

Statement of Compliance with the IOSCO Principles for Financial Benchmarks

July 6, 2020

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

- the [Effective Federal Funds Rate \(“EFFR”\)](#) and the [Overnight Bank Funding Rate \(“OBFR”\)](#) - the EFFR and the OBFR will herein be referred to as the “Unsecured Benchmarks”;
- the [Tri-party General Collateral Rate \(“TGCR”\)](#), the [Broad General Collateral Rate \(“BGCR”\)](#), and the [Secured Overnight Financing Rate \(“SOFR”\)](#) - 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”;
- [30-day Average SOFR, 90-day Average SOFR, and 180-day Average SOFR](#) - collectively the “SOFR Averages”; and
- the [SOFR Index](#).

The Federal Reserve Bank of New York’s [Audit Group](#) has independently reviewed the internal control structure used to administer the Benchmarks and has determined that they are in compliance with the [Principles for Financial Benchmarks](#) (“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 [endorsed by the Financial Stability Board](#) 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 [Ethics and Conflicts of Interest](#) 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 [Unsecured Benchmark](#) 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 published each business day 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 [Principles for Financial Benchmarks](#).

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 [Repo Benchmark](#) 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 published each business day 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 [SOFR Averages and SOFR Index](#).

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 and SOFR Index are calculated as compounded averages, and production is also subject to internal controls. Any material change to the methodology of, or decision to terminate, a Benchmark would be communicated to the public and public comment would 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
<p>1. Overall Responsibility of the Administrator</p>	<p>The Administrator should retain primary responsibility for all aspects of the Benchmark determination process. For example, this includes:</p> <ul style="list-style-type: none"> 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 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 Benchmark. 	<p>Compliant</p>	<p>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.</p> <ul style="list-style-type: none"> 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 how the Benchmarks will be calculated and disseminated should there be a problem in the normal production process. Any use of a contingency methodology in calculating a Benchmark will be disclosed on the Federal Reserve Bank of New York public website. Because the SOFR Averages and SOFR Index are calculated

			<p>using only the historical series of SOFR values, there is no separate contingency source for these Benchmarks.</p> <p>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 Board of Governors, in line with the Federal Reserve Bank of New York's other operations.</p>
<p>2. Oversight of Third Parties</p>	<p>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:</p> <ul style="list-style-type: none"> 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. 	<p>Not Applicable</p>	<p>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.</p>

	<p>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.</p>		
<p>3. Conflicts of Interest for Administrators</p>	<p>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.</p> <p>Administrators should disclose any material conflicts of interest to their users and any relevant Regulatory Authority, if any.</p> <p>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:</p> <ul style="list-style-type: none"> 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, subject to the disclosure obligations of 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 	<p>Compliant</p>	<p>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 is 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.</p> <ul style="list-style-type: none"> 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

	<p>staff and third parties, where that information may reasonably affect any Benchmark determinations; and</p> <p>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.</p> <p>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:</p> <p>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</p> <p>b) Provide that an Administrator discloses conflicts of interest arising from the ownership structure or the control of the Administrator to its Stakeholders and any relevant Regulatory Authority in a timely manner.</p>		<p>interest related to the Benchmarks. Staff is prohibited from taking direct investment exposure to the Benchmarks they produce and are required to disclose to the Ethics Office of the Federal Reserve Bank of New York any personal debt tied to the Benchmarks.</p> <p>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.</p> <p>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.</p> <p>e/f) Staff involved in the Benchmark production process are periodically trained in the handling of data related to the Benchmarks.</p> <p>g) Staff compensation is not linked in any way to the value of the calculated Benchmarks.</p>
<p>4. Control Framework for Administrators</p>	<p>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 documented and available to relevant Regulatory Authorities,</p>	<p>Compliant</p>	<p>The Federal Reserve Bank of New York has implemented control frameworks defining the roles and responsibilities of the Administrator in the production of the Benchmarks. The frameworks are reviewed by an Oversight Committee on a periodic basis.</p> <p>The frameworks include:</p>

	<p>if any. A summary of its main features should be Published or Made Available to Stakeholders.</p> <p>This control framework should be reviewed periodically and updated as appropriate. The framework should address the following areas:</p> <ul style="list-style-type: none"> a) Conflicts of interest in line with Principle 3 on conflicts of interests; b) Integrity and quality of Benchmark determination: <ul style="list-style-type: none"> i. Arrangements to ensure that the quality and integrity of Benchmarks is maintained, in line with principles 6 to 15 on the quality of the Benchmark and Methodology; ii. Arrangements to promote the integrity of Benchmark inputs, including adequate due diligence on input sources; iii. Arrangements to ensure accountability and complaints mechanisms are effective, in line with principles 16 to 19; and iv. Providing robust infrastructure, policies and procedures for the management of risk, including operational risk. c) Whistleblowing mechanism: <p>Administrators should establish an effective whistleblowing mechanism to facilitate early awareness of any potential misconduct or irregularities that may arise. This mechanism should allow for external reporting of such cases where appropriate.</p> d) Expertise: <ul style="list-style-type: none"> i. Ensuring Benchmark determinations are made by personnel who possess the relevant levels of 		<ul style="list-style-type: none"> a) Conflicts of interest: In line with Principle 3, the Federal Reserve Bank of New York, as Administrator of the Benchmarks, has implemented a conflicts of interest policy. It requires dual approval between two staff members for all actions involved in the production of the Benchmarks, prohibits staff involved in the production of the rates from having direct investment exposure to the Benchmarks, prohibits staff from making investment decisions or placing orders during the time of rate production, and requires that staff disclose to the Ethics Office of the Federal Reserve Bank of New York any personal debt tied to the Benchmarks. Additionally, an Oversight Committee meets on at least a quarterly basis and is responsible for reviewing all uses of staff judgment in the Benchmark production process during each quarter, including exclusions of submitted data and the use of contingency policies. This Committee is also responsible for reviewing existing conflicts of interest policies, as well as new conflicts of interest as they arise. b) Integrity and quality of Benchmark determination: The providers of the data for the FR 2420 Report of Selected Money Market Rates which underlie the Unsecured Benchmarks, and Bank of New York Mellon (BNYM) and DTCC Solutions LLC (DTCC Solutions), whose data underlie the Repo Benchmarks, are required to submit their data in a timely manner to the Federal Reserve Bank of New York each day. Consistent with Principle 15, the data collected for each of the 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,
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	<p>expertise, with a process for periodic review of their competence; and</p> <p>ii. Staff training, including ethics and conflicts of interest training, and continuity and succession planning for personnel.</p> <p>Where a Benchmark is based on Submissions: Administrators should promote the integrity of inputs by:</p> <ul style="list-style-type: none"> a) 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; b) 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; c) Specifying how frequently Submissions should be made and specifying that inputs or Submissions should be made for every Benchmark determination; and d) 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. 		<p>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 Unsecured Benchmarks and for the Repo Benchmarks specify contingency data sources in the case that the FR 2420 data or one or more data sources for the Repo Benchmarks are unavailable on a given day, and define how the Overnight Benchmarks would 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 contingency policies to mitigate operational risk, which include the ability to calculate and disseminate the Benchmarks from offsite locations.</p> <ul style="list-style-type: none"> 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 Tips and Complaints 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. <p>Consistent with Principle 14, the Benchmarks are based entirely on observable transactions, as opposed to submissions or estimates.</p>
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<p>5. Internal Oversight</p>	<p>Administrators should establish an oversight function to 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.</p> <p>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.</p> <p>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 be Made Available to Stakeholders. These procedures should include:</p> <ul style="list-style-type: none"> 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. <p>The responsibilities of the oversight function include:</p> <ul style="list-style-type: none"> a) Oversight of the Benchmark design: <ul style="list-style-type: none"> 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); 	<p>Compliant</p>	<p>An Oversight Committee reviews and provides challenge on 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 and other senior staff from various control areas of the Federal Reserve Bank of New York. For the Repo Benchmarks, the SOFR Averages, and the SOFR Index, the Committee also includes a representative of the U.S. Office of Financial Research (OFR).</p> <p>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.</p> <p>The Committee's responsibilities include reviewing:</p> <ul style="list-style-type: none"> a) Benchmark design: <ul style="list-style-type: none"> • 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. b) Integrity of the Benchmark determination and control framework: <ul style="list-style-type: none"> • 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.
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	<ul style="list-style-type: none"> 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. <p>b) Oversight of the integrity of Benchmark determination and control framework:</p> <ul style="list-style-type: none"> 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. <p>Where conflicts of interests may arise in the Administrator due to its ownership structures or 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,</p>		<p>External parties are not included in the oversight of the Unsecured Benchmarks. However, 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. The OFR is included in the oversight of the Repo Benchmarks, the SOFR Averages, and the SOFR Index.</p> <p>Consistent with Principle 14, the Benchmarks are based entirely on observable transactions, as opposed to submissions or estimates.</p>
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	<p>which is chosen to counterbalance the relevant conflict of interest.</p> <p>Where a Benchmark is based on Submissions: the oversight function should provide suitable oversight and challenge of the Submissions by:</p> <ul style="list-style-type: none"> 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. 		
<p>6. Benchmark Design</p>	<p>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.</p> <p>Benchmark design should take into account the following generic non-exclusive features, and other factors should be considered, as appropriate to the particular Interest:</p> <ul style="list-style-type: none"> 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); 	<p>Compliant</p>	<p>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 federal funds, Eurodollar, and wholesale, unsecured, “selected deposit” overnight markets. Each of the Unsecured Benchmarks provides a reliable measure of market activity and, in line with Principle 7, the data underlying the Unsecured Benchmarks are representative samples of transactions in federal funds, 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.</p> <p>The Repo Benchmarks are intended to create accurate and reliable representations of different segments of the</p>

	<ul style="list-style-type: none"> 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). 	<p>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 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.</p> <p>Each of the Overnight Benchmarks is calculated as a volume-weighted median, which, as noted in a Technical Note 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 approval. These circumstances include when staff identifies 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.</p> <p>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</p>
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			<p>compounded by the value of each SOFR thereafter. The Federal Reserve Bank of New York publishes details and formulas regarding the SOFR Averages and SOFR Index.</p> <p>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.</p>
<p>7. Data Sufficiency</p>	<p>The data used to construct a Benchmark determination should be sufficient to accurately and reliably represent the Interest measured by the Benchmark and should:</p> <ul style="list-style-type: none"> 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. <p>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 bids and offers or extrapolations from prior transactions. This is further clarified in Principle 8.</p> <p>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</p>	<p>Compliant</p>	<p>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.</p> <p>The FR 2420 Report of Selected Money Market Rates, 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.</p> <p>The FR 2420 report is reviewed by the Office of 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.</p> <p>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. For example, best efforts are made to remove such transactions from the tri-party data provided by BNYM, but are not relevant to the GCF data provided by DTCC Solutions as the GCF market segment is blind-brokered. Such transactions are not removed from the bilateral repo data provided by DTCC Solutions, given that counterparty names are not currently available in the submitted data. However, a trim applied to the bilateral repo data automatically removes low rate</p>

	<p>Benchmarks where anchored in an observable market consisting of <i>Bona Fide</i>, Arms-Length transactions.</p> <p>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 such that non-transactional data is used to reflect what the index is designed to measure. For example, certain volatility indices, which are designed to measure the expected 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.</p>		<p>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 outlier trades.</p> <p>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 SOFR Averages and SOFR Index.</p>
<p>8. Hierarchy of Data Inputs</p>	<p>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:</p> <ul style="list-style-type: none"> 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. <p>Provided that the Data Sufficiency Principle is met (i.e., an active market exists), this Principle is not intended to restrict an Administrator’s flexibility to use inputs consistent with the Administrator’s approach to ensuring the quality, integrity, continuity and reliability of its Benchmark determinations, as set out in the Administrator’s Methodology. The</p>	<p>Compliant</p>	<p>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.</p> <p>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 calculation of the SOFR Averages and SOFR Index. Accordingly, there is no separate contingency source for these Benchmarks.</p> <p>The contingency data for the Unsecured Benchmarks are received from brokers in the unsecured wholesale funding</p>

	<p>Administrator should retain flexibility to use the inputs it believes are appropriate under its Methodology to ensure the quality and integrity of its Benchmark. For example, certain Administrators may decide to rely upon Expert Judgment in an active albeit low liquidity market, when transactions may not be consistently available each day. IOSCO also recognizes that there might be circumstances (e.g., a low liquidity market) when a confirmed bid or offer might carry more meaning than an outlier transaction. Under these circumstances, non-transactional data such as bids and offers and extrapolations from prior transactions might predominate in a given Benchmark determination</p>		<p>markets and consists of brokered transactions in federal funds, Eurodollars and “selected deposits”. These data, which are based on actual transactions, do not represent the entire market that is captured by the FR 2420 report, but are a sizeable portion of the overall market and have historically tracked the FR 2420 data closely. In the case that brokered data are used for the EFFR and the OBFR, the Benchmarks would be calculated as volume-weighted medians of the contingency data sets.</p> <p>For the Repo Benchmarks, contingency data are derived 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 each of the three repo market segments that correspond to the three 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.</p>
<p>9. Transparency of Benchmark Determinations</p>	<p>The Administrator should describe and publish with each Benchmark determination, to the extent reasonable without delaying an Administrator publication deadline:</p> <ul style="list-style-type: none"> a) A concise explanation, sufficient to facilitate a Stakeholder’s or Market Authority’s ability to 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 	<p>Compliant</p>	<p>The volume and several volume-weighted percentile rates of transactions underlying the Overnight Benchmarks are published on a daily basis. On a quarterly basis, summary statistics related to the data are published which are calculated using any submissions received subsequent to the publication of the daily Overnight Benchmarks.</p> <p>The SOFR Averages and SOFR Index are compounded averages of historical of SOFR; 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</p>

	<p>that have been considered in a Benchmark determination; terms referring to the pricing Methodology should be included (i.e., <i>transaction-based, spread-based or interpolated/extrapolated</i>);</p> <p>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.</p>		<p>and formulas regarding the SOFR Averages and SOFR Index.</p> <p>As stated in the Data Exclusions policies for the Unsecured Benchmarks and for the Repo Benchmarks, 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.</p> <p>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 New York public website.</p>
<p>10. Periodic Review</p>	<p>The Administrator should periodically review the conditions 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 Methodology. The Administrator also should periodically review whether the Interest has diminished or is non-functioning such that it can no longer function as the basis for a credible Benchmark.</p> <p>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.</p>	<p>Compliant</p>	<p>Federal Reserve staff monitors 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 the Benchmarks. The Federal Reserve Bank of New York has established an Oversight Committee that reviews the performance and functioning of the Benchmarks on at least a 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.</p> <p>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,</p>

			in a manner appropriate and proportionate to the circumstances.
<p>11. Content of the Methodology</p>	<p>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.</p> <p>At a minimum, the Methodology should contain:</p> <ul style="list-style-type: none"> 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); e) The procedures for dealing with error reports, including when a revision of a Benchmark would be applicable; f) Information regarding the frequency for internal reviews and approvals of the Methodology. Where applicable, the Published Methodologies should also include information regarding the procedures and frequency for external review of the Methodology; 	<p>Compliant</p>	<p>As described in the Data and Calculation Methodology policies for the Unsecured Benchmarks and for the Repo Benchmarks, 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 Technical Note regarding the EFFR, 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 compounded in line with broader money market and derivatives conventions in order to reflect the time value of money as accurately as possible.</p> <p>The definitions and descriptions of the EFFR, the OBFR, and the Repo Benchmarks, the SOFR Averages, and the SOFR Index are available on the Federal Reserve Bank of New York public website.</p> <p>In line with Principle 9, Data Exclusions and Data Contingency policies have been implemented for the Unsecured Benchmarks and for the Repo Benchmarks, 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 remove transactions between affiliated institutions, in which neither institution is operating in a fiduciary capacity, from the data provided by BNYM. Affiliated transactions are not removed from the bilateral repo data provided by DTCC Solutions, given that counterparty names are not currently available in the data submitted by DTCC Solutions.</p> <p>Rate Revisions policies for the Unsecured Benchmarks and for the Repo Benchmarks state that, if transaction data are revised or an error is discovered in the calculation process</p>

	<p>g) The circumstances and procedures under which the Administrator will consult with Stakeholders, as appropriate; and</p> <p>h) The identification of potential limitations of a Benchmark, including its operation in illiquid or fragmented markets and the possible concentration of inputs.</p> <p>Where a Benchmark is based on Submissions, the additional Principle also applies:</p> <p>The Administrator should clearly establish criteria for including and excluding Submitters. The criteria should consider any issues arising from the location of the Submitter, if in a different jurisdiction to the Administrator. These criteria should be available to any relevant Regulatory Authorities, if any, and Published or Made Available to Stakeholders. Any provisions related to changes in composition, including notice periods should be made clear.</p>		<p>subsequent to the rate publication on the same day, the affected rate or rates will be revised at approximately 2:30 P.M. ET. These revisions will only take place if the change in the published rate exceeds one basis point. The SOFR Averages and SOFR Index will be revised if the SOFR is revised or if a calculation error is discovered. There will not be a revision to a prior day's Benchmark, except in extraordinary circumstances. Any revisions to a Benchmark will be clearly indicated on the public website.</p> <p>An Oversight Committee meets on at least a quarterly basis to provide effective oversight and challenge to the Benchmark production process.</p> <p>In line with Principles 12 and 13, any proposed changes to the methodology of a Benchmark will be reviewed by the Oversight Committee. The Federal Reserve Bank of New York would communicate any such changes to the public and would seek public comment, to the extent reasonable, before implementing changes.</p> <p>Consistent with Principle 14, the Benchmarks are based entirely on observable transactions, as opposed to submissions or estimates.</p>
<p>12. Changes to the Methodology</p>	<p>An Administrator should Publish or Make Available the rationale of any proposed material change in its Methodology, and procedures for making such changes. These procedures should clearly define what constitutes a material change, and the method and timing for consulting or notifying Subscribers (and other Stakeholders where appropriate, taking into account the breadth and depth of the Benchmark's use) of changes.</p> <p>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.</p>	<p>Compliant</p>	<p>The Federal Reserve Bank of New York may seek to revise the composition or calculation methodology for one or more Benchmarks. An Oversight Committee, charged with periodically reviewing the calculation methodology of the Benchmarks to ensure that they continue to properly reflect their underlying interests, will review and approve any such proposed revisions.</p> <p>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</p>

	<p>The Administrator should specify how changes to the Methodology will be scrutinized, by the oversight function.</p> <p>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:</p> <ul style="list-style-type: none"> 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. 		<p>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 may be sought through more informal means.</p> <p>Any notification of a change to the composition or calculation process for a Benchmark would describe the rationale for the change, what the change entails, and when it would apply.</p>
<p>13. Transition</p>	<p>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 financial stability impact that might result from the cessation of the Benchmark. The Administrator should take into account the views of Stakeholders and any relevant Regulatory and National Authorities in determining what policies and procedures are appropriate for a particular Benchmark.</p> <p>These written policies and procedures should be Published or Made Available to all Stakeholders.</p>	<p>Compliant</p>	<p>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 continue to properly reflect their underlying interests, and, if necessary, will make efforts to amend one or more Benchmarks to promote their accuracy. Such efforts could include identifying additional data sources and modifying the Benchmark methodologies to account for market evolution.</p> <p>Any termination or discontinuation of a Benchmark would be evaluated by an Oversight Committee, which would approve a public consultation plan and a process for the</p>

	<p>Administrators should encourage Subscribers and other Stakeholders who have financial instruments that reference a Benchmark to take steps to make sure that:</p> <ul style="list-style-type: none"> a) Contracts or other financial instruments that reference a Benchmark, have robust fallback provisions in the event of material changes to, or cessation of, the referenced Benchmark; and b) Stakeholders are aware of the possibility that various factors, including external factors beyond the control of the Administrator, might necessitate material changes to a Benchmark. <p>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:</p> <ul style="list-style-type: none"> 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 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; 		<p>discontinuation of the Benchmark that would include a timeline for the discontinuation, a public notification strategy, and steps that could be taken to mitigate the effects of the discontinuation on Benchmark users. Any notification of the termination of a Benchmark would describe the rationale for the decision and when the Benchmark would be discontinued. If appropriate, these steps could include the Federal Reserve Bank of New York convening a committee of external stakeholders to consult on the appropriate process and taking steps to assist the market in identifying and transitioning to an alternative Benchmark.</p>
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<p>14. Submitter Code of Conduct</p>	<p>Where a Benchmark is based on Submissions, the following additional Principle also applies:</p> <p>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.</p> <p>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 annually and whenever a change to the Submitter Code of Conduct has occurred.</p> <p>The Administrator’s oversight function should be responsible for the continuing review and oversight of the Submitter Code of Conduct.</p> <p>The Submitter Code of Conduct should address:</p> <p>a) The selection of inputs;</p>	<p>Compliant</p>	<p>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.</p> <p>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.</p> <p>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.</p> <p>For the BGCR and the SOFR, the GCF Repo data and FICC-cleared bilateral repo data provided by DTCC Solutions are provided under a commercial agreement with the Federal Reserve Bank of New York.</p> <p>For the SOFR Averages and SOFR Index, the Federal Reserve Bank of New York owns and maintains the historical series of SOFR values.</p>

	<ul style="list-style-type: none"> b) Who may submit data and information to the Administrator; c) Quality control procedures to verify the identity of a Submitter and any employee(s) of a Submitter who report(s) data or information and the authorization of such person(s) to report market data on behalf of a Submitter; d) Criteria applied to employees of a Submitter who are permitted to submit data or information to an Administrator on behalf of a Submitter; e) Policies to discourage the interim withdrawal of Submitters from surveys or Panels; f) Policies to encourage Submitters to submit all relevant data; and g) The Submitters' internal systems and controls, which should include: <ul style="list-style-type: none"> i. Procedures for submitting inputs, including Methodologies to determine the type of eligible inputs, in line with the Administrator's Methodologies; ii. Procedures to detect and evaluate suspicious inputs or transactions, including inter-group transactions, and to ensure the <i>Bona Fide</i> 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; 		<p>The Federal Reserve monitors the FR 2420 report submissions and repo data obtained from BNYM and DTCC Solutions for inaccurate or misleading data. Institutions that submit late, false, or misleading FR 2420 reports are subject to enforcement under federal law. The data provided by BNYM are obtained through the Federal Reserve's supervisory authority, and the data provided by DTCC Solutions are subject to a contractual agreement between DTCC Solutions and the Federal Reserve Bank of New York.</p> <p>Because these factors mitigate the risks that are intended to be addressed by a Submitter Code of Conduct under the Principles, the Federal Reserve Bank of New York does not maintain a Submitter Code of Conduct for any of its Benchmarks.</p>
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	<ul style="list-style-type: none"> 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 Controls over Data Collection	When an Administrator collects data from any external source the Administrator should ensure that there are appropriate internal controls over its data collection and transmission processes. These controls should address the process for selecting the source, collecting the data and protecting the 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.	Compliant	<p>The data collected for each of the 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.</p> <p>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 is trained in the proper usage of the data.</p>
16. Complaints Procedures	The Administrator should establish and Publish or Make Available a written complaints procedures policy, by which	Compliant	As stated on the Additional Information pages for the Unsecured Benchmarks and for the Repo Benchmarks, the

	<p>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.</p> <p>The complaints procedures policy should:</p> <ul style="list-style-type: none"> 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. <p>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.</p>		<p>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 Tips and Complaints 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</p>
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<p>17. Audits</p>	<p>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.</p> <p>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.</p>	<p>Compliant</p>	<p>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.</p>
<p>18. Audit Trail</p>	<p>Written records should be retained by the Administrator for five years, subject to applicable national legal or regulatory requirements on:</p> <ul style="list-style-type: none"> 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; 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. 	<p>Compliant</p>	<p>The Federal Reserve Bank of New York retains records, for at least five years, of:</p> <ul style="list-style-type: none"> • 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.

	<p>When a Benchmark is based on Submissions, the following additional Principle also applies:</p> <p>Submitters should retain records for five years subject to applicable national legal or regulatory requirements on:</p> <ul style="list-style-type: none"> 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. 		
<p>19. Cooperation with Regulatory Authorities</p>	<p>Relevant documents, Audit Trails and other documents subject to these Principles shall be made readily available by the relevant parties to the relevant Regulatory Authorities in carrying out their regulatory or supervisory duties and handed over promptly upon request.</p>	<p>Compliant</p>	<p>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 Board of Governors of the Federal Reserve System have processes in place for sharing information with other authorities, including 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.</p>