	relevant regulation (covering Benchmark		
	regulation or any market abuse regime);		
	vii. Suspicious Submission reporting;		
	viii.Roles and responsibilities of key personnel and		
	accountability lines;		
	ix. Internal sign off procedures by management for		
	submitting inputs;		
	x. Whistle blowing policies (in line with Principle		
	4); and		
	xi. Conflicts of interest procedures and policies,		
	including prohibitions on the Submission of data		
	from Front Office Functions unless the		
	Administrator is satisfied that there are adequate		
	internal oversight and verification procedures for		
	Front Office Function Submissions of data to an		
	Administrator (including safeguards and		
	supervision to address possible conflicts of		
	interests as per paragraphs (v) and (ix) above), the		
	physical separation of employees and reporting		
	lines where appropriate, the consideration of how		
	to identify, disclose, manage, mitigate and avoid		
	existing or potential incentives to manipulate or		
	otherwise influence data inputs (whether or not in		
	order to influence the Benchmark levels),		
	including, without limitation, through appropriate		
	remuneration policies and by effectively		
	addressing conflicts of interest which may exist		
	between the Submitter's Submission activities		
	(including all staff who perform or otherwise		
	participate in Benchmark Submission		
	responsibilities), and any other business of the		
	Submitter or of any of its affiliates or any of their		
	respective clients or customers.		
15. Internal	When an Administrator collects data from any external source	Compliant	The data collected for each of the Benchmarks are submitted
Controls over	the Administrator should ensure that there are appropriate		to the Federal Reserve through secure data collection
Data Collection	internal controls over its data collection and transmission		mechanisms. Prior to being used to calculate the
	processes. These controls should address the process for		Benchmarks, the data are validated and stored by the Federal
	selecting the source, collecting the data and protecting the		Reserve Bank of New York.

	integrity and confidentiality of the data. Where Administrators receive data from employees of the Front Office Function, the Administrator should seek corroborating data from other sources.		Internal controls have been put in place in regard to collecting the data and in protecting the integrity and confidentiality of the data, and staff involved in the Benchmark production process are trained in the proper use of the data.
16. Complaints Procedures	 The Administrator should establish and Publish or Make Available a written complaints procedures policy, by which Stakeholders may submit complaints including concerning whether a specific Benchmark determination is representative of the underlying Interest it seeks to measure, applications of the Methodology in relation to a specific Benchmark determination(s) and other Administrator decisions in relation to a Benchmark determination. The complaints procedures policy should: a) Permit complaints to be submitted through a user- friendly complaints process such as an electronic Submission process; b) Contain procedures for receiving and investigating a complaint made about the Administrator's Benchmark determination process on a timely and fair basis by personnel who are independent of any personnel who may be or may have been involved in the subject of the complaint, advising the complainant and other relevant parties of the outcome of its investigation within a reasonable period and retaining all records concerning complaints; c) Contain a process for escalating complaints, as appropriate, to the Administrator's governance body; and d) Require all documents relating to a complaint, including those submitted by the complainant as well as the Administrator's own record, to be retained for a minimum of five years, subject to applicable national legal or regulatory requirements. 	Compliant	As stated on the Additional Information pages for the Unsecured Benchmarks and for the Repo Benchmarks, the SOFR Averages, and the SOFR Index, a mailbox (rateproduction@ny.frb.org) has been created to receive and respond to any complaints regarding the Benchmark calculation process or a given day's rate. Additionally, the Federal Reserve Bank of New York maintains a <u>Tips and</u> <u>Complaints</u> page detailing its complaints procedures policies with respect to fraud or other unethical activity. In addition, the Federal Reserve Bank of New York maintains an internal process for the reporting of fraudulent or other unethical activity. An Oversight Committee periodically reviews all complaints received regarding the Benchmarks. The Federal Reserve Bank of New York retains records of complaints for at least five years.

	Disputes about a Benchmarking determination, which are not formal complaints, should be resolved by the Administrator by reference to its standard appropriate procedures. If a complaint results in a change in a Benchmark determination, that should be Published or Made Available to Subscribers and Published or Made Available to Stakeholders as soon as possible as set out in the Methodology.		
17. Audits	The Administrator should appoint an independent internal or external auditor with appropriate experience and capability to periodically review and report on the Administrator's adherence to its stated criteria and with the Principles. The frequency of audits should be proportionate to the size and complexity of the Administrator's operations. Where appropriate to the level of existing or potential conflicts of interest identified by the Administrator (except for Benchmarks that are otherwise regulated or supervised by a National Authority other than a relevant Regulatory Authority), an Administrator should appoint an independent external auditor with appropriate experience and capability to periodically review and report on the Administrator's adherence to its stated Methodology. The frequency of audits should be proportionate to the size and complexity of the Administrator's Benchmark operations and the breadth and depth of Benchmark use by Stakeholders.	Compliant	The internal control structure used to administer the Benchmarks is audited by an independent internal auditing body within the Federal Reserve Bank of New York and an oversight body within the Federal Reserve Board of Governors, in line with the Federal Reserve Bank of New York's other operations.
18. Audit Trail	 Written records should be retained by the Administrator for five years, subject to applicable national legal or regulatory requirements on: a) All market data, Submissions and any other data and information sources relied upon for Benchmark determination; b) The exercise of Expert Judgment made by the Administrator in reaching a Benchmark determination; c) Other changes in or deviations from standard procedures and Methodologies, including those made during periods of market stress or disruption; 	Compliant	 The Federal Reserve Bank of New York retains records, for at least five years, of: All transaction data collected for use in the Benchmark determination; Any use of expert judgment in the calculation of the Benchmarks; Any use of non-standard procedures, including the use of contingency data; The identities of staff responsible for the calculation of the Benchmarks; and Any complaints and responses related to the validity and accuracy of the input data.

	 d) The identity of each person involved in producing a Benchmark determination; and e) Any queries and responses relating to data inputs. f) If these records are held by a Regulated Market or Exchange the Administrator may rely on these records for compliance with this Principle, subject to appropriate written record sharing agreements. When a Benchmark is based on Submissions, the following additional Principle also applies: Submitters should retain records for five years subject to applicable national legal or regulatory requirements on: 		
	 a) The procedures and Methodologies governing the Submission of inputs; b) The identity of any other person who submitted or otherwise generated any of the data or information provided to the Administrator; c) Names and roles of individuals responsible for Submission and Submission oversight; d) Relevant communications between submitting parties; e) Any interaction with the Administrator; f) Any queries received regarding data or information provided to the Administrator; 		
	 g) Declaration of any conflicts of interests and aggregate exposures to Benchmark related instruments; h) Exposures of individual traders/desks to Benchmark related instruments in order to facilitate audits and investigations; and i) Findings of external/internal audits, when available, related to Benchmark Submission remedial actions and progress in implementing them. 		
19. Cooperation with	Relevant documents, Audit Trails and other documentssubject to these Principles shall be made readily available bythe relevant parties to the relevant Regulatory Authorities incarrying out their regulatory or supervisory duties and handedover promptly upon request.	Compliant	The objectives and functions of this Principle have been addressed in an alternative manner to the extent applicable. The Federal Reserve Bank of New York and the Federal Reserve Board of Governors have processes in place for sharing information with other authorities, including

Regulatory Authorities	regulations, memorandums of understanding and information sharing agreements. A request for information related to the Benchmarks by any applicable Regulatory Authorities would be addressed through these existing
	processes.