## STATISTICS

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# Recording of Deferred and Waived Interest on Loans 

Intersecretariat Working Group on National Accounts

This note focuses on financial intermediaries' response to the COVID-19 crisis by allowing loan payment deferrals or waived interest payments to qualified borrowers. It provides guidance on how these should be recorded in macroeconomic statistics. The note also considers some of the implications on key national accounts aggregates and price and volume measures.

## I. INTRODUCTION

In response to the COVID-19 crisis, many banks are allowing businesses and households to defer (postpone) their loan payments. ${ }^{1}$ The deferral can be on both interest and principal payments for qualifying mortgage and business borrowers (e.g., businesses that have suspended operations-forced by government or otherwise). Furthermore, many banks are offering deferrals on credit card payments, which are classified as loans in the international standards. In many cases it appears that the offer for a deferral is for a limited period of time (e.g., six months) and while no payments are required during the period, interest will continue to be accrued. ${ }^{2,3}$ In other cases it may be that interest is waived for a period of time where the interest is not expected to be paid later. ${ }^{4}$

As explained in Section III and summarized in Table 4, ${ }^{5}$ if the financial institution is allowing businesses and households to defer payments, then interest continues to accrue, and any unpaid amount is added to the closing

[^0]loan balance. However, if the financial institution does not expect to be paid at a later date (i.e., waives the interest), the amount of the waived interest accrued is removed from the closing loan balance via a capital transfer from the financial institution to the borrower.

## II. BACKGROUND ON FINANCIAL INTERMEDIARIES

Financial intermediaries, such as banks and credit unions (FIs), charge for their services explicitly via commissions and fees, as well as implicitly via an interest margin. If these implicitly charged services are not considered when calculating the financial intermediaries' output, then it would be understated. Therefore, the international standards (System of National Accounts (SNA), Balance of Payments Manual (BPM) and related standards) recommend including these implicit charges in the calculation of output of financial intermediaries. The methodology used to calculate the financial intermediaries' output charged implicitly-known as financial intermediation services indirectly measured (FISIM)-is the difference between the effective rates of interest payable and receivable, and a "reference" rate of interest (i.e., an interest margin). The reference rate should represent the pure cost of borrowing funds. ${ }^{6}$ For example, if a financial institution charges 5 percent interest on a mortgage and the reference rate is deemed to be 3 percent then the interest margin (or implicit charge) is 5 percent -3 percent $=2$ percent. Questions have been raised as to the appropriate way to record the output of financial intermediaries when loan payments are deferred and/or interest payments on loans are waived.

## III. RECORDING OPTIONS AND THEIR IMPACT ON KEY NATIONAL ACCOUNT AGGREGTES

## Case 1: Recording of Loan Deferrals, Interest Continues to Accrue

Fls are offering qualified borrowers a deferral in which the interest accrues at the same interest rate, but the interest and/or principal payments are deferred (either full or partial deferral). Under this scenario, the bank may be allowing clients to make the payment in full at a later date or it could be that there will be a mechanism where borrowers play catchup where payments would be higher once the deferral period ended until the loan's end of term. Alternatively, the bank may allow for the loan's end of term to be extended so that the same level of interest payments is made. For the COVID-19 related measures discussed in this note, it seems reasonable to regard them mainly as modifications of existing loan agreements rather than new agreements. ${ }^{7}$ These arrangements have an impact on the way financial intermediation services (FISIM), interest flows, savings and the flows and stocks of loans are recorded in the national accounts. The recommended recording of these transactions is outlined below.

### 1.1 Production of Financial Intermediation Services

The calculation of FISIM output can be written as:

$$
F I S I M=F I S I M_{L}+F I S I M_{D}=\left(r_{L}-r r\right) Y_{L}+\left(r r-r_{D}\right) Y_{D}
$$

where FISIML, FISIMd, $r_{L}, r_{D}, r_{r}, Y_{L}, Y_{D}$ represent FISIM on loans made by financial institutions, FISIM on deposits held by financial institutions, the lending and deposit rates of interest, the reference rate of interest, the

[^1]average stock of loans at opening and closing balance and average stock of deposits at opening and closing balance, respectively. The various interest rates are expressed as a percentage.

Table 1 illustrates a simple example of how FISIM on loans is calculated where the effective interest rates on loans is 4 percent and the reference rate is 1 percent, so the bank margin is 3 percent. The example in Table 1 assumes that the interest accrued during the period is paid in the same period. There is no payment made toward the principal.

Table 1. Calculation of FISIM, Interest, and Loans: Accrued Interest Fully Paid within Time Period

|  | Cash <br> Flows | Principal <br> Outstanding | Bank <br> Interest <br> Accrued | SNA <br> Interest <br> Received (D41) | FISIM <br> FI Implicit <br> Output (P1) | Interest <br> Paid | Loans (AF4) <br> Closing <br> Balance |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Loan 1 | 4 | 100 | 4 | 1 | 3 | 4 | 100 |
| Loan 2 | 4 | 100 | 4 | 1 | 3 | 4 | 100 |
| Loan 3 | 4 | 100 | 4 | 1 | 3 | 4 | 100 |
| Loan 4 | 4 | 100 | 4 | 1 | 3 | 4 | 100 |
| Loan 5 | 4 | 100 | 4 | 1 | 3 | 4 | 100 |
| Total | 20 | 500 | 20 | 5 | 15 | 20 | 500 |

Source: Authors' calculations.
If the FIs are providing data on an accrual basis, then the normal procedures for calculating the actual accrued interest ("bank interest"), the reference rate of interest ("SNA interest") and FISIM can be followed. The reference rate of interest is determined according to national circumstance and can be based on an exogenous rate for a specific instrument such as interbank lending rates, a weighted average of observable exogenous rates of maturities with different terms, or a weighted average of the endogenous interest rates on loans and deposits ${ }^{8}$ For FISIM, an effective interest rate on loans ( $r_{L}$ ) can also be computed in the standard way. ${ }^{9}$

If no payment of interest is made during the period, then the end of period stock of loans will increase. ${ }^{10}$ Table 2 illustrates the case where two loans are allowed to defer their interest payment.

Table 2. Calculation of FISIM, Interest, and Loans: Interest Not Paid in Time Period

|  | Cash <br> Flows | Principal <br> Outstanding | Bank <br> Interest <br> Accrued | SNA <br> Interest <br> Received (D41) | FISIM <br> FI Implicit <br> Output (P1) | Interest <br> Paid | Loans (AF4) <br> Closing <br> Balance |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Loan 1 | 0 | 100 | 4 | 1 | 3 | 0 | 104 |
| Loan 2 | 0 | 100 | 4 | 1 | 3 | 0 | 104 |
| Loan 3 | 4 | 100 | 4 | 1 | 3 | 4 | 100 |
| Loan 4 | 4 | 100 | 4 | 1 | 3 | 4 | 100 |
| Loan 5 | 4 | 100 | 4 | 1 | 3 | 4 | 100 |
| Total | 12 | 500 | 20 | 5 | 15 | 12 | 508 |

Source: Authors' calculations.
In practice, the increase in the end of period stock of loans (due to the fact that the interest payments were not made) will have an impact on the allocation between SNA interest and FISIM because statistical offices average the beginning and ending period stock to determine $Y_{L}$ in the equation noted above. Furthermore, since the actual bank interest accrued does not change, there will be offsetting effects, and there will be a reallocation between what is recorded as SNA interest and what is recorded as FISIM (see annex figure 1).

[^2]Assuming that the reference rate is calculated exogenously (e.g., based on the interbank lending rates), and the reference rate is unchanged, then the increase in the stock of loans will cause an increase in the amount of SNA interest received by the FI. ${ }^{11}$ Again, since the actual bank interest is unchanged in the current time period ${ }^{12}$ this may lead to a reduction in the amount recorded as FISIM. ${ }^{13}$ This decrease in FISIM output ${ }^{14}$ will lead to a decrease in operating surplus, ceteris paribus.

### 1.2 Interest Flows in the SNA

In the SNA, interest is recorded on an accrual basis, that is, interest is recorded as accruing continuously over time to the creditor on the amount of principal outstanding. The interest accruing is the amount receivable by the creditor and payable by the debtor and it may differ from the amount of interest actually paid.

As discussed in Section 1.1, the closing loan balance will increase because the actual bank interest accrued is not paid. However, the actual accrued payments or receipts of interest to or from Fls need to be adjusted to eliminate the margins that represent the implicit charges of financial intermediaries (i.e., FISIM). This is because the implicit charges are treated as payments for services rendered by Fls to their customers and not as payments of interest.

As described in Section 1.1, since the actual bank interest accrued has not changed there will be a reallocation between SNA interest and FISIM which are offsetting.

### 1.3 Saving

Saving represents that part of disposable income (adjusted for the change in pension entitlements) that is not spent on final consumption of goods and services. Since corporations have no final consumption expenditures their saving is equal to their disposable income (apart from any adjustment item for pension entitlements). Since there is no impact on the actual accrued bank interest (i.e., the increase in the reference rate of interest accrued is completely offset by the decrease in FISIM output) saving and net lending/net borrowing is unchanged.

### 1.4 Flows and Stocks of Loans

The amount of the deferred payment will be reflected in the closing loan balance on the SNA balance sheet. In other words, the nominal value of the loan is the amount of outstanding principal including any interest and FISIM accrued and not paid, as illustrated in table 2. Note that when borrowers make payments toward the principal it reduces the amount outstanding, to the extent that principal payments are deferred the loan will not be reduced by the amount initially expected by the FI.

Furthermore, since there is a bilateral agreement between the lender and borrower deferring payment of both the principal and interest to a future period, this means that the instrument is not past due. Thus, the loan should not be considered in arrears.

[^3]If at a later date the FI determines that the borrower cannot repay the loan then it is removed from the closing loan balance on the SNA balance sheet. It is important to distinguish whether this is due to a mutual agreement to no longer seek repayment of the loan (debt forgiveness) or a unilateral decision by the FI (writing-off the debt). In the case of the former, the transaction is recorded "as a capital transfer from the creditor to the debtor equal to the value of the outstanding debt at the time of cancellation" (SNA 2008 paragraph 10.210). In the latter case, when the FI unilaterally decides that the loan is uncollectible and decides to write it off, no transaction is recorded, as it is "not a transaction between institutional units and therefore [do] not appear either in the capital account or the financial account of the SNA" (2008 SNA, paragraph 10.211), and such a write-off "should be recorded in the other changes in the volume of assets account of the creditor and the debtor" (2008 SNA, paragraph 10.211).

### 1.5 Price and Volume Estimates of FISIM ${ }^{15}$

The deflation method is the most commonly used method for calculating volume estimates of FISIM. ${ }^{16}$ Estimation techniques vary by country and are described briefly below.

The Task Force on FISIM recommended that countries use the direct deflation method with volume estimates of FISIM created separately for the various types (maturities) of loans and deposits, since different kinds of loans and deposits have different margins between their rates and the reference rate. ${ }^{17}$ This allows for different kinds of loans and deposits to have different prices. This is advisable because an average unit measure of price change will be affected by changes in the composition of loans or deposits and changes in the structure of interest rates. Thus, averaging can lead to unit-value bias and therefore should be avoided. The extent to which the composition of loans and margins are impacted by the various bank responses to the COVID-19 crisis the deflator will be impacted and should be monitored.

If the margins remain the same (or nearly the same) then there will be no (not much of) an impact on the price. Therefore, any change to the nominal value of FISIM will be reflected in the volume estimates of FISIM.

The Financial Production, Stocks and Flows in the System of National Accounts (2015) notes that an ideal deflator for the stocks of loans and deposits should measure the actual change in the price of money, but this is not possible in practice. Alternatively, deflation by a general price index excluding FISIM where appropriate can provide a reasonable/an appropriate approximation for providing a measure of the change in the purchasing power of money. ${ }^{18}$

If the general price index remains the same, then any change to the nominal value of FISIM will be reflected in the volume estimates of FISIM.

## 2. Recording of Waived Interest Payments

In some instances, Fls may waive interest payments (which includes both SNA interest and the value of the financial intermediation services provided by the Fl ) where the interest is not expected to be paid later. In general, the accrual recording of interest should be applied in this case as well. If the waived interest is mutually

[^4]agreed ${ }^{19}$ then a capital transfer (considered like a type of debt forgiveness) ${ }^{20}$ of the same amount should be recorded in the same period from the financial institution to the borrower, in order to remove the accrued interest from the financial stocks at the end of the period. ${ }^{21}$ FISIM should be recorded in the normal way. An exception could be if the grace period without interest payments is part of the loan agreement from the beginning. These arrangements have an impact on the way financial intermediation services (FISIM), interest flows, savings, and the flows and stocks of loans are recorded in the national accounts. The recommended recording of these transactions is outlined below.

### 2.1 Production of Financial Intermediation Services ${ }^{22}$

The expectation is that the Fls' accounting systems will record waived interest in a gross way (accruing interest revenue, then removing the amount at the end of the accounting period), in line with normal practice for impaired loans. However, the amount of interest that is removed may not be directly identifiable in the statistical data reported by the financial corporations.

Building on the example provided above, Table 3 illustrates this scenario by assuming the FI waives interest payments on two loans. ${ }^{23}$ Again, interest on these two loans continue to accrue but the waived interest is treated as a capital transfer.

Since the amount of waived interest is removed from the closing loan balance, there is no impact on the calculation of the Fls' FISIM output. This is slightly different than in scenario 1 described above because the amount of deferred interest added to the closing loan balance (and was not removed as in scenario 2), thus impacting the split between SNA interest and FISIM (see Section 1.1).

Table 3. Calculation of FISIM, Interest, and Loans: Interest Waived in Time Period

|  | Cash <br> Flows | Principal <br> Outstanding | Bank <br> Bnterest <br> Accrued | SNA <br> Interest <br> Received (D41) | FISIM <br> FI Implicit <br> Output (P1) | Interest <br> Paid | Other <br> Capital <br> Transfer <br> Paid (D.99) | Loans <br> (AF4) <br> Closing <br> Balance |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Loan 1 | 0 | 100 | 4 |  | 1 | 3 | 0 | 4 |
| Loan 2 | 0 | 100 | 4 | 1 | 3 | 0 | 4 | 100 |
| Loan 3 | 4 | 100 | 4 | 1 | 3 | 4 | 0 | 100 |
| Loan 4 | 4 | 100 | 4 | 1 | 3 | 4 | 0 | 100 |
| Loan 5 | 4 | 100 | 4 |  | 1 | 3 | 4 | 0 |
| Total | 12 | 500 | 20 | 5 | 15 | 12 | 8 | 500 |

Source: Authors' calculations.

### 2.2 Interest Flows in the SNA

[^5]As discussed in Section 1.2, if the reference rate of interest is unchanged in the time period when the waived interest takes place, then there is no impact on the accrued interest that is to be recorded in the SNA, as illustrated in Table 3.

### 2.3 Saving

The removal of the interest accrued and not paid is treated as a capital transfer, thus there is no impact on the Fl's saving. However, the capital transfer impacts net lending/net borrowing.

### 2.4 Stocks of Loans ${ }^{24}$

The value of the loan on the balance sheet is to be recorded at nominal value, that is, the amount of outstanding principal including any interest and FISIM accrued and not paid. However, the amount of interest waived will not be added to the loan value because it is treated as a capital transfer from the FI to the borrower.

So, the closing balance of the stock of loans is unchanged from the scenario presented in Table 1.

## 3. Price and Volume Estimates of FISIM

Price and volume estimates would be calculated as described in Section 1.5. If the margins remain the same (or nearly the same) then there will be no (not much of) an impact on the price.

## IV. SUMMARY TABLE OF RECORDING OPTIONS AND THEIR IMPACT ON KEY NATIONAL ACCOUNTS AGGREGATES

*Note that the last column reflects the direct impact, ceteris paribus, on the main aggregates (thus not reflecting the negative impact of the crisis in general on e.g., operating surplus/mixed income).

Table 4. Summary of Recording Options

| Action | Proposed National Accounts Recording | National Accounts Aggregates |
| :---: | :---: | :---: |
| 1. Financial intermediaries (FI) are offering qualified borrowers a deferral in when the principal and interest are actually paid (either in full or partial deferral). | Interest (D.41) and FISIM output (P.1) are recorded on an accrual basis. <br> Stock of loans increases by the amount of bank interest, accrued but not paid. <br> Assuming exogenous reference rate is unchanged, there is a decrease in FI FISIM output (P.1) because the FISIM margin decreases. This is offset by the increase in SNA Interest (D.41). | Fl output (P.1) |
|  |  | $\begin{gathered} \uparrow \\ \text { Interest (D.41) } \\ \hline \end{gathered}$ |
|  |  | Fl saving (B.8) and net lending/net borrowing (B.9) |
| Interest rate on loans is the same and continues to accrue. | The value of Loans (AF.4) on the balance sheet is to be recorded at nominal value, that is, the amount of outstanding principal including any interest and FISIM accrued and not paid. | Value of loans (AF.4) |
| Exogenous reference rate of interest is unchanged. |  | FISIM price (based on margin) |

[^6]| Action | Proposed National Accounts <br> Recording | National Accounts Aggregates |
| :--- | :--- | :---: |
|  |  | $\uparrow$ |
| 2. Financial intermediaries <br> (FI) waive interest <br> payments for qualified <br> borrowers. <br> Exogenous reference rate <br> of interest is unchanged. | Interest (D.41) and FISIM output (P.1) are <br> recorded on an accrual basis. <br> Neutral impact on FI FISIM output (P.1), <br> Interest (D41) and saving (B.8). <br> Other capital transfer (D.99) is recorded to <br> remove the waived interest accrued from <br> the financial asset and liabilities (AF.4) at <br> the end of the period. | FIS output (P.1) |
|  |  | FI operating surplus (B.2) |

## Annex 1. Summary of International Standards

## Financial Intermediation Services Indirectly Measured

Figure 1 shows the relationship between the actual rate of interest (known as "bank interest"), and the reference rate of interest (known as "SNA interest"), and FISIM on loans and deposits and the key role of the reference rate of interest plays in the calculation of FISIM. The reference rate is a rate of interest at which lending and borrowing take place without including any service charges. This reference rate is used to calculate SNA interest for deposits and loans.

After the reference interest has been established, FISIM is calculated as shown in Figure 1 as the difference between the actual interest receivable and the reference rate of interest receivable by financial corporations on the loans they issue, and the difference between the reference rate of interest payable and the actual interest payable by financial corporations on the deposits of their customers. FISIM is a component of the interest receivable by financial corporations on the loans they issue, partly because borrowers are willing to pay more than the reference rate of interest in order to use the services provided by financial corporations. Likewise, FISIM is one component of the reference rate of interest payable by financial corporations on the deposits of their customers because the latter are willing to accept lower bank interest payments on their deposits in order to receive the services provided by financial corporations. ${ }^{25}$

[^7]FISIM can be written as:

$$
F I S I M=F I S I M_{L}+F_{I S I} M_{D}=\left(r_{L}-r r\right) Y_{L}+\left(r r-r_{D}\right) Y_{D}
$$

where FISIML, FISIMD, $r_{L}, r_{D}, r r, Y_{L}, Y_{D}$ represent FISIM on loans made by financial institutions, FISIM on deposits held by financial institutions, the lending and deposit rates of interest, the reference rate of interest, the average stock of loans at opening and closing balance and average stock of deposits at opening and closing balance, respectively. The various interest rates are expressed as a percentage.

Figure 1. Relationship Between Actual Bank Interest, SNA Interest, and FISIM


Source: Financial Production, Flows, and Stocks in the System of National Accounts 2015.

## Interest

"Interest is recorded on an accrual basis, that is, interest is recorded as accruing continuously over time to the creditor on the amount of principal outstanding. The interest accruing is the amount receivable by the creditor and payable by the debtor. It may differ not only from the amount of interest actually paid during a given period but also the amount due to be paid within the period." (2008 SNA paragraph 7.115)

Interest is recorded as accruing continuously over time to the creditor on the amount of principal outstanding. The counterpart transaction of an entry in interest (D.41) is a financial transaction creating a financial claim of the creditor against the debtor. The accumulation of interest is recorded in the financial account with the financial instrument to which it relates. The effect of this financial transaction is that interest is reinvested. The actual payment of interest is not recorded as interest (D.41), but as a transaction in currency and deposits (F.2) matched by an equivalent repayment of the relevant asset reducing the net financial claim of the creditor against the debtor. (ESA 2010 paragraph 5.43)

When accrued interest is not paid when due, it gives rise to interest arrears. As it is the accrued interest, which is recorded, interest arrears do not change the total of financial assets or liabilities. (ESA 2010 paragraph 5.44)

## Loans

According to the accrual basis, repayments of debts are recorded when they are extinguished (such as when they are paid, or rescheduled, or forgiven by the creditor). When arrears occur, no transactions should be imputed, but the arrears should continue to be shown in the same instrument until the liability is extinguished. If the contract provided for a change in the characteristics of a financial instrument when it goes into arrears, this
change should be recorded as a reclassification in the other changes in the financial assets and liabilities account. The reclassification applies to situations where the original contract remains, but the terms within it changes (for example, interest rates or repayment periods). If the contract is renegotiated or the nature of the instrument changes from one instrument category to another (for example, from bonds to equity), the consequences are to be recorded as new transactions. (2008 SNA paragraph 3.175)

The values of loans to be recorded in the balance sheets of both creditors and debtors are the amounts of principal outstanding. This amount should include any interest that has been earned but not been paid. It should also include any amount of indirectly measured service charge (the difference between the actual rate of interest and the reference rate of interest) due on the loan that has accrued and not been paid. In some instances, accrued interest may be shown under accounts receivable or payable but inclusion in loans is to be preferred if possible. (2008 SNA paragraph 13.62)

## Arrears

When they are important it may be useful to group all arrears of interest and repayment under a memorandum item. (2008 SNA paragraph 11.130)

Interest and principal arrears data should be reported in the memorandum items that accompany the sectoral balance sheets. (Monetary and Financial Statistics Manual and Compilation Guide (MFSMCG) paragraph 5.138)

## Debt Forgiveness

Debt forgiveness is defined as the voluntary cancellation of all or part of a debt obligation within a contractual arrangement between a creditor and a debtor. Debt forgiveness is distinguished from debt write-off by the agreement between the parties and the intention to convey a benefit, rather than unilateral recognition by the creditor that the amount is unlikely to be collected. Debt forgiven may include all or part of the principal outstanding, inclusive of any accrued interest arrears (interest that fell due in the past) and any other interest costs that have accrued. Debt forgiveness does not arise from the cancellation of future interest payments that have not yet fallen due and have not yet accrued. (2008 SNA paragraph 22.107)

Debt forgiveness is recorded as a capital transfer received by the debtor from the creditor at the time specified in the agreement that the debt forgiveness takes effect with a repayment of the debtor's liability in the financial account and a matching receipt by the creditor. In the balance sheet, the debtor's liability and creditor's asset are reduced by the amount of debt that is forgiven. Valuation of the amount of the debt forgiven is at market prices for flows and stocks, except for loans where the nominal value is used. (2008 SNA paragraph 22.108)

Current and capital transfers received and provided by financial corporations (FCs) are treated as transactions affecting Equity liability [Monetary Statistics (MS)]. The receipt of a current or capital transfer is recorded as a transaction: an increase in currency or deposits (or nonfinancial assets) on the asset side of the FC's balance sheet, or as a reduction in a liability (in case of debt forgiveness). The contra entry is an increase in Equity liability [MS] of the FC in Current year result. The provision of a current or capital transfer is also recorded as a transaction: a decrease in currency or deposits (or nonfinancial assets) on the asset side of the FC's balance sheet, with a contra entry in Equity liability [MS] in Current year result. (MFSMCG paragraph 5.156)


[^0]:    ${ }^{1}$ This note focuses on the treatment of loan payment deferrals or waived interest payments offered voluntarily by financial intermediaries. Governments forcing lenders to provide more favorable conditions to borrowers need additional considerations.
    ${ }^{2}$ For example, in Australia banks are offering a six-month deferral on loans for qualifying small businesses. https://www.ausbanking.org.au/covid-19-relief-faqs/
    ${ }^{3}$ For example, Singapore banks are offering deferral on mortgage loans and qualifying small- and medium-sized businesses until the end of the year. https://www.straitstimes.com/asia/se-asia/banks-around-the-world-are-suspending-loan-repayments-as-coronavirus-hits-borrowers
    ${ }^{4}$ For example, several Malaysian banks stated that they would not be compounding interest for their customers during the six-month moratorium period. https://www.straitstimes.com/asia/se-asia/banks-around-the-world-are-suspending-loan-repayments-as-coronavirus-hits-borrowers
    ${ }^{5}$ Table 4 includes the SNA 2008 classification codes. Product codes (P codes) describe the supply and use of goods and services produced within the SNA. Distributive transaction codes ( D codes) show the impact of distribution and redistribution of income (and saving in the case of capital transfers).

[^1]:    ${ }^{6}$ See annex for more details on calculation and Chapter 3 of Financial Production, Stocks and Flows in the System of National Accounts (2015). https://www.ecb.europa.eu/pub/pdf/other/handbookofnationalaccounting2014en.pdf
    ${ }^{7}$ A loan can be considered modified when the loan is renegotiated, and principal characteristics of the original loan are changed such as changing the interest rate or currency of denomination.

[^2]:    ${ }^{8}$ See page 58 of Financial Production, Stocks and Flows in the System of National Accounts (2015) for more information. https://unstats.un.org/unsd/nationalaccount/docs/FinancialHB.pdf
    ${ }^{9}$ Effective interest rate on loans = interest receivable on loans/average of the opening and closing balances.
    ${ }^{10}$ Assuming there is no payment made toward the principal.

[^3]:    11 If the reference rate changes-for example, in response to central bank action that reduces the reference rate-the allocation between SNA interest (D.41) and the FISIM service charge will be impacted. However, since the actual bank interest accrued does not change the changes will have two opposite offsetting effects.
    12 Note that the deferred payments will result in an increase in the outstanding principal balance of the loan and the borrower, in future time periods, will pay more bank interest over the life of the loan.
    ${ }^{13}$ The increase in the stock loans will cause a decrease in the effective interest rate on loans. This causes the margin between the effective interest rate and the reference rate of interest to decrease ( $r L-r r$ ). The lower FISIM margin rate ( $r_{L}-r r$ ) will be multiplied by an increase in the stock of loans, $Y_{L}$. However, the increase in the stock of loans is not enough to counteract the decrease in the FISIM margin.
    ${ }^{14}$ It should be noted that financial intermediaries may charge explicit fees in relation to granting loan deferrals. The example only considers the direct impact on FISIM output.

[^4]:    15 See Chapter 3 of Financial Production, Stocks and Flows in the System of National Accounts (2015) for a more detailed description. https://www.ecb.europa.eu/pub/pdf/other/handbookofnationalaccounting2014en.pdf
    ${ }^{16}$ A volume indicator for each type of loan and deposit can be calculated by using output indicators that are representative of the activities that generate FISIM on the loan or deposit concerned. However, this method is rarely used by statistical offices.
    17 See the ISWGNA Task Force on FISIM Final Report (2013) at https://unstats.un.org/unsd/nationalaccount/aeg/2013/M8b-2.pdf
    18 See paragraph 3.71 in Financial Production, Stocks and Flows in the System of National Accounts (2015)

[^5]:    19 If not made by mutual agreement, then the loan is considered a write-off and should be recorded as other changes in the volume of assets.
    20 Treating as a capital transfer is consistent with how government finance statistics treat debt forgiveness where the debtor is outside the government sector. For more information see Special Series on COVID-19: "How to Record Government Policy Interventions in Fiscal Statistics" http://www.imf.org/COVID19notes 21 The length of time of the waived interest does not in itself change the recommended treatment. The deferral is related to a specific event-in this case COVID-19, which is the guiding principle, rather than the length of time. However, longer-term concessions on interest rates would be treated as a reduction in the interest payments to the FI.
    ${ }^{22}$ A consequence of the COVID-19 crisis could be that there is a significant increase in nonperforming loans. The current guidance provided in the ISWGNA Task Force on FISIM final report (2013) is that although there is conceptual merit in excluding credit default risk from FISIM, in practice it does not seem feasible, at least in a way that can ensure reasonable comparability across most countries. Thus, the Task Force concluded that credit default risk should remain part of FISIM in order to facilitate international comparability.
    ${ }^{23}$ Assuming there is no payment made toward the principal.

[^6]:    ${ }^{24}$ This scenario assumes that the debtor and creditor come to a mutual agreement to cancel (part of) the loan and is to be recorded as a capital transfer. If the cancellation is not made by mutual agreement, then the loan is considered a write-off and should be recorded as other changes in the volume of assets.

[^7]:    ${ }^{25}$ See Chapter 3 of the Financial Production, Stocks and Flows in the System of National Accounts (2015) for a more detailed description. https://www.ecb.europa.eu/pub/pdf/other/handbookofnationalaccounting2014en.pdf

