

**COMFAR *III Expert***  
**COMFAR *III Business Planner***  
*for Windows*  
**Release Notes for Version 3.0**  
**May 2005**

These Release Notes refer to issues not covered by printed COMFAR *III Expert* documentation (Manuals for Versions 1.0b or 2.1 for Windows).

The Release Notes are applicable for COMFAR *III Expert* as well as COMFAR *III Business Planner*. Since COMFAR *III Business Planner* does not facilitate a module for *Economic analysis*, the respective topics related to this module are not applicable for COMFAR *III Business Planner*. Later, the Release Notes will always refer to COMFAR *III Expert*.

## **Contents**

- 1 Version 1.0a, update of Version 1.0**
  - 1.1 New features
  - 1.2 Corrections
- 2 Version 1.0b, update of Version 1.0a**
  - 2.1 New features
  - 2.2 Corrections
- 3 Version 1.0c, update of Version 1.0b**
  - 3.1 New features
  - 3.2 Corrections
- 4 Version 1.0d, update of Version 1.0c**
  - 4.1 New features
  - 4.2 Corrections
- 5 Version 2.0, update of Version 1.0d**
  - 5.1 New features
  - 5.2 Corrections
- 6 Version 2.1, update of Version 2.0**
  - 6.1 New features
  - 6.2 Corrections
- 7 Version 2.2, update of Version 2.1**
  - 7.1 New features
  - 7.2 Corrections
- 8 Version 2.2a, update of Version 2.2**
  - 8.1 Corrections
- 9 Version 2.2b, update of Version 2.2a**
  - 9.1 Corrections
- 10 Version 3.0, update of Version 2.2b**
  - 10.1 New features
  - 10.2 Corrections
  - 10.3 Future development
- A Currently known limitations and problems**
  - A.1 Features not yet released
  - A.2 Technical problems due to the working environment
- B Language Modules**
  - B.1 Language modules available
  - B.2 Language modules under preparation
  - B.3 Future development, possible cooperation

**New !**

**New !**

## RELEASE NOTES

### 1 Version 1.0a, update of Version 1.0

#### 1.1 New features

- Page Setup Changed: Date, time and project name added
- ESC-key active when input line for list box has been selected
- Faster algorithm for 'IRR' and 'Sensitivity of IRR' calculation
- Automatic adjustment of 'Standard production costs' input data when changing the 'Nominal capacity' for a product
- Possibility to interrupt (stop) calculation
- Loading of COMFAR *III Mini Expert* project files

#### 1.2 Corrections

The following errors have been corrected:

- GPE (General Protection Error) when printing 'Distribution of profit'
- GPE when printing 'Discounted Cash Flow on Partners capital invested' for long partner names
- GPE when printing 'Income tax' under certain conditions
- GPE in 'Print job window' when clicking into **Yearly**/**Periodical** header
- GPE when leaving the result window with Alt-F4 and mouse cursor was inside of chart
- GPE during calculation under certain conditions due to a bug within the 'Income tax' model
- GPE and wrong 'Reference year' within the 'Adjustment of inputs / outputs window' in the economic analysis part of the browser
- GPE in parametric analysis charts of 'Discounted Cash flow on Partner Capital invested'
- Context sensitive help reference for 'Calculation window'
- Some corrections of the on-line help text
- Legend for line chart is now printed in color
- Coordinates within charts for expansion/rehabilitation projects
- Enable/disable of Copy, Cut, Split and Paste under certain conditions
- Copy, Cut, Split and Paste corrected (problems with some numerical operations)
- Range within charts after activating/deactivating the Expansion / Rehabilitation feature
- Change of color of input icon in the data input browser
- Error when changing structure of planning horizon
- Range for IRR iteration extended to 1000% (before limited to up to 110%)
- Selecting of a complete line in the result schedules list box
- Setup was requesting FILES=50 when files were already set to 50

## **2 Version 1.0b, update of Version 1.0a**

### **2.1 New features**

- The new installation program (SETUP) installs additional drivers needed to use of the protection keys for COMFAR III Expert under Windows 95 and Windows NT.
- Use of COMFAR III Expert under Windows NT 4.0 (requires the installation of the Service pack 1)
- Correction and extension of the calculation of the static and dynamic payback periods (starting with first year of outflow, information about the year when paid back)
- Size of browser nodes is adjusted in correspondence with the language selected
- Change of descriptions in the following schedules for consistency: Summary sheet, Financial flow, Cash flow for financial planning, Projected balance sheet
- Context-sensitive pop-up menu to be activated with the right mouse button in the browser window in order to facilitate quicker and easier menu-bar functions such as: Insert, Delete, Copy, Cut, Split, Paste, etc.
- Change of the default algorithm of the 'Profit distribution'. 100% of the profit is retained in the project until defined differently

### **2.2 Corrections**

The following errors have been corrected:

- Several layout adjustments and corrections in the printing procedures
- Corrections of the example cases GROWMANIA and SAHARA in the tutorial manual (financing, foreign/local origin of items)
- Correction of messages displayed when changing the planning horizon
- GPE if pasting data from the clipboard different than text
- GPE if default save directory is not existing
- GPE if hardware toggle is removed from the parallel interface when located in a modal window
- Description of the chart 'Debt/Equity ratio' is changed to 'Debt/Net worth ratio'
- Correction of the legend of the chart 'Source of finance-Equity and loan flow' for project types other than industrial
- GPE if clipboard operations exceed 32 Kbytes. Clipboard operations are now limited to 32 Kbytes (may occur especially in the horizontal view mode)
- Some corrections and adaptations in the On-line help text
- Split calculation corrected for certain conditions in the 'Insert window'
- Adjustment of Summary sheet for the case when the 'Start of production' is not at a 'Balance date'
- Correction of the calculation algorithm for 'Accelerated depreciation' to include the case of a depreciation rate of 0%.
- Replacement of the term 'Shadow exchange rate' by 'Foreign currency conversion factor' (see 'Global parameters' window in the 'Economic analysis' browser)
- Correction of the calculation methods for the chart 'Sensitivity of IRR'
- GPE in the results window, if more than one 'subsidy' subline is defined.

### 3 Version 1.0c, update of Version 1.0b

#### 3.1 New features

- **Local Area Network Version:** The version 1.0c may be installed as a shared application within a Local Area Network.
- **New installation program (Setup):** For the version 1.0c a new installation (setup) program is available, which supports the following functions for COMFAR *III Expert*:
  - Installation as a stand-alone application (on a single PC),
  - Installation as a shared application (within a LAN),
  - Uninstall of an installed COMFAR *III Expert*.
- **Compare function in the Graphics menu:** The version 1.0c allows for certain selected charts the graphical comparison of 2 or more projects.
- **The loan repayment types 'Constant principal' and 'Annuity' are also available for 'Short-term finance'.**
- **Assign economic analysis:** When assigning financial data ('Assign Economic analysis' in the 'Edit menu') to the Cost-benefit module, the FOB/CIF values are initialized with the respective financial value instead of 0.
- **Cancel pushbutton, Escape key:** The version 1.0c checks, in case the user presses 'Cancel' or 'Esc', if input data in the respective data input windows (investments, production costs, etc.) has been changed, and displays a warning.
- **The same project is only loaded once into COMFAR *III Expert*, Version 1.0c.**
- **Load / Save project as window:** The 'Load project' and 'Save project as' window is improved, by offering the following special commands: Page Up, Page Down, Home, End, automatic scrolling when typing the project name.
- **Language selection:** The version 1.0c allows to select the font-family for the display ('Language' in the 'Display menu') and the print-outs ('Page Setup' in the 'Print menu').
- **Calculation:** The version 1.0c allows to display and print possible calculation errors and warnings prior to a new calculation run ('View Errors' pushbutton in the 'Calculation' window).
- **Discounting window:** The version 1.0c displays and prints the reference points for discounting ('End of first year' or 'Beginning of first period') as dates (mm/yyyy).
- **COMFAR *III Expert*, Version 1.0c can be ordered on CD-ROM.**
- **COMFAR *III Expert* Homepage:** With the release of version 1.0c the COMFAR *III Expert* Homepage is updated and extended by:
  - Multilingual (English, French, German, Portuguese and Spanish) information
  - Demonstration version of COMFAR *III Expert* (free of charge),
  - Demonstration version of COMFAR *III Mini Expert* (free of charge),
  - Download services such as:
    - Latest release of COMFAR *III Expert* (free of charge for registered users),
    - Latest release of COMFAR *III Mini Expert* (free of charge for registered users),
    - Language modules (free of charge for languages already licensed),
    - COMFAR *III Expert* manuals in PDF format (free of charge),
    - COMFAR *III Mini Expert* manuals in PDF format (free of charge),
  - Information on Training workshops for COMFAR *III Expert* and *Mini Expert*,
  - Direct E-mail contact to the members of the COMFAR team,
  - On-line purchase possibility.

The address of the new COMFAR *III Expert* Homepage is:

<http://www.unido.org/comfar>

#### 3.2 Corrections

The following errors have been corrected:

- Several layout adjustments and corrections in the printing procedures.
- The error 'Error in Delete Object' (appeared only with Windows NT 4.0 and some specific screen drivers) is eliminated in version 1.0c.
- Cost-benefit analysis: The error in the employment effect is eliminated.
- Depreciation: In case of 'Expansion/rehabilitation' and 'Sale of asset' during the production phase, no depreciation has been calculated for the year previous to the 'sales year'.
- Display error in Loans window: If the planning horizon of a project has been changed, the disbursements of existing loans have been displayed wrong. This error had no effect on the results, it was only a display error in the data input.
- Projected Balance Sheet: The balance sheet has been corrected, by eliminating the dividends from both, the asset and liabilities side. Through this correction, the ratios calculated in the projected balance sheet (Equity to total liabilities, Net worth to total liabilities, Long-term debt to net worth and Current assets to current liabilities) are corrected.
- The algorithm for the calculation of the Internal Rate of Return (IRR, IRRE) is further improved.
- Debt service ratio: The chart 'Debt service ratio' displayed and printed wrong data in case of a user-defined range and parametric analysis.
- Income (corporate) tax: When changing the income (corporate) tax rates of an existing projects, the command 'Save project' in the 'File menu' was not switched to active.
- Profit distribution: In the data input window 'Profit distribution' the Paste-command did not work correctly for the line 'Profit distributed'.

## 4 Version 1.0d, update of Version 1.0c

### 4.1 New features

- New installation program (Setup): For the version 1.0d a new installation (setup) program is available, which supports the following functions for COMFAR *III Expert*:
  - For both, single PC and LAN installation, it is possible to select which of the licensed dialogue languages should be installed.
  - Installation of the latest version of the drivers for the software protection keys (see also 4.2 Corrections).
- Adaptation and expansion of COMFAR *III Expert* Summary sheet. COMFAR supports now the more precise analysis of the investment costs vis-à-vis the defined financing components (equity, long-term and short-term loans) of the project for the construction, the production phase and the complete project.
- The Remarks function has been extended. It is now possible to enter for every group of project input data (e.g.: investment costs, production costs, etc.) as well as for every group of calculated results (e.g.: sources of finance, business results, etc.) descriptive text up to 5,000 characters.
- With the release of COMFAR *III Expert*, version 1.0d, new languages are available. For details please refer to chapter B.
- With the release of version 1.0d, the COMFAR *III Expert* palette will be extended by a new product - COMFAR *III Business Planner*. This new system is fully data compatible to the existing products. It has been designed to support the financial analysis only, includes the full functionality of COMFAR *III Expert*, excluding the economic (cost-benefit) analysis. For administrative reasons, COMFAR *III Business Planner* will be commercially available by October 1999.
- COMFAR *III Expert* Homepage: For the download services (release updates, demonstration versions) a new FTP server has been installed. The address of the COMFAR *III Expert* Homepage remains unchanged:  
**<http://www.unido.org/comfar>**

### 4.2 Corrections

The following errors have been corrected:

- Several layout adjustments and corrections in the printing procedures.
- The installation problem using Windows NT 4.0 and Service Pack 4 and 5 (appearing on certain hardware configurations only), that produced a 'blue screen' is eliminated.
- Long- and short-term loans: COMFAR *III Expert* ignored disbursements defined for the date 'Last disbursement'.
- Commitment and guarantee fees: The calculation rules have been changed. The respective fees are only calculated per annum and are paid together with the interest.
- Inflation rates: If the planning horizon of a project has been changed, the existing inflation rates have been transferred wrongly into the new structure.
- Depreciation adjustments: In the scrap value of the 'Cashflow for financial planning' and the 'Discounted cashflow' the depreciation adjustments have not been taken into account.
- Standard production costs: the calculation algorithm for the switch between the options 'at planned capacity' and 'per unit of output' has been changed if the unit costs have not been specified yet.
- Local Area Network version: the saving procedure has been changed, so that any intermediate files are now produced on the defined working directory. The version 1.0c produced an error, if the device from which a project has been loaded is 'read-only'.

- Local Area Network version: during the installation of the workstations for the LAN version the setup program collapsed, if the mapping to the location from which the workstations should be installed has been defined to the installation folder only, but not to the level above this folder.

## 5 Version 2.0, update of Version 1.0d

### 5.1 New features

- The new version is a 32-bit version and is therefore only available for Microsoft Windows 95/98 and Microsoft Windows NT/2000.
- The user interface of the new version has the 'look-and-feel' of Windows 95. COMFAR facilitates now:
  - a toolbar with icons for the most important commands from the menu bar,
  - notebooks (instead of radio buttons) for the switching between different panels within a specific window. This change is applicable for the following windows: Discounting, Sales programme, Working capital, Loans and Starting balance,
  - All windows are now "child windows" within the "main window" (browser) of COMFAR.
  - The new version has been designed for the resolution 800\*600 (SVGA).
- The installation program (Setup) automatically creates a Shortcut for COMFAR.
- Adaptation and expansion of COMFAR *III Expert* Summary sheet. COMFAR shows now additional information (Exchange rates and Net present value on Equity capital).
- The layout of the Production cost window (data input) has been changed.
- The File-menu (menu-bar) has been extended by the list of the (max.) 5 last projects in use. By clicking on the respective project it is automatically loaded.
- The toolbar facilitates two new commands, "Next project" and "Previous project". If more than one project is loaded these commands may be used for switching between the loaded projects.
- The user emblem can be loaded from a file (Bitmap, TIFF and GIF).
- The clipboard operation "Copy" is now also available for the "Summary sheet" and for every "Chart".
- For the print-out every chart is resized to fit on one page.
- For every chart it is now possible to switch between the display of the chart or the corresponding numerical values. On the print-out the numerical values are printed below the chart.
- The following limitations of the version 1.0d concerning printing have been eliminated:
  - More than 100 print jobs may be generated,
  - Print to a file is now supported,
  - The commands and options in the *Print Window* (change of printer, the properties, etc.) at the beginning of each print operation within COMFAR are now supported and are valid for all print-jobs.
  - The EMF spool data format is now supported.
- The algorithm for the calculation of the "Internal Return of Return on Partner Capital" has been changed. COMFAR allows now also to distribute the "Net worth" at the end of the project between the Joint-venture partners.
- The algorithm for discounting cashflows has been changed. COMFAR discounts now also the "Scrap value" at the end of the project.
- With the release of COMFAR *III Expert*, version 2.0, new languages are/will be available. For details please refer to chapter B.
- With the release of version 2.0, the COMFAR *III Product* palette has been extended by a new product - COMFAR *III Business Planner*. This new system is fully data compatible to the existing products. It has been designed to support the financial analysis only, includes the full functionality of COMFAR *III Expert*, excluding the economic (cost-benefit) analysis.



## 5.2 Corrections

The following errors have been corrected:

- The calculation of the "Income (corporate) tax" was incorrect, if more than one "tax bracket" and a different unit than "absolute" (e.g. millions) for the Accounting currency has been defined.

## 6 Version 2.1, update of Version 2.0

### 6.1 New features

- With the release of COMFAR *III Expert*, version 2.1, new languages are available. For details please refer to chapter B.
- The COMFAR *III* Manuals in English and Spanish have been edited and newly published. For registered licensees these manuals are also available for downloading from the COMFAR *III* homepage, <http://www.unido.org/comfar>.
- Two new charts are available within the *Business results – Discounted cash flow*. It is now possible to display / print the *Normal Payback* and *Dynamic Payback* in graphical form.
- All charts are displayed / printed with the *Accounting currency* embedded into the chart title.
- The toolbar facilitates four new commands: *OK – Next window*, *OK – Previous window*, *Cancel – Next window* and *Cancel – Previous window*. The commands are active for the *Data input* module and *Show results* module of COMFAR *III Expert*. They enable the user to switch to the next or previous window within the *data input tree* or *results tree* of COMFAR by either accepting and saving (=OK) or discarding and ignoring (=Cancel) all changes done within the current window.
- The data input module of COMFAR *III Expert* has been extended by a *Horizontal data input option* for the following windows:
  - *Cost centre structure*
  - *Fixed investment costs*
  - *Production costs*
  - *Sales programme*
  - *Equity, risk capital*
  - *Economic analysis – Indirect effects*

This option is activated / deactivated through the commands *Vertical* and *Horizontal* of the *Display menu*, or through the *Vertical icon* of the toolbar. Through this new feature the user has the possibility to enter or edit all items within a data input group (e.g. Fixed investment costs) at the same time, using a spreadsheet like table. Alternatively, the traditional vertical data input mode remains available.

Printing of COMFAR *III Expert* input data in Horizontal (table) format is only possible through the command *Selected item*, if the command is invoked from within a horizontal data input window. If *Selected item* is invoked from the data input tree, or if a *Print job* is printed, COMFAR *III Expert* uses the Vertical print format.

- The *Page setup* for COMFAR *III Expert*, version 2.1, has been extended, in order to allow the user to define the fonts used for the printouts of COMFAR. Font definitions may be done for the following components:
  - Title
  - Level 1-4
  - Data input descriptions
  - Header and Footer

For each of the above listed components the user may specify the:

- Font,
- Font size,
- Font style (Normal, Bold, Italic)

The Font definitions may be defined individually for each installed language.

- The main lines of COMFAR *III Expert* result schedules are displayed in a different colour, in order to highlight the most important results.
- The *Print job* uses for the print out of charts with *Parametric analysis* the same variation percentages for both, *Yearly* and possible *Periodic* charts.
- The schedule *Net working capital* displays in the first column for all items the *Coefficient of turnover*, if mathematically possible.

- If a mouse with three buttons is used, the center button activates a pop-up menu with a list of presently all open windows. The user may switch through this window (alternatively to the *Projects* menu of the menu-bar) between these windows.
- COMFAR *III Expert*, version 2.1 has been technically linked with *Share*, the electronic backbone of UNIDO *Exchange*. For more details on this link please contact UNIDO.
- Several small adaptations in the dialogue of COMFAR *III Expert*, version 2.1.

## 6.2 Corrections

The following errors have been corrected:

- The *Look and feel* of COMFAR printouts is now identical for different Windows operating systems (Windows 95/NT/98), due to revised runtime libraries provided through the developing system.
- The date printed optionally by COMFAR has been corrected.
- The print out of Periodical charts via the Print job, or Parametric charts sometimes caused a program error.
- Planning horizon window: If user data input for the date for *Begin of construction* did not include a month, COMFAR did not display the first month according the fiscal year definition. All calculations have been performed correctly.
- Long- or short term loan windows: If a foreign currency has been selected instead of a local currency, the *Foreign radio button* for *Fees paid local or foreign* within the fee definitions pad was not activated.
- Some combinations of parallel open or in certain sequences invoked *Data input*- and *Result* windows caused error situations.
- Sensitivity analysis module: After invoking the window the last *Fixed investment cost item* was not displayed on the screen.
- Sensitivity analysis module: After adjusting data with the *Change data* push-button, the *Save project* option was not activated, as well as the *Show results* module was not deactivated.
- Paste and Split in Text entry fields did not function.
- Cost centre structure: The *OK* button was not active as long as no data have been changed in this window.
- Cost centre structure: If the Cost centre structure has been changed, COMFAR did not report all necessary changes. Nevertheless, the changes have been carried out.
- Fixed investment cost window: The new version does not allow negative entries for the numeric *depreciation conditions* (rate, length, scrap).
- Fixed investment cost window: The *Sale of asset* calculations have been corrected in case of Expansion/rehabilitation projects, Sales during construction (balance sheet was wrong) and Depreciation calculations (no depreciation was calculated in the year of sales, if the asset was sold before the end of depreciation).
- Horizontal view windows: COMFAR collapsed, if the window was closed with the Close icon (upper right corner of the window) and not with the *OK* button.
- Starting balance: The results reported by COMFAR in case of a not balanced user entry have been incorrect and have been corrected.

## 7 Version 2.2, update of Version 2.1

### 7.1 New features

- With the release of COMFAR *III Expert*, version 2.2, new languages are available. For details please refer to chapter B.
- The toolbar facilitates two new commands: *View Errors* and *Incremental Analysis*. The command *View Errors* is active if during a calculation 'Errors and/or warnings' have been detected. For the command *Incremental Analysis* please refer to the next paragraph.
- COMFAR *III Expert* has been extended by the new function *Incremental Analysis*. This new function offers the possibility to analyze the incremental part of two project alternatives. *Incremental Analysis* may be applied for the following schedules:

*Cashflow for financial planning*  
*Discounted Cash flow on total capital invested*  
*Discounted Cash flow on total equity invested*  
*Discounted Cash flow on joint venture capital invested*

This function is only available for projects, with the same (yearly and/or periodical) planning horizon. The function is activated with the new toolbar item *Incremental Analysis* described above. The new schedule *Incremental Analysis* may be printed either with the function *Selected item* or through the *Print job*.

- The descriptions of the toolbar icons (help captions) are active. They were not available (due to an error in the development toolkit) in the previous version (2.1).
- The version 2.2 supports MDI child windows. Therefore the commands "*Cascade windows*", "*Tile windows horizontally*" and "*Tile windows vertically*" (see "*Projects menu*") are active. These commands have not been available (due to an error in the development toolkit) in the previous version (2.1).
- The data input module of COMFAR *III Expert* has been extended by a *Horizontal data input option* for the window *Loans*. This new window includes both, the *Long-term* as well as the *Short-term loans*.

This option is activated / deactivated through the commands *Vertical* and *Horizontal* of the *Display menu*, or through the *Horizontal icon* of the toolbar. Through this new feature the user has the possibility to enter or edit all loan items at the same time, like in a spreadsheet. Alternatively, the traditional vertical data input mode remains available.

Printing of COMFAR *III Expert* input data in Horizontal format is only possible through the command *Selected item*, if the command is invoked from within a horizontal data input window. If *Selected item* is invoked from the data input tree, or if a *Print job* is printed, COMFAR *III Expert* uses the Vertical print format.

With the release of the previous version (2.1) the horizontal data input function has been already offered for the following windows: *Cost centre structure*, *Fixed investment costs*, *Production costs*, *Sales programme*, *Equity*, *risk capital* and *Economic analysis – Indirect effects*.

- The function for *Capitalize interest* has been extended. It is now possible to define a percentage of the applicable interest calculated by COMFAR *III Expert*, which should be capitalized. The remaining rest of interest is paid.
- The range of fees (commitment, guarantee, agency and other fee) is limited from 0% to 99,99% only.
- The layout of the data input tree has been adjusted if the function *Economic appraisal* is active. Every node which may be 'assigned to economic analysis' is extended by a check icon. This icon indicates whether this node (and all possible sub-nodes) is assigned to the *Economic appraisal*. Furthermore the icon may also be used to assign a node to or delete a node from the module *Economic appraisal*.
- The function *Edit node* may also be activated by a double-click on the description of a user-defined data input node.

- The function *Delete* (node) has been extended. It is now possible to request the delete option not only for a node that has no children but also for any node in the data input tree. The version 2.2 requests confirmation for any user-defined node below this node. It is also possible to delete all user defined nodes with one command (*Yes to All*).
  - The layout of the vertical windows for *Fixed investment costs* has been changed. The window *Sale of assets* is now invoked by clicking on the data input icon in the (new) 4th column. A red colour of the icon indicates if a data input has been done which differs from the default settings.
  - The layout of the windows *Income (corporate) tax* has been modified. All years of operation for which a *Tax holiday* is defined are marked (red font).
  - The main lines/items in the result schedules are displayed in a different colour.
  - The schedules 'Product Profitability Indicators' has been slightly changed. The lines 'In % of sales revenue' now show the percentage of the 'Margin' (of 'Factory costs', 'Operating costs', 'Total Production costs' and 'Costs of Product') in relation to the 'Sales revenue'. In the previous version (2.1) the line 'In % of sales revenue' showed the percentage of the lines 'Factory costs', 'Operating costs', 'Total Production costs' and 'Costs of Product' in relation to the 'Sales revenue'. The formula for e.g.: the 'Factory costs' is:
- |                       |  |
|-----------------------|--|
| Margin                | <i>Sales revenue less Factory costs</i>        |
| In % of sales revenue | $(\text{Margin} / \text{Sales revenue}) * 100$ |
- Numerical results may be displayed/printed with up to 6 digits behind the comma.
  - Several small adaptations in the dialogue of COMFAR *III Expert*, version 2.2.

## 7.2 Corrections

The following errors have been corrected:

- Specific errors in clipboard operations (especially copying of graphical charts) have been corrected
- The functions *Next window* and *Previous window* (with OK or Cancel) of the toolbar caused a program crash when moving to the *Inputs* or *Outputs* window of the Economic analysis modul, if no related data input items have been assigned to the Economic analysis.
- COMFAR *III* caused a General Protection Error if the following charts including "Parametric analysis" have been invoked and if "Expansion/Rehabilitation" was activate: "Net cash flow to long-term debt" and "Long-term debt service coverage". As a consequence of this error, and in consultation with our trainers the calculation rules for those two ratios have been changed as follows:

*Net cash flow to long-term debt:*  $(\text{Surplus (Deficit)} + \text{Repayment} + \text{Interest payable} + \text{Other financial costs}) / \text{Debt balance at the end of previous year}$

*Long-term debt service coverage:*  $(\text{Surplus (deficit)} + \text{Repayment} + \text{Interest payable} + \text{Other financial costs}) / \text{Repayment} + \text{Interest payable} + \text{Other financial costs}$

Furthermore the name of the first ratio (*Net cash flow to long-term debt*) was changed to: *Cash flow to long-term debt*.

- The function *Compare* has been corrected. In case the *Balance date* was not *31 December* the data have been presented incorrect.

## **8 Version 2.2a, update of Version 2.2**

### **8.1 Corrections**

The following errors have been corrected:

- Calculation error in Incremental Analysis on Cash flow for financial planning in case of a JV project;
- When creating a user defined Cost allocation key the input of percentages was not always accepted by the system;
- COMFAR /// caused a General Protection Error if Remarks were activated from a horizontal data input window;
- Delete key did not work properly when used in input fields.

## **9 Version 2.2b, update of Version 2.2a**

### **9.1 Corrections**

The following errors have been corrected:

- Printing of the chart 'Production & sales – Total sales – Selected period' caused an Application Error;
- Printing with a 'Licensee emblem' caused in all schedules and tables unreadable results.

## 10 Version 3.0, update of Version 2.2b

### 10.1 New features

- With the release of COMFAR *III*, version 3.0, a new language module (Farsi) is available. For details please refer to chapter B.
- COMFAR *III*, version 3.0 complies with the mechanisms established in the Kyoto Protocol. The following modules/functions have been incorporated:
  - Investment Ranking Test:

Through this function it is possible to rank up to five (5) projects according to the following parameters:

    - Internal Rate of Return on investment
    - Net Present Value Ratio on investment
    - Internal Rate of Return on equity capital
    - Net Present Value Ratio on equity capital
    - Internal Rate of Return for each Joint-Venture partner (if available)
    - Net present Value Ratio for each Joint-Venture partner (if available)
    - Benefit-Cost Ratio
    - Unit Cost for each product

The ranking of the up to five projects is supported either numerically and graphically.
  - Carbon credits definitions:

COMFAR *III*, version 3.0 offers the possibility to define (in the Project identification window) that the project to be analyzed should follow the mechanisms established in the Kyoto Protocol (Clean Development Mechanism, Joint Implementation). By selecting this option the user activates/expands the following functions:

    - Product definition:

COMFAR adds automatically a product names 'Carbon credits' for which, according to the regulations of the Kyoto Protocol the trading period may be defined.

For every 'Standard product' the user may specify in tons the amount of CO<sup>2</sup> reduction achieved. Based on the production programme specified for each product COMFAR will automatically calculate the emission reductions.
    - Investment cost definition  
For a CDM/JI project COMFAR allows the definition of CDM related Investment costs.
    - Operating cost definition  
For a CDM/JI project COMFAR allows the definition of CDM related Operating costs.
    - Sales program  
For the automatically added product 'Carbon credits' (see above) and the calculated emission reduction the user may specify the emission trading scenario proposed for the project by specifying the amount of emission reductions sold (=traded) in which period of the defined trading period as well as the price assumed per ton of CO<sup>2</sup>. Untraded emission reductions are automatically carried forward.
- For the payback periods COMFAR calculates also the month (within a project period) in which the investments will be recovered.
- The calculation of the Net Present Value has been extended. It is now possible to calculate the NPV not only at the 'Begin of the Project' or 'End of first period' but furthermore at the end of every project period.
- The direct as well as 'cost-allocated' production cost schedules have been expanded by a line showing the 'Unit costs' (costs per unit of output).



- The Value-added schedule shows the distribution in % (e.g.: 33) and not as factor (0.33).
- Descriptions of input-nodes used in data-input windows (e.g.: working capital) are displayed in the same color as in the input browser.
- Negative figures in the result schedules are displayed and printed (in case a color printer is utilized and 'print in color' is switched on) in red.
- In all horizontal data input windows figures not equal to zero are displayed and printed (in case a color printer is utilized and 'print in color' is switched on) in blue.
- For the user logo it is possible to use JPEG files.
- Several small adaptations in the dialogue of COMFAR *III Expert*, version 3.0.

## 10.2 Corrections

The following errors have been corrected:

- Incremental analysis produced wrong results if both projects have a starting balance (expansion/rehabilitation/modernization/privatization projects) but only one of the projects had other than yearly (half-yearly, quarterly, etc.) periods.
- In case of a periodical project the commitment fee was calculated wrongly.
- If the option 'Print with Remarks' was activated the 'Print job' stopped printing after the first page.
- The calculation of the 'Break-Even charts', 'Net income statement charts' and 'IRR/NPV charts' when applying 'Parametric Analysis' was incorrect.
- Treatment of skilled and unskilled labor has been corrected in the 'Value Added Schedule'. Salaries/wages defined for overhead costs have been treated always as unskilled labor.
- The headline of the 'Cost-Benefit schedules' showed the wrong currency.
- Foreign exchange effect schedule: Indirect local items have been treated wrong.
- Relative efficiency test is only calculated if the net foreign exchange flow is negative.
- Discrepancy between dialogue and/or printout language if more than one multi-product project has been loaded.
- COMFAR crashed if a window has been closed during it's printing through the function 'Print selected item'.
- The line descriptions of a horizontal window have been printed in the dialogue but not in the printout language.
- COMFAR caused an abort if input window(s) and more than one result window have been open parallel and the user changed any input data.
- If printing investment cost items that became empty due to shortening of the planning horizon COMFAR crashed.

## 10.3 Future development

For the future development and orientation of COMFAR *III Expert* UNIDO would like to respond to the needs and requests of the users of our software package. For this purpose we would appreciate any suggestions concerning the future orientation and development of COMFAR. We are also kindly inviting you to our COMFAR *III Expert* Homepage (<http://www.unido.org/comfar>) to learn about any new developments concerning COMFAR.

In advance, we would like to thank you very much for your suggestions, efforts and cooperation.

## A Currently known limitations and problems

### A.1 Features not yet released

Due to the very low interest of the existing COMFAR users in the planned modules *Material Flow*, *Analyze* and *Project Data Base* it has been decided to postpone the possible release of these modules to a future version of COMFAR, and to eliminate the respective functions from the software dialogue.

### A.2 Technical problems due to the working environment

The technical problems listed below have been identified, but cannot be solved by the COMFAR Team at present, because they are linked to the *Windows* environment or to the runtime libraries of the development toolkit used and, therefore, beyond our control. Users are recommended to take precautions as appropriate. Updates will be made available as soon as problems have been solved.

- All printouts (columns) are resized automatically in order not to cut off text. As the size of a character printed depends on the printer, COMFAR offers within the *Page Setup* an input field called **Width correction factor**. In case text is cut off on your printer, increase this figure from 5% to e.g. 15%.
- Printing within Windows NT4 using HP 690 or similar printers is not possible, due to an incompatibility of the respective printer driver and the above mentioned runtime libraries. Please use a more general driver like the HP 550c printer driver.
- The menu-bar uses the native font of the installed Windows environment. Therefore, COMFAR *III* in Croatian, Czech, Polish, Russian and Slovak language, requires either the use of the Windows environment in the respective language, or the selection of an appropriate font for the menu-bar within the *Display properties* (activated within the *Control Panel* or through clicking with the right mouse button on the desktop). This function is not supported within Windows NT. Therefore, for the use of COMFAR with Windows NT in one of the above-mentioned languages, the respective Windows environment is required.
- To operate COMFAR *III* in dialogue languages such as Japanese, Chinese, Korean or Farsi requires the use of the Windows environment in the respective language. Windows XP users may use alternatively the Microsoft AppLocale Utility. For a detailed description of the required procedure please refer to the document AppLocale.doc which is available on the COMFAR *III* CD in the folder **AppLoc**.

## B Language Modules

A language module consists of the following components:

- Software dialogue,
- On-line help,
- Reference, tutorial and technical manuals.

### B.1 Language modules available

With the release of COMFAR *III Expert*, Version 3.0, the following language modules are available:

Language (in alphabetic order)	Software dialogue	On-line help <sup>1</sup>	COMFAR Manuals <sup>2</sup>
Chinese	✓	✓	✓
Croatian	✓		
Czech	✓		
English	✓	✓	✓
Farsi <sup>3</sup>	✓		✓
French	✓	✓	✓
German	✓	✓	✓
Indonesia Bahasa	✓		
Italian	✓		
Japanese	✓		
Korean	✓		
Mongolian <sup>4</sup>	✓		
Polish	✓	✓	✓
Portuguese	✓		
Russian	✓	✓	✓
Slovak	✓		
Spanish	✓	✓	✓

<sup>1</sup> If the On-line help is not available in a respective language, the software is delivered with the English On-line help.

<sup>2</sup> If the COMFAR Manuals are not available in a respective language, the software is normally delivered with the English manuals. Upon request, the licensee may choose any other available manual instead.

<sup>3</sup> The manuals for the Farsi language module have been translated and published by the COMFAR Promoter in Iran (NPSN) and may be obtained directly.

<sup>4</sup> The Mongolian language version is currently under preparation and will be available by the end of 2005 only.

### B.2 Language modules under preparation

The Mongolian language version for COMFAR *III Software* is under preparation.

### B.3 Future development, possible cooperation

Some of the above mentioned language modules have been (are) developed in cooperation with partners (organizations or companies) interested in this respective language. In this case, UNIDO is giving the necessary technical support, while the partner carries out the actual translation work. Due to our experience, the volume of

translation work and the time required for the different parts of a language module are as follows:

- Software dialogue: app. 15 standard pages (4,500 - 5,000 words)  
app. 4 weeks including file transfer via e-mail.
- Manuals: app. 600 standard pages (330 words per page)
- On-line help: app. 190 standard pages (75% copied from manuals) for both, manuals and on-line help app. 5 - 6 months are required.

As shown in the table above, it is not necessary to translate all three parts (software dialogue, on-line help, manuals). The preparation of the software dialogue only into a specific language is a relatively short effort and enables a user to operate (screen) and print projects calculated with COMFAR *III Expert* in this specific language.

At the end of the translation the partner is receiving the language module incorporated into COMFAR *III Expert* free of charge. The copyright and ownership of the language module remains with UNIDO. For further information, please do not hesitate to contact us.