Error messages and warning messages:
How the cash flow estimates are checked

Why cash flow estimates are checked

Cash flow estimates are checked for (a) the presence of conditions that make it impossible to calculate a subsidy and (b) conditions that may indicate errors or inconsistencies in the cash flows, but do not prevent the calculation of the subsidy. When an instance of the first category is found, an error message is displayed and processing of the cash flows stops. When instances of the second category are found, warning messages are collected and displayed, together with the display of the subsidy and its derivation.

The CSC does not modify data in any way. The subsidy, when calculated, will always be based on the values provided.

Description of the error messages

The following conditions will result in an error message and stop further processing of the cash flows estimates:

E001: Missing spreadsheet file

> **Description:** This message is applicable when the CSC is run in command line mode and a spreadsheet name is specified on the command line. In this case, the spreadsheet should either be in the default directory or be fully specified with drive letter and full directory path.
>
> When the CSC cannot find the file specified, this message will result.
>
> **Resolution:** Verify the file name, extension, and path and make changes to the command line as necessary.

E002: Unable to open the file as a spreadsheet

> **Description:** The CSC was able to locate the file but could not interpret the content. The CSC uses the file extension to determine the format of the file. For example, files with a WK1 extension will be opened and read assuming they are in WK1 format. If a WK3 file was renamed to have a WK1 extension, without changing the internal organization of the file from the WK1 specification to the

WK3 specification, this error could occur. This error could also occur if the file was damaged.

Resolution: Use your spreadsheet software to verify that the file contents are intact. Make sure the file contents and extension are consistent. The "file save as" dialog box can be useful for this purpose.

E003: Out of memory

Description: The CSC requests memory from the operating system as part of its processing. When the operating system indicates that memory is not available in the amounts requested, this message will be displayed and processing of the spreadsheet causing the error will stop.

Resolution: This message could appear when (a) the available memory on your system is already in full use by other applications or (b) the spreadsheet is so large that it requires more memory than is available on your system. Check for these conditions and either shut down idle applications or adjust the size of the named range in the spreadsheet. For particularly large files, such as files that include several worksheets and macros, it may be necessary to copy the named range to a separate, new file. If the problem persists, there may be problems with your system.

E004: The range _____ could not be found in the spreadsheet _____

Description: This message is applicable when the CSC is run in command line mode and a spreadsheet and range name is specified on the command line. This message occurs whenever the spreadsheet could be located and read, but the range name could not be found among the named ranges in the spreadsheet. Incidentally, the range name is not case sensitive.

Resolution: Open the spreadsheet, verify the name of the range, and adjust the command line as necessary.

E005: Range is too small

Description: The minimum range is two columns and six rows. Any fewer rows or columns would provide insufficient data to calculate a subsidy.

Resolution: Make sure the range is the name you intended and that it covers all rows and columns needed for the subsidy calculation.

E006: Three-dimensional ranges are not supported

Description: This message is applicable when the CSC is run in command line mode and a three-dimensional range is specified on the command line. Three dimensional ranges are those ranges that contain cells on multiple sheets.

Resolution: Place all cash flow data in a range that is contained on a single sheet.

E007: A "Program type" line must precede the cash flow estimates

Description: The left-most row did not have a cell with "program type" before the first cash flow line. (The "program type" line is used to indicate whether the program makes direct loans or loan guarantees.)

Resolution: Insert a "program type" line.

E008: Program type (on line beginning in ___) must be either "direct" or "guaranteed"

Description: As stated

Resolution: Correct the cell to read either "direct" or "guaranteed"

E009: Quarterly factors for _____ do not add to 100.00

Description: The quarterly factors identified by the keyword (where the blank appears) do not add to 100.0

Resolution: Adjust the values to add to 100.0. A simple way to ensure that values always add to 100.0 is to make the fourth value equal to 100.0 less the value of the other three factors.

E010: No cash flow estimates

Description: The end of the named range was reached before any cash flows were found.

Resolution: Adjust the size of the range or add cash flow lines.

E012: Upper-left corner of range does not contain the "Name" keyword

Description: The cell in the upper-left corner of the range must contain the "name" keyword. If not, this message will appear.

Resolution: Make sure the range is the name you intended and that the upper-left corner cell has this keyword.

E013: Budget year must be in the range 1992 through 3000

Description: The CSC located a budget year in the spreadsheet, but the year was invalid.

Resolution: Replace the budget year listed in the spreadsheet with a valid year in the range 1992 through 3000.

E016: A negative value for disbursements was found on the row beginning in cell ____.

Description: The CSC found negative disbursements in the cash flow spreadsheet. All disbursement values must be positive**.**

Resolution: Update the spreadsheet by replacing the negative disbursements with the correct positive values.

E017: Two or more disbursement lines found in a cohort

Description: The CSC found multiple disbursement lines in at least one cohort in the named range.

Resolution: If a cohort contains multiple disbursements the values must be on the same line.

E019: Two rows, starting at ____ and ____, are the same type. The first is NOT associated with a disbursement period and the second one is.

E019: Two rows, starting at ____ and ____, are the same type. The first is associated with a disbursement period and the second one is NOT.

Description: The CSC identified two lines in the cohort containing the same type of information, but only one was associated with a disbursement period.

Resolution: Associate the other keyword with the proper disbursement period and reload the spreadsheet.

E020:   A row, starting at ____, indicates that it belongs to a disbursement period that does not exist

Description: The cohort contains a keyword and cash flows that are associated with a disbursement period that does not exist. For example, the keyword "(3)interest" associates the row with the third disbursement period. If the cohort only contains two disbursement periods, the CSC will return an error message.

Resolution: Associate the cash flow with the proper disbursement period. The number in the parentheses preceding the keyword cannot be greater than the number of disbursement periods in the cohort.

E021:   Two rows, starting at ____ and ____, are the same type and are NOT associated with a disbursement period. They cannot be combined because the first is ____ and the second is ____.

E021:   Two rows, starting at ____ and ____, are the same type and are NOT associated with a disbursement period. They cannot be combined because the first has ____ within-period timing and the second has ____.

Description: Two rows within a cohort contain the same type of information but differ with respect to within-period timing or periodicity. Since they are not explicitly associated with a specific disbursement period the CSC cannot use the cash flows.

Resolution: Associate the rows with a specific disbursement period or combine them into a single row.

E022: Missing right square bracket on row in ____

Description: The right square bracket is missing from a keyword that contains a left square bracket, e.g., interest [qtr, end, 2001:2.

Resolution: Add the closing bracket, "]".

E023: Formatting problem with year and period specification in ____

Description: The CSC could not interpret the formatting between a set of square brackets.

Resolution: The following example represent the correct formatting for information inside a set of brackets: [qtr,end,2001:3]. The CSC would interpret this to mean that the following data would occur at the end of quarterly periods beginning with the third quarter of fiscal year 2001. The brackets may include information on period, timing, year, or all three, where the <u>period</u> is annual, semiannual, quarterly, or monthly and <u>timing</u> is beginning, middle, or end.

E024: Disbursement line must follow obligations or commitments and precede all other cash flow lines

Description: As stated

Resolution: Move the disbursement line in the cash flow spreadsheet to a location that precedes all other cash flows.

E025: Spreadsheet calls for a rate selection that does not exist. In the budget rates forecast section, rates named _____ were not found.

Description: As stated

Resolution: Place the correct name in the spreadsheet or make a selection from "Actions, Rates" on the toolbar.

E026: Range not found

Description: The message occurs when a range name is provided on the command line and that name provided is not found in the spreadsheet.

Resolution: Check the list of ranges available in the spreadsheet. Make sure the spelling of the range name on the command line is correct. The range name, incidentally, is not case-sensitive.

E027: The cash flows beginning in cell _____ extend beyond 100 years
E027: The cash flows beginning in cell _____ combined with those beginning in _____ extend beyond 100 years

Description: As stated.

Resolution: Make sure that the named range does not include columns that are not part of the cash flow observations. Also, check the data frequency. If

quarterly data covering 26 years (104 observations) were identified as annual data, it would appear as 104 (rather than 26) years.

E028: The frequency of the cash flows beginning in cell _____ has not been given
E028: The timing of the cash flows beginning in cell _____ has not been given

Description: For each row of cash flow observation, the frequency (annual, semiannual, quarterly, or monthly) and timing (beginning, middle, or end of period) must be clear. Timing information can be given on a "timing" line or in square brackets at the end of the keyword on a cash flow line.

This error message may arise when a timing line has provided some, but not all, of the required information.

This error message does *not* arise when timing information is not provided. When no information is provided, cash flow observations are assumed to be annual, middle of period.

Resolution: Review cash flow inputs for incomplete information. For more information, see the working paper *How to organize cash flow estimates in a spreadsheet file*.

Description of the warning messages

W030: The value for _____ in cell _____ is missing.
W030: The value for _____ in cell _____ could not be interpreted.
W030: The value for _____ in cell _____ was incomplete

> **Description:** The CSC read a keyword from the spreadsheet and expected a value.

> **Resolution:** Add the proper values to the cells indicated.

W031: The value for _____ in cell _____ should be one of the following:
(list of possible values)

> **Description:** The CSC detected an incorrect value in the spreadsheet for the listed keyword.

> **Resolution:** Replace the incorrect value with one of the values listed in the warning message.

W032: A duplicate _____ line beginning in ___ was ignored

> **Description:** The CSC detected an additional instance of the keyword and ignored it.

> **Resolution:** Re-specify or delete the line.

W033: A "suppress-warnings" message has a defective range of values (start > end)
W033: A "suppress-warnings" message has a defective range of values (start > 99)
W033: A "suppress-warnings" message has a defective range of values (end > 99)

> **Description:** Warning messages are numbered between one and 99. The value(s) specified in the spreadsheet did not fall within this range ("all" or "none" are also valid values).

> **Resolution:** The value in the cell next to the "suppress-warnings" keyword should be changed to read "all," "none," or a number between one and 99. Multiple warnings can be suppressed by entering a range of numbers or a set of numbers separated by commas: "33-99" or "33,42,46-99."

W034: On the ____ line beginning in ____, some values are negative

Description: Negative values were found where positive values were expected.

Resolution: Under most circumstances, the cash flows associated with this keyword should be positive. Double check the spreadsheet formulas used to calculate this set of cash flows.

W035: On the line beginning in ____, some values are positive

Description: Positive values were found where negative values were expected.

Resolution: Under most circumstances, the cash flows associated with this keyword should be negative. Double check the spreadsheet formulas used to calculate this set of cash flows.

W036: Total disbursements and total principal payments differ by ____

Description: The sum of the principal payment line(s) does not equal the total disbursement(s). This will create an interest subsidy that is not directly related to the interest rate charged for the loan.

Resolution: Verify the terms of the loan. In most cases the terms call for repayment of principal in full. Both the principal and interest lines are unaffected by defaults, fees, etc. If there is a shortfall in principal repayment due to default, it should be placed on a separate default line. Likewise, annual fees should be entered on an annual fee line (they are not additions to principal repayments).

W037: Present value of recoveries exceeds present value of losses due to defaults

Description: Recoveries are offsets to defaults that result from the disposition of collateral or actions taken by the borrower to restore the loan to good standing. In most cases the present value of the recoveries will not fully offset the losses due to defaults. The CSC posts a warning when the present value of recoveries more than offsets the present value of losses due to defaults.

Resolution: The total amount of recoveries should generally be less than the total amount of loses. If total recoveries exceed total losses verify that the program intended this result to occur.

W038: Non-numeric or invalid cell value in cell ___. Zero used instead.

Description: Upon opening a spreadsheet, the CSC detected a non-numeric or invalid cell value where a number was expected, e.g., text was found in the middle of a row containing interest payments.

Resolution: Replace the spreadsheet cell value with a valid numeric value.

W039: Cell ____: unrecognized keyword (____)

Description: The CSC could not recognize the value found in the specified cell. Its location in the range indicates that the intended value was a keyword.

Resolution: Replace the value in the cell with the proper keyword.

W042: Unable to open output file ____

Description: A keyword in the spreadsheet directed the CSC to send output directly to a file. The CSC was not able to create or open the filename specified in the spreadsheet.

Resolution: Verify that the file path listed next to the "output file" keyword is valid. This warning will also occur when the specified output file is "open" in another software program. If this is the case, close the other instance of the output file.

W043: Obsolete keyword SKIP was ignored
W043: Obsolete keyword REPEAT was ignored

Description: As stated.

Resolution: Ignore or remove the keywords.

W044: The cohort beginning in cell A:B24 has the same year as a previous cohort

Description: As stated.

Resolution: Remove the extra cohort or change the year listed in the cell.

W050: An exact single effective rate could not be computed. Nearest used

      Target subsidy was............. _____ percent
      Nearest subsidy was............ _____ percent
      Difference is........................ _____ percent

      Description: The single effective rate is the single interest rate that produces the same total subsidy as was produced by the full yield curve. Warning 50 occurs when the CSC is unable an exact single rate. Instead, the calculator provides the rate that yields a subsidy that is as close to the target subsidy rate as possible.

      Resolution: No Resolution:

W051: Rates for most recent budget were used because "purpose" set to "budget"

      Description: If the "purpose" is set to "budget" in the spreadsheet and conflict resolution is set to "Use spreadsheet choices" in the general preferences dialog box, the CSC will use budget rates regardless of the choices made in the rate selection dialog box. In the general preferences dialog box, if the purpose is set to "budget" and conflict resolution is set to "Use CSC choice..." the CSC will use budget rates regardless of the choices made in the rate selection dialog box.

      Resolution: If the goal is to calculate a subsidy under alternative rates set the purpose to "analysis" in the spreadsheet and conflict resolution to "Use spreadsheet choices" in the CSC general preferences dialog box. Alternatively, set conflict resolution to "Use CSC choice..." and purpose to analysis in the general preferences dialog box.

W055: Fatal error calculating the subsidy or creating displays. Please try again. If this error persists, please call technical support.

      Description: This error can arise from several system-related problems.

      Resolution: Make a copy of the input spreadsheet that triggered this message. Contact technical support and make arrangements to send the input spreadsheet, either by email (preferred) or by copying it to a floppy disk and arranging to have it sent to technical support.

W057: Single effective rate was not calculated because the average maturity of the cash flow observations is zero or negative.

Description: The average maturity of the cash flow observations would be zero whenever the cash flows, on average, occur at about the same time as the disbursements. It would be negative if, on average, cash flow observations occur before disbursements. Either way, the single effective rate cannot be calculated.

Resolution: Check the cash flow observations.