Options for Using SOFR in Student Loan Products

The Alternative Reference Rates Committee
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Executive Summary

This paper describes a model for using the Secured Overnight Financing Rate (SOFR) in student loan products.[1] The Alternative Rates Reference Committee (ARRC), convened by the Federal Reserve Board and Federal Reserve Bank of New York (FRBNY), asked that the Consumer Products Working Group (CPWG) develop this paper to describe how market participants can voluntarily use SOFR in new student loan products.[2]

CPWG members, including lenders, consumer advocates, investors, and servicers, participated in a months-long process sharing insights and perspective on student loan market operations in reaching a consensus recommendation that SOFR-based student loan products use the 30- or 90-day Average SOFR, with a monthly or quarterly reset period, respectively, a rate determined before the interest rate period, with a margin set by the lender or originator. 30- and 90-day Average SOFR incorporate several beneficial attributes that make these rates a preferable alternative to U.S. dollar (USD) LIBOR and lenders may select the appropriate term to suit their financing model. The CPWG believes this recommendation aligns well with current practices and will meet lenders, servicers, borrowers, and investors' expectations for a vibrant market for the foreseeable future.

As recommendations from the ARRC, the conventions set forth in this paper do not constitute binding rules or regulatory guidance, and market participants must decide for themselves whether or to what extent they will adopt and apply them consistent with the size and complexity of their activities and institutions, and with the nature of their engagement in relevant transactions, taking into account relevant supervisory and regulatory policy. Nothing in this paper is intended to limit the range of possible new product development based on SOFR, or the terms and conditions under which market participants transact in any variable rate products based on SOFR (or any other rate); and it is not intended to address or be inconsistent in any way with alternative product development based on other rates in the future, e.g., on forward-looking term (SOFR) rates, to the extent that those rates are established and meet the criteria set forth by the ARRC. While those types of forward-looking rates may offer some attractive features to investors, the ARRC has emphasized that it is important not to wait for those rates and the U.S. official sector has emphasized that market participants should seek to transition away from LIBOR as soon as possible. Given the risks to LIBOR and the length of time that it can take to build new product systems, there are persuasive arguments for using the robust, IOSCO-compliant rates that already exist.

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[1] The Secured Overnight Financing Rate (SOFR) is a broad measure of the cost of borrowing cash overnight collateralized by Treasury securities. https://apps.newyorkfed.org/markets/autorates/SOFR

[2] The ARRC is a group of public and private sector entities, convened and sponsored by the Federal Reserve with a mandate to develop recommendations for a successful transition from USD LIBOR. https://www.newyorkfed.org/arrc/about. The ARRC's members include private-market buyside, sellside, and intermediary participants in a broad range of interest rate products and transactions, and ex-officio members of the official sector, including the Federal Reserve and other market regulators. To help meet its mandate, the ARRC has established numerous working groups with additional public and private sector market participants to study market transition issues potentially affecting various products currently based on USD LIBOR. The Consumer Product Working Group includes participants representing loan originators, loan servicers, consumer advocates, and investors.

Background

In 2014, the Federal Reserve convened the Alternative Reference Rates Committee (ARRC). The ARRC was tasked with identifying an alternative rate to USD LIBOR that is compliant with International Organization of Securities Commissions' (IOSCO) standards, transaction-based, and derived from a deep and liquid market. The ARRC was further tasked to promote the voluntary use and adoption of such rate.

The ARRC evaluated possible alternatives to USD LIBOR over several years, engaging in market-wide consultation and deliberation, as well as seeking input from its Advisory Group of end-users. Factors considered included underlying market depth, resilience over time, usefulness to market participants, and consistency with IOSCO Principles for Financial Benchmarks. The ARRC also formed the Consumer Products Working Group (CPWG) in 2019 and published its guiding principles and scope of work:

- To ensure an orderly, fair, and transparent outcome for adjustable-rate U.S. residential mortgages as well as other consumer products with loans indexed to LIBOR, transition planning should actively engage with stakeholders (including, lenders, servicers, investors, regulators, and consumer groups) and comply with all applicable consumer protection laws and regulations.

- While ensuring fair and transparent outcomes for consumers, stakeholders should seek to maintain alignment in outcomes for investors in order to minimize basis risk between their consumer loan products and any related loans and securities, securitizations, or hedges associated with them, bearing in mind operational, tax, accounting and similar issues.

- In determining proposed fallbacks for LIBOR in consumer products, the choice of the replacement benchmark, spread adjustment to the replacement benchmark, succession timing, and mechanics should be easily comprehensible and capable of being effectively communicated to all stakeholders in advance of the transition away from LIBOR, and should seek to minimize any potential value transfer based on observable, objective rules determined in advance.

- Where flexibility or discretion are incorporated in fallback recommendations, it should be carefully considered and limited to the extent possible to ensure ease of application and minimize any potential disputes arising from a transition to an alternative rate.

The CPWG's mandate included seeking active engagement from stakeholders and recommending models for using SOFR in consumer products with competitive market terms that meet consumer needs. The New Student Loan Product Development Subgroup was created within the CPWG as an inclusive forum for lenders, consumer groups, investors, and servicers to discuss potential new SOFR-based student loan products. This paper will explain the CPWG's considerations and present options created to date. We do not doubt there may be other acceptable alternatives than those included here.

SOFR-Based Student Loan Products

The ARRC selected SOFR in 2017 as its recommended alternative to USD LIBOR. SOFR is based on overnight transactions in the U.S. dollar Treasury repo market, which is the largest rates market at a given maturity in the world. National working groups in other jurisdictions have similarly identified overnight nearly risk-free rates (RFRs) like SOFR as their preferred alternatives.

SOFR has characteristics that LIBOR and other similar rates based on wholesale term unsecured funding markets do not. Some of SOFR's benefits include:

- It is a rate produced by the FRBNY for the public good;
- It is based on an active and well-defined market with sufficient depth to make it extraordinarily difficult to ever manipulate or influence;
- It is produced in a transparent, direct manner and is based on observable transactions, rather than being dependent on estimates, like LIBOR, or derived through models; and
- It is based on transactions in a market that was able to weather the global financial crisis and that the ARRC believes will remain sufficiently active to be able to be reliably produced in a wide range of market conditions.

The main drawback with SOFR is that it is new, and many are unfamiliar with how to use overnight rates like it. While the ARRC believes that most market participants can adapt by using compound or simple averaging over the relevant term, they recognize challenges in doing so. To support efficient adoption of SOFR, FRBNY has begun to publish compounded averages of SOFR over rolling calendar day periods.

I. SOFR Averages

The FRBNY, as SOFR administrator, and the Treasury Department's Office of Financial Research (OFR) has begun publishing 30-, 90-, and 180-day SOFR averages in order to support a successful transition away from USD LIBOR. The new SOFR averages are referred to as "30-day Average SOFR", "90-day Average SOFR" and "180-day Average SOFR." The SOFR averages employ daily compounding on business days, as determined by the SOFR publication calendar. Specifically, the SOFR averages are calculated as:

$$SOFR\ Average = \left[\prod_{i=1}^{d_b}\left(1+\frac{SOFR_i \times n_i}{360}\right)-1\right]\times\frac{360}{d_c}$$

Where:

$SOFR_i$ = SOFR applicable on business day i

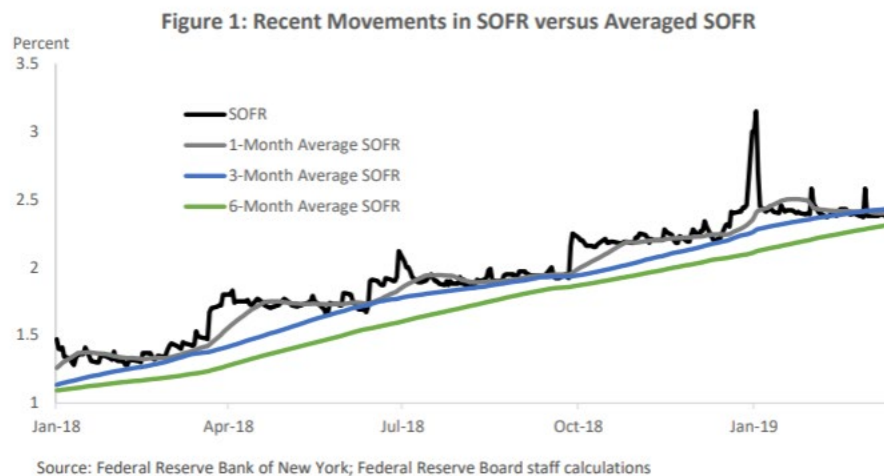
n_i = number of calendar days for which $SOFR_i$ applies (often 1 day, or 3 days for typical weekend)

d_c = the number of calendar days in the calculation period (that is, 30-, 90-, or 180- calendar days)

d_b = the number of business days in the calculation period

i denotes a series of ordinal numbers representing each business day in the calculation period

The SOFR averages for a given publication date incorporate all the SOFR values starting exactly 30-, 90-, and 180-calendar days before the publication date, regardless of whether or not that date is a weekend or holiday, and extend through the SOFR published that day. In order to preserve the fixed-day count structure, the SOFR averages are assigned the SOFR value from the preceding business day when the start date of a given tenor falls on a weekend or a holiday. For example, if the start date falls on a Saturday, the SOFR for the preceding Friday is applied for two calendar days (Saturday and Sunday). If the start date falls on a Sunday, the SOFR for the preceding Friday is applied for one calendar day (Sunday). The SOFR averages are published as percentages rounded to the fifth decimal place on each day that the SOFR is published, to a dedicated web page on the FRBNY website, shortly after the SOFR is published at approximately 8:00 a.m. ET.



II. Current Market Conventions for Student Loan Products

The CPWG considered a wide range of student loan products and different ways that student loans are financed. The ecosystem supporting the student loan universe consists of borrowers, loan originators, loan servicers, and loan financers. Loan originators are often not the holder or "investor" of the loan, and likewise loan servicers may not be the holder or investor of the loans they service. Sometimes the entities that perform these functions are under the same corporate umbrella though.

Loan originators, or lenders, typically offer both a fixed rate student loan product and a variable rate product, subject to applicable federal and state laws. Loan originators that hold bank charters tend to offer variable rate student loan products indexed to 90-day benchmarks ("90-day Index Lenders"). 90-day Index Lenders generally finance their lending activity with customer deposits and reference the 90-day Treasury as a benchmark. Loan originators that do not hold bank charters generally offer variable rate student loan products indexed to 30-day benchmarks ("30-day Index Lenders"). Unlike 90-day Index Lenders, 30-day Index Lenders do not finance lending activity with customer deposits, and instead typically finance lending activity by selling loans through securitization or whole loan sales. Purchasers of securitizations and whole loan sales of student loans typically prefer to purchase investments indexed to 30-day benchmarks, a preference which is reflected in the pricing the purchaser is willing to offer.

The CPWG concluded that most if not all student loan products have the following attributes, regardless of the benchmark or tenor, and it is not aware of any student loan product that does not have these attributes:

1. Borrower payment frequency set to monthly. The payment date is usually set by the servicer, but in some cases the borrower may request a different date.

2. Interest rate resets at the start of the interest period (meaning the borrower is told what the interest rate will be for the next interest period, so that they know what the payment owed will be before the payment due date).

3. The interest rate charged is reset on a monthly basis in some student loans, and there are some student loan products that reset the rate on a quarterly basis with the same rate applied for three monthly interest periods. In all cases, the rate is known at the start of an interest period.

III. Using SOFR in Student Loan Products

Perspectives from stakeholders throughout the student loan market were raised in discussions, including potential considerations from consumers, originators, and servicers. Investor perspectives were also invited since investors serve a critical role in the credit pipeline as loan originators often sell loans to investors in order to finance new lending activity. To the extent possible, recommendations to index a variable rate student loan product to SOFR align with existing practices to minimize confusion and complexity, maintain consistency for borrowers, and simplify potential regulatory considerations. It is expected that an organization will consider its unique factors when selecting an index rate for its product offerings and to ensure that the use of SOFR in consumer products is consistent with any applicable regulations.

A. Payment Calculation

i. SOFR Averages

For lenders who choose to use SOFR, the consensus recommendation is for lenders to choose either 30-day or 90-day Average SOFR in variable rate student loan products and to reset the rate at the beginning of an interest period in order to calculate monthly payments in advance of the interest period. Overnight spot SOFR for cash products is not recommended because of the volatility caused by day-to-day market rate changes. SOFR averaging is preferred because it smooths out fluctuations and accurately reflects interest rate movements over a given time. Providing the rate in advance of an interest period benefits the consumer by enabling them to budget their upcoming payment. The CPWG recommends that 90-day Index Lenders adopt 90-day Average SOFR and 30-day Index Lenders adopt 30-day Average SOFR, but the choice between a 30-day or 90-day average can be made depending on a lender's current practice or preference.

The 30-day and 90-day Average SOFR for a given publication date incorporate all the SOFR values starting exactly 30 and 90 days before the publication date, respectively, and extend through the SOFR published that day. Using an average of SOFR over time presents other benefits in addition to smoothing daily market fluctuations. Unlike overnight SOFR, 30-day and 90-day Average SOFR are also end products that

do not require further calculation. The FRBNY and Office of Financial Research provide transparency and certainty to the calculation, reducing the risk that disputes may arise from 3rd party calculations.

CPWG members concluded that individual lenders may find either 30-day or 90-day Average SOFR preferable depending on their financing and current operations, and that neither approach provides a clear consumer benefit over the other. Lenders that rely on securitization markets for their financing may prefer the 30-day Average SOFR to stay consistent with current practices, while lenders relying on customer deposits or other balance sheet funding that typically are tied to the 90-day Treasury today may prefer the 90-day Average SOFR. Although 90-day Average SOFR is generally somewhat less volatile than 30-day Average SOFR, 30-day Average SOFR will also better reflect current rate conditions. Using 30-day Average SOFR was seen by some as more consistent with current practices and easier for borrowers and servicers to understand. Some participants also noted that investors may prefer 30-day Average SOFR over 90-day Average SOFR if the investor perceives the 90-day Average SOFR to reflect more stale market activity due to the longer day span, and that this preference would be reflected in the financing.

ii. Payment Determination in Advance

The 30-day and 90-day Average SOFR are recommended to be used to calculate monthly payments in advance of the billing cycle, regardless of the choice made by individual lenders.[3] Although some investors may prefer the interest rate to reset at the end of an interest period in order to align more with current market environments, members of the CPWG noted that doing so presents challenges for consumers and could bring complexities that complicate modeling and hedging. Calculating the payment in advance of the interest period provides originators and servicers ample time for calculations and notices and minimizes potential disruptions in the relationship between the borrower and the servicer. CPWG participants further noted that consumers will benefit from knowing their rate in advance by allowing households to better budget loan payments. It is recommended that originators consult with servicers when examining available financing options and determining a loan product's index rate and reset conventions.

iii. Monthly or Quarterly Rate Reset Frequency

Interest rate reset frequency and the lookback period are key attributes that were considered by the CPWG. The CPWG agreed with the convention that student loan payments should be due on a monthly frequency, which would continue to be the payment frequency for SOFR-indexed student loan products. To further enable efficient adoption of SOFR, the CPWG participants recommend, to the extent possible, maintaining consistency with current practice and systems to minimize confusion and enhancement costs. The CPWG recommends a monthly interest rate reset on a date initially set by the originator (in consultation with its servicers) during the month preceding the interest rate period. The CPWG believes that the vast majority of student loan products reset during the month prior to the first day of an interest period. However, the CPWG found that the specific date on which the reset occurs is specific to each originator/servicer combination and depended on internal systems and operational capabilities. Neither factor was considered to have a significant impact on the consumer.

B. Margin

[3] Alternative approaches in using SOFR in a student loan produce are permitted. One commenter suggested indexing a product to 30-day Average SOFR with a quarterly reset. Such an approach was not assessed by the subgroup, and so is not included in this recommendation.

To set the interest rate on a student loan, originators typically add a few percentage points to the index rate, called the "margin." Margin amounts may differ among lenders but usually stay the same over the life of any loan. The "fully indexed rate" is equal to the margin plus the index. For example, if the lender uses an index that currently is 2.5 percent and adds a 3 percent margin, the fully indexed rate would be 5.5 percent. If the index on this loan rose to 3.5 percent, the fully indexed rate at the next adjustment would be 6.5 percent (3.5 percent + 3 percent). If the index fell to 2 percent, the fully indexed rate at adjustment would be 5 percent (2 percent + 3 percent).

The CPWG did not discuss margin levels and believes that margins should remain at the discretion of the originator. In practice, student loans linked to different underlying indices often have different margins and the choice of margin involves considerations made by the originator..

IV. Conclusion

Although still relatively new, Average SOFRs carry several advantages over USD LIBOR and their use in student lending products should ultimately benefit all market participants. The model recommended in this paper is not a binding directive nor exhaustive of all other acceptable possibilities but a consensus-based example of how a successful SOFR-based student loan product could be conceived using 30- or 90-Day Average SOFR, monthly or quarterly resets with rates determined one month prior to the interest period, and a margin set by the lender.

Summary of the Proposed Models of SOFR Student Loans

	Current Monthly-Tenor Student Loan Model	Proposed Model of SOFR Student Loan
Floating Rate Index	1-Month USD LIBOR	30-Day Average SOFR
Rate Reset	Monthly or Quarterly	No Change to Current Structure
Rate Determination	Determined in Month Prior to Interest Period	No Change to Current Structure
Margin	Originator's Discretion	Likely to Adjust for New Index; Originator's Discretion
	Current Quarterly-Tenor Student Loan Model	**Proposed Model of SOFR Student Loan**
Floating Rate Index	3-Month USD LIBOR or 90-Day Treasury	90-Day Average SOFR
Rate Reset	Monthly or Quarterly	No Change to Current Structure
Rate Determination	Determined in Month Prior to Interest Period	No Change to Current Structure
Margin	Originator's Discretion	Likely to Adjust for New Index; Originator's Discretion

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