

Exl-Plan

Comprehensive Business Financial Planner

for

Microsoft[®] Excel for Windows[™]

By

Invest-Tech Limited

**Micro, Lite, Pro, Super, Super Plus, Ultra & Ultra Plus Versions
US/Canadian & UK/International Editions**



Exl-Plan

Comprehensive Business Financial Planner

Table of Contents

Tip

Use Word's (or Adobe Acrobat's) Find facility (access via **Edit | Find ...**) to search the entire document for key words or phrases.

If you change the paper size for printing, you may need to update this table of contents - place cursor within it and press F9.

Table of Contents	i
Using this Manual	vi
Very Quick Start	vii
Installation of Exl-Plan (Windows 95/98/NT/2000/XP).....	vii
Installation of Exl-Plan (Windows 3.1).....	viii
Familiarization with Exl-Plan	viii
Using Quik-Plan - Part 1	ix
Using Quik-Plan - Part 2	x
Building a New Model	x
List of Toolbar Buttons	xii
Creating a Plan within 15 Minutes	xiv
1. Welcome to Exl-Plan	1
1.1. Welcome.....	1
1.2. Powerful & Easy-to-Use	1
1.3. Scope of Manual.....	2
1.4. Help System	2

1.5.	Typographical Conventions	3
1.6.	About Invest-Tech.....	3
2.	Financial Modeling & Business Planning.....	4
2.1.	Introduction	4
2.2.	Computers & Modeling.....	4
2.3.	Uses of a Model.....	5
2.4.	Preparing to Plan	5
2.5.	Pitfalls & Dangers	6
2.6.	More about Business Planning.....	6
3.	Introducing Exl-Plan.....	7
3.1.	Introduction	7
3.2.	Versions of Exl-Plan	7
3.3.	Scope of Exl-Plan.....	8
3.4.	Facilities & Features of Exl-Plan	8
3.5.	Assumptions Handled by Exl-Plan.....	9
3.5.1.	Sales, Cost, Inventory & Expense Assumptions	10
3.5.2.	Fixed Asset, Investment & Financing Assumptions	10
3.5.3.	Credit & Input/output Tax Assumptions.....	10
4.	Loading Exl-Plan for First Time.....	11
4.1.	Introduction	11
4.2.	Installation of Exl-Plan (Windows 95/98/NT/2000/XP).....	11
4.3.	Installation of Exl-Plan (Windows 3.1).....	12
5.	Getting Started with Exl-Plan	13
5.1.	Introduction	13
5.2.	Familiarization Exercises	13
5.2.1.	Familiarization - Part 1.....	13
5.2.2.	Familiarization - Part 2.....	14
5.3.	Protecting Your Work	15
5.4.	Printing.....	16
5.5.	Zoom Settings.....	16
5.6.	Fast Entry of Assumptions	17
5.7.	Exl-Plan's Toolbar	17
5.8.	Reset All Rows/Columns	18
5.9.	Freezing Titles.....	18
5.10.	Changing View of Reports.....	18
6.	Using Exl-Plan	19
6.1.	Introduction	19
6.2.	Starting to Use Exl-Plan.....	19
6.2.1.	Erasing Existing Values	19
6.2.2.	Gathering & Entering Assumptions	20
6.3.	Structuring a Model.....	21
6.4.	Using Quik-Plan.....	21

6.4.1.	Outline Procedure for using Quik-Plan	21
6.4.2.	Procedure for setting up Exl-Plan prior to using Quik-Plan	22
6.4.3.	Procedure for Using Quik-Plan	23
6.5.	Model-Building Procedure	23
6.5.1.	Summary of Procedure for Generating Projections	23
6.5.2.	Detailed Guidance on using Exl-Plan to Generate Projections.....	24
6.5.3.	Setting up Exl-Plan.....	24
6.5.4.	Entering Monthly Assumptions.....	26
6.5.5.	Entering Prior Year Income Statement & Opening Balance Sheet.....	26
6.5.6.	Completing the Projections	27
6.6.	Avoiding Calculation Errors	27
6.7.	Doing Sensitivity Analyses	28
6.8.	Viewing What-If Analyses.....	29
6.9.	Planning Better Profitability.....	30
6.10.	Making Short-Term Cash Projections.....	30
6.11.	Tracking Trading Performance	31
6.12.	Analyzing Long-Term Performance	31
7.	Changing Exl-Plan	33
7.1.	Introduction	33
7.2.	Making Simple Changes	33
7.2.1.	Changing the Name of an Existing Variable.....	34
7.2.2.	Entering New Assumption Rows	34
7.2.3.	Plugging New Variables into an Existing Variable	34
7.2.4.	Extending the Power of Plugging In	35
7.2.5.	Using Formulae Instead of Values	35
7.2.6.	Changing Report Layouts.....	36
7.2.7.	Combining Simple Changes	36
7.3.	Making Complex Changes	36
7.3.1.	General Procedure for Complex Changes	37
7.3.2.	Inserting a New Main Sales Group	37
7.3.3.	Inserting an Additional Monthly Expense Item	38
7.3.4.	Inserting a New Balance Sheet Item	38
7.3.5.	Deleting a Row	38
7.3.6.	Changing Intervals & Time Horizons	39
7.3.7.	Changing Column Widths	39
7.4.	Extending Exl-Plan.....	39
7.4.1.	Incorporating Actuals with Projections.....	40
7.4.2.	Updating Projections with Actuals.....	40
7.4.3.	Consolidating Projections	41
8.	Support & Assistance	42
8.1.	Support Policy	42
8.2.	Model Development Services	42
8.3.	Other Products.....	43
8.4.	Contacting Invest-Tech	43

Appendix - 1 License Agreements	44
Commercial Version License Agreement	44
Shareware Version License Agreement	45
Shareware Distribution License Agreement.....	46
Association of Shareware Professionals Ombudsman Statement	46
Appendix - 2 Lists of Reports & Graphs	47
List of Reports	47
List of Graphs.....	48
Appendix - 3 Adapting Exl-Plan to Different Business Types	49
Manufacturing Businesses.....	49
Distribution Businesses	50
Service Businesses	51
Hybrid & Multi-site Businesses	52
Appendix - 4 How Quik-Plan Handles Assumptions	53
Appendix - 5 Guidance on Entering Assumptions.....	55
Monthly Assumption Report No. 1 - Sales & Finished Goods Inventory Targets	55
Monthly Assumption Report No. 2 - Cost of Materials/Goods, Inventory & Purchases.....	57
Monthly Assumption Report No. 3 - Direct Labor, Other Direct Costs & Cost of Sales	58
Monthly Assumption Report No. 4 - Overhead Expenses	60
Monthly Assumption Report No. 5 - Fixed Assets	61
Monthly Assumption Report No. 6 - Funding, Interest Rates & Related Items	62
Monthly Assumption Report No. 7 - Opening Balance Sheet Items, Receivables & Payables	65
Monthly Assumption Report No. 8 - Sales & Related Taxes	66
Opening Balance Sheet	67
Prior Year Income Statement	67
Assumptions for 2 nd & 3 rd Years and Projections for 1 st Year - Sales & Costs	67
Assumptions for 2 nd & 3 rd years and Projections for 1 st Year - Other Items.....	68
4 th & 5 th Year Assumptions	69
Appendix - 6 Calculation Error Messages	70
Appendix - 7 Glossary of Terms.....	72

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**NOTICE TO USERS**

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## Using this Manual

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This manual is aimed at first-time users of planning software as well as at experienced planners and Excel users.

It is suitable for use with all shareware/commercial versions<sup>1</sup> and editions of Exl-Plan. However, for simplicity and to avoid confusion, it is mainly directed at the Super version of Exl-Plan. Where appropriate references are made to other versions.

When using the manual, instructions must be interpreted to take account of the differences between the various versions of Exl-Plan. Key differences include the following:

- The Micro version handles only one revenue/cost group whereas the more powerful versions handle up to ten such groups.
- The more powerful versions handle numerous additional cost and expense variables as well as greater detail in relation to fixed assets, debt etc.
- The Micro & Lite versions do not specifically handle finished goods inventory and do not have facilities for deferring the cashflows relating to individual cost and expense variables.
- The more powerful versions have additional sensitivity analysis and planning tools.
- The Ultra and Ultra Plus versions are based on the Super and Super Plus versions. The main difference are that they handle monthly projections for an initial three years (as compared with one year for all other versions). Accordingly, their quarterly projections refer to fourth and fifth years (instead of second and third) and their optional annual projections relate to sixth and seventh years.

This manual is based on the US/Canadian editions of Exl-Plan and uses US terminologies. Users of UK/International editions of Exl-Plan should note that the Monthly Assumption Report No. 8 for handling input/output taxes (e.g. sales taxes, VAT, GST etc.) does not exist in these editions as the variables for handling these taxes are located with Monthly Assumption Report Nos. 1 & 6. Note that the diagrams in the manual relate to the Pro version of Exl-Plan.

Note: The optional printed manuals which can be purchased with commercial or upgraded copies of Exl-Plan are specifically tailored to suit each separate version and edition of Exl-Plan. Likewise, the online help systems accompanying Exl-Plan relate to specific versions and editions.

### **For further assistance, be sure to check:**

1. README.DOC file accompanying Exl-Plan.
2. Frequently Asked Questions at <<http://www.planware.org/exlfaq.htm>>.

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<sup>1</sup> A separate Word-based manual is available for Exl-Plan Free and included within the freeware package.

## Very Quick Start

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The procedures below should enable an Excel spreadsheet user to get Exl-Plan up and running with minimal initial instruction. If problems are encountered, refer to Loading Exl-Plan for the First Time or Getting Started with Exl-Plan.

Exl-Plan requires Microsoft Excel for Windows (versions 5, 7, 8, 95, 97, 2000 or XP) running with Windows 3.1 or Windows 95/98/NT/2000/XP on a PC with a 486/50Mhz or higher processor, 16+ MB of memory, VGA or better display and 20 Mb disk space.

If Exl-Plan was secured as shareware and subsequently upgraded remotely by Invest-Tech, the upgraded Exl-Plan's workbook file should be kept safe and intact as the primary master version of Exl-Plan. Copies of this file should be created and used for normal working purposes.

When being loaded for the first time, Exl-Plan needs 16 Mb of disk space to enable it to automatically create backup copies (WORKPLAN.XLS and/or TESTPLAN.XLS) during set up. If this space is not available, Exl-Plan will skip their creation.

Installation takes a few monutes - depending on the speed of the PC being used. Exl-Plan must always be installed from supplied installation disk(s) or via a downloaded installation file. It will not operate correctly if it is installed by simply transferring an Exl-Plan workbook file from one PC to another.

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## Installation of Exl-Plan (Windows 95/98/NT/2000/XP)

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When Exl-Plan starts loading, Excel may display a dialog about macros and viruses. If Exl-Plan was secured from a reliable source or directly from Invest-Tech, press the Enable Macros button. Note that Exl-Plan will not load properly if the Disable Macros button is pressed. As loading progresses, a further dialog may appear about the location of macros. This can be disabled or ignored.

If using Excel 2000 (or higher) make sure that security is set to Medium (via **Tools | Macro | Security | Security Level**) before loading Exl-Plan.

Installation takes a few minutes. The procedure is as follows:

1. Close all other applications.
2. Confirm that at least 16 Mb of space is free on the hard disk to which Exl-Plan will be installed.
3. Insert the Exl-Plan Product Disk in a disk drive and use **Start | Run** to run the executable file EXLPLAN.EXE by entering A:\EXLPLAN.EXE at the Open prompt (replace A: by B: if appropriate). Follow on-screen instructions to install Exl-Plan's files into the appropriate folders. (If Exl-Plan was acquired by downloading from the Internet to a temporary folder, the downloaded executable file should be run and its on-screen instructions followed to install Exl-Plan's files into the appropriate folders.)
4. When installation has finished, go to the Exl-Plan menu within the Programs Menu and review any indicated README file.
5. Load Excel and open the main Exl-Plan workbook file EXLPLAN.XLS located in the folder specified during installation. Once loaded, follow on-screen prompts and then wait a few moments while copies of Exl-Plan are created. These copies, WORKPLAN.XLS and TESTPLAN.XLS, should be used as the primary working copy and for experimentation respectively. EXLPLAN.XLS should be carefully retained as the original master copy.

Note: If Exl-Plan failed to detect the correct size of the screen display being used, use **\*Setup | Change Default Zoom Value**.

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## Installation of Exl-Plan (Windows 3.1)

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Installation takes a few minutes. The procedure is as follows:

1. Close all other applications.
2. Confirm that at least 16 Mb of space is free on the hard disk to which Exl-Plan will be installed.
3. Insert the Exl-Plan Product Disk in a disk drive and use the Run option within File Manager or Program Manager to run the executable file EXLPLAN.EXE by entering A:\EXLPLAN.EXE at the prompt (replace A: by B: if appropriate). Follow on-screen instructions to install Exl-Plan's files into the appropriate sub-directories. (If Exl-Plan was acquired by downloading from the Internet to a temporary sub-directory, the downloaded executable file should be run and its on-screen instructions followed to install Exl-Plan's files into the appropriate sub-directories.)
4. Once installation is complete, go to the Exl-Plan Application Group and review any displayed README file.
5. Load Excel and open the main Exl-Plan workbook file EXLPLAN.XLS located in the sub-directory specified during installation. Once loaded, follow on-screen prompts and then wait a few moments while copies of Exl-Plan are created. These copies, WORKPLAN.XLS and TESTPLAN.XLS, should be used as the primary working copy and for experimentation respectively. EXLPLAN.XLS should be carefully retained as the original master copy.

Note: If Exl-Plan failed to detect the correct size of the screen display being used, use **\*Setup | Change Default Zoom Value**.

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## Familiarization with Exl-Plan

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When running Exl-Plan with W95/98/NT/2000/XP, it is best to place the taskbar at the bottom of the screen in order to improve the view of reports etc.

1. To become familiar with the basics and geography of Exl-Plan, take the Quik-Tour (**\*Exl-Plan Help | Quik-Tour**) from within the previously created TESTPLAN.XLS file.
2. Run the cursor across the menu bar - File, Edit etc. Note that Exl-Plan has added several new menus (**\*Assumptions**, **\*Protection** etc.).
3. Click the M\_S worksheet tab (or the "MA" toolbar button) to go to the monthly assumptions report for sales forecasts etc. Note that assumption values (displayed in blue) should be entered or altered only within the rectangular boxed-in areas opposite the ->> or <<->> arrows. Values shown in black contain formulae and are normally locked (protected).
4. Try adding or changing some of the supplied assumption values for sales and recalculate (**\*Tools | Calculate All & Check**) to check the model's integrity and to update all the monthly, first-year, quarterly and annual output reports. (Note that Exl-Plan always uses manual calculation instead of Excel's automatic calculation default setting).
5. Click sheet tabs to view the other monthly assumption reports (M\_M, M\_C etc.) and change/add assumption values as desired.

6. Use Exl-Plan's menus, worksheet tabs and buttons (especially "<" and ">") to view the remaining assumption and output reports and charts.
7. Explore Exl-Plan's help facilities within the **\*Exl-Plan Help** menu.

## Using Quik-Plan - Part 1

Quik-Plan is a facility within Exl-Plan that simplifies the preparation of high-level multi-year projections. To use it to compile real or hypothetical trial financial projections, proceed as follows:

1. Save TESTPLAN.XLS with an appropriate new file name e.g. QUIKPLAN.XLS.
2. Select **\*Setup | Basic Model Info** and enter basic information about the business to be modeled.

3. Select **\*Setup | Model Title** and give the model an appropriate title e.g. *First Attempt with Quik-Plan*.
4. Select **\*Tools | Quik-Plan** to make *first-cut* projections. Delete or overwrite the supplied assumptions and then run Quik-Plan with the newly entered values.
5. Review a selection of the monthly, quarterly and annual assumption & output reports and charts to see for how Quik-Plan operates and Exl-Plan handles its assumptions.
6. Revise and expand Quik-Plan's assumptions from within the monthly assumption reports and recalculate as desired (select either **\*Tools | Calculate All & Check** or the "C" button on the toolbar).
7. Experiment with Exl-Plan's data-entry facilities which are located within the **\*Assumptions** menu (i.e. **Clear Assumptions**, **Constant Assumptions** etc.) or accessible via buttons in the toolbar (refer to Section 5.6 Fast Entry of Assumptions).

## Using Quik-Plan - Part 2

1. Go to the Quarterly Assumptions Report (by clicking the Q\_A tab or "QA" button). Observe that monthly projections for the first-year have been included in this report as quarterly values. In the case of Ultra & Ultra Plus versions, the monthly projections for the third year have been included as quarterly values.
2. Add or change quarterly assumptions for the second and third years. Recalculate and review the quarterly and annual output reports and their associated charts.
3. If using the Pro, Super or Super Plus versions of Exl-Plan, go to the 4th-5th Year Assumptions Report (click the 45\_A tab). If using the Ultra or Ultra Plus versions, go to the 6th-7th Year Assumptions Report (click the 67\_A tab). Add or change annual assumptions for the fourth and fifth years and recalculate.
4. View the Textual Summary Report (TEXT tab or **\*Output | Textual**) and other annual output reports & charts.
5. Print selected assumption or output reports and charts.
6. If using Pro, Super, Super Plus, Ultra or Ultra Plus versions, use the sensitivity analysis facility (**\*Tools | Sensitivity Analysis**) to globally change groups of key monthly and/or quarterly assumptions.
7. If using Super, Super Plus, Ultra or Ultra Plus versions, review Exl-Plan's other planning tools for analyzing what-ifs (Section 6.8), profitability planning (Section 6.9), short-term cashflow planning (Section 6.10), performance tracking (Section 6.11) and trend analysis (Section 6.12).
8. Continue exploring Exl-Plan's menus etc. and entering or changing assumptions. Use its online help (**\*Exl-Plan | Help**) as appropriate. Refer to Section 6 Using Exl-Plan and Appendix 5 Guidance on Entering Assumptions for further guidance.

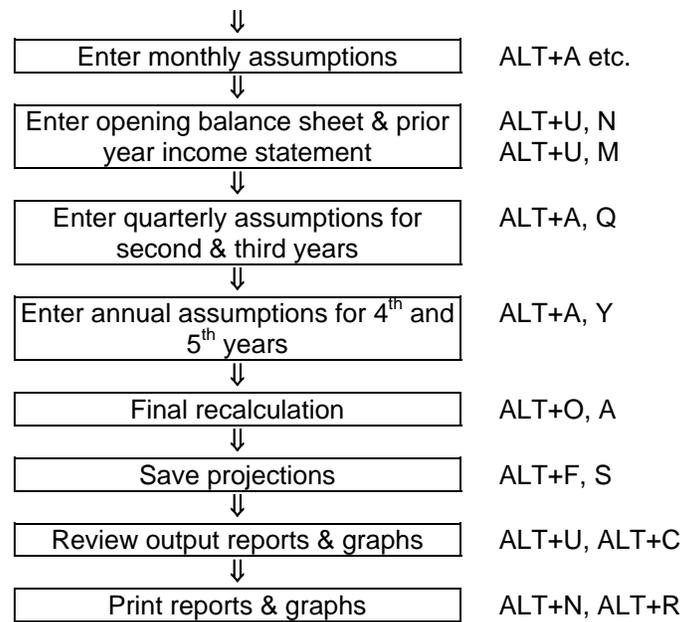
## Building a New Model

To start constructing a new model (without using Quik-Plan), reload WORKPLAN.XLS and immediately save it with an appropriate new file name. Then proceed as outlined below.

Note that a user's assumptions are entered directly into Monthly, Quarterly & 4<sup>th</sup>/5<sup>th</sup> Year Assumption Reports only. Output Reports contain extensive formulae which generate the projections. The only exceptions are the prior year income statement in the Monthly Income Statements and the opening balance sheet in Monthly Balance Sheet which must be entered directly into these reports.

**Be sure to save the model at regular intervals.**

|                                                                                              | <u>Initiating<br/>Keystrokes</u> |
|----------------------------------------------------------------------------------------------|----------------------------------|
| Remove all existing assumptions                                                              | ALT+S, L                         |
| ↓                                                                                            |                                  |
| Enter basic data about the business,<br>projection start date, currency and<br>main products | ALT+S, B                         |
| ↓                                                                                            |                                  |
| Enter title for the new model                                                                | ALT+S, T                         |



## List of Toolbar Buttons

This listing of toolbar buttons mainly relates to the Micro, Lite, Pro, Super & Super Plus versions. There are minor variations for the Ultra and Ultra Plus versions.

Note: To see a button's hint on the toolbar, slide the mouse's pointer slowly over the button.



Print reports within selected groups of reports  
Print the current report



Go to Monthly Assumptions Report No. 1 - Sales & Finished Goods Inventory Targets  
Go to Monthly Income Statements Report  
Go to 2nd & 3rd Year Quarterly Assumptions Report - Sales & Costs  
Go to Quarterly Income Statements Report  
Go to Annual Income Statements Report



Access graphs



Mark position of cursor  
Jump back to the marked position of the cursor



Move backward one report  
Move forward one report



Calculate entire model with error checking  
Calculate current sheet without error checking  
Go to Summary & Diagnosis Report



Clear unprotected values in assumption report row  
Enter constant assumption value across remaining months/quarters  
Enter incremented assumption value across remaining months/quarters  
Enter assumption value changed by % across remaining months/quarters  
Enter total assumption value & allocate equally across months/quarters  
Allocate assumption across 12 months based on report's seasonal index



- Unlock selected range
- Lock selected range
- Unprotect current report
- Protect current report



Freeze panes within all reports



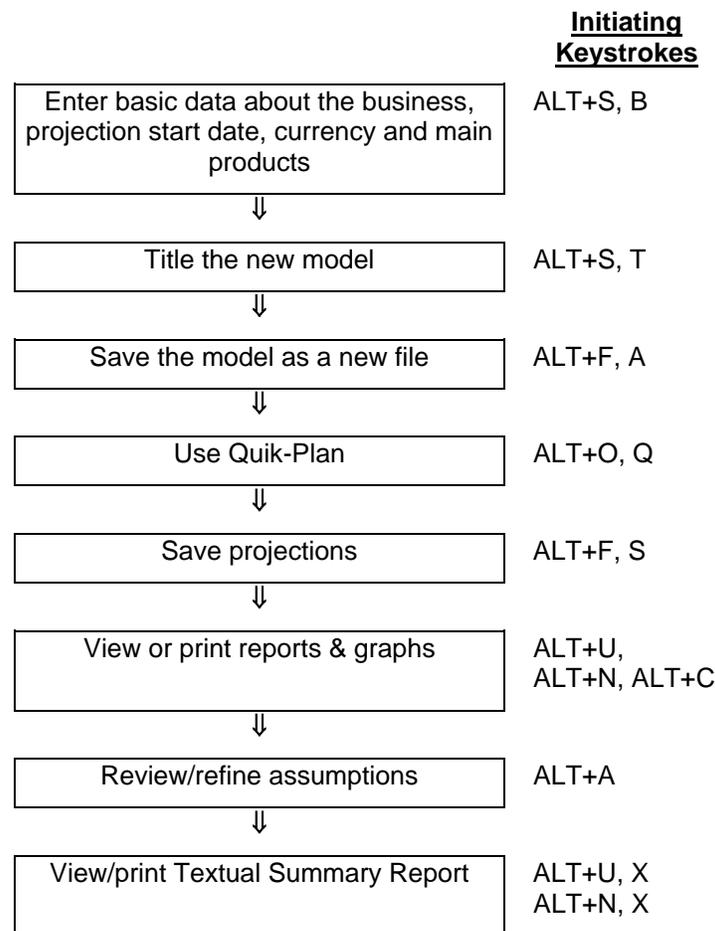
- Restore default zoom for all reports
- Zoom into current report by 10%
- Zoom out from current report by 10%

## Creating a Plan within 15 Minutes

Exl-Plan incorporates a special facility, called Quik-Plan, for producing outline projections for three years (five years with Pro, Super, Super Plus, Ultra & Ultra Plus versions) based on *high-level* assumptions entered into a special report (at the QUIK worksheet). It is ideally suited for producing *first-cut* projections or for compiling preliminary forecasts which can be fine-tuned subsequently via Exl-Plan's more detailed monthly and quarterly assumption reports.

For a full explanation of Quik-Plan refer to Section 6.4 Using Quik-Plan. See also Appendix 4 - How Quik-Plan Handles Assumptions.

The procedure below summarizes the key tasks involved in using Quik-Plan and very quickly producing multi-year projections as a Textual Summary Report. *Even a new user of Exl-Plan should be able to produce first-cut projections in less than 15 minutes.*



# Exl-Plan

## Comprehensive Business Financial Planner

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## 1. Welcome to Exl-Plan

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### 1.1. Welcome

---

Exl-Plan is a powerful, easy-to-use software package for preparing comprehensive financial projections, budgets, business plans etc. for one, three, five years or seven ahead. It can also be used as a tool for strategic and corporate planning, business restructuring, financial appraisals and performance monitoring within almost any size of business. *Fourth and fifth year projections are available with the Pro, Super & Super Plus versions of Exl-Plan and, optional, sixth-seventh year projections can be created by the Ultra and Ultra Plus versions.*

Exl-Plan is available in seven versions and in two editions using UK/International and US/Canadian accounting conventions – fourteen variants in total. They all have the flexibility to handle manufacturing, distribution and service businesses and are suitable for established businesses as well as for new ventures and strategic business units within major corporations. Exl-Plan is also ideal for use by professional advisers, consultants, training organizations, financial institutions and enterprise support agencies.

Exl-Plan is primarily a workbook file which runs on the best selling Excel spreadsheet from Microsoft®. As Exl-Plan incorporates extensive formulae and pre-programmed menus and buttons only a very basic knowledge of Excel is required to prepare highly professional and presentable projections. Because Exl-Plan is an *open system*, advanced Excel users can utilize their expertise to enhance and expand Exl-Plan to meet their particular needs (see Section 7 Changing Exl-Plan).

Exl-Plan requires Excel for Windows (versions 5, 7, 8, 95, 97, 2000 or XP) running with Windows 3. or Windows 95/98/NT/2000/XP on a PC with a 486/50Mhz or higher processor, 16+ MB of memory, VGA or better display and 20 MB disk space.

Exl-Plan incorporates a comprehensive range of data entry and planning facilities and features. It is suitable for managers and business people with minimal previous experience of financial or business planning as well as for experienced planners, accountants, spreadsheeters and model-builders.

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### 1.2. Powerful & Easy-to-Use

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Exl-Plan is pre-formatted to handle the very wide range of the variables and functions normally encountered when preparing financial projections. Based on the monthly and quarterly assumptions entered by the user, it compiles detailed and fully integrated financial projections for one year on a monthly basis and in less detail for a further two years on a quarterly basis. It produces dozens of pro-forma financial and management reports together with numerous graphs for key variables. Exl-Plan contains numerous facilities for accelerating the

process of preparing projections and for undertaking global or specific *what-if* sensitivity analyses alongside scenarios created using Excel's built-in Scenario Manager.

Exl-Plan is easy-to-use because all the formulae for financial calculations are pre-written; reports are pre-formatted and clearly laid out; menu structures follow logical sequences; and *online* help is available to the user at all stages. For experienced users of Excel, Exl-Plan offers a familiar environment which can be tailored and expanded to meet specialist needs and utilize existing spreadsheet-based data without the need to get involved in any extensive import/export procedures.

The time required to set-up and become familiar with Exl-Plan is less than an hour as compared with the many hundreds of hours that would be required to construct a comparable-quality financial model.

To get started, refer to Very Quick Start near the front of the manual for fast-track guidance on installing Exl-Plan; exploring its main features and facilities; and developing an initial set of projections. Ultimately, the best way to learn about Exl-Plan is to start using it in a real situation by entering meaningful assumptions, compiling and reviewing projections, printing reports and graphs etc.

---

### 1.3. Scope of Manual

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This manual provides detailed explanations on all aspects of Exl-Plan and will help users make effective use of the package with the minimum of preparation. It is structured as follows:

- Sections 2 and 3 introduce financial & business planning and Exl-Plan respectively.
- Section 4 explains how to install Exl-Plan.
- Section 5 describes the basics of Exl-Plan.
- Section 6 contains detailed advice on using Exl-Plan in *real* planning situations and introduces its more advanced facilities.
- Section 7 describes possible approaches to making simple and complex changes to Exl-Plan.
- Finally, Section 8 reviews Invest-Tech's support for Exl-Plan.

New users are invited to quickly browse through the entire manual before using Exl-Plan to gain a general appreciation of its overall scope and content.

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### 1.4. Help System

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When Exl-Plan's Online Help is first loaded a conventional contents page or dialog appears depending on the version of Windows being used.

When using Exl-Plan's Help, specific procedures are displayed in separate windows that remain open and *on top* until closed.

Closing Help also closes any open procedural windows.

The Glossary of Terms refers to the variables used in the Monthly Assumption Reports. Its definitions provide additional guidance on entering assumptions and explanations of formulae. It supplements Appendix 5 - Guidance on Entering Monthly Assumptions.

## 1.5. Typographical Conventions

---

The following typographical conventions are used throughout this manual:

**Zzzz** | **Zzzzzz** indicates a menu option

**Zzzzzzzz.XLS** specifies a file name

**Zzzzz** refers to a worksheet name

"zzzz" refers to a toolbar button

This manual covers the US/Canadian edition of Exl-Plan and uses North American spellings and financial terms.

## 1.6. About Invest-Tech

---

Exl-Plan is the third-generation version of Invest-Tech's integrated financial planning systems. These have been developed over several years and are used by a wide variety of businesses ranging from start-ups to major companies.

Formed in 1983, Invest-Tech is an independent business and management consultancy based in Ireland and specializing in business planning & strategy, and the development of related software. It is a Registered Practice within the Institute of Management Consultants in Ireland (IMCI) and a Company Member of the Association of Shareware professionals (ASP) in the US.

Further information about Invest-Tech's other software products for business, cashflow & financial planning along with access to downloadable shareware versions can be obtained from its PlanWare website at the following URL:

[www.planware.org](http://www.planware.org)

This site also contains details of all new versions of Exl-Plan as soon as they become available.

## 2. Financial Modeling & Business Planning

### 2.1. Introduction

This general introduction to financial modeling and business planning will be of particular interest to non-financial managers and first-time entrepreneurs.

The following topics are discussed:

- 2.2 Computers & Modeling
- 2.3 Uses of a Model
- 2.4 Preparing to Plan
- 2.5 Pitfalls & Dangers
- 2.6 More about Business Planning

### 2.2. Computers & Modeling

By means of a computer and suitable software, a mathematical model of a business's finances can be constructed to help prepare its financial projections. A computer-based model reduces the tedium of carrying out numerous repetitive calculations and simplifies the alteration of assumptions and the presentation of results.

Financial models are used to compile forecasts and budgets; to assess possible funding requirements; and to explore the likely financial consequences of alternative funding, marketing or operational strategies. They can also be used for business planning, investment or funding appraisals and for financial analysis. Used effectively, a model can help prevent major planning errors, identify or evaluate opportunities, attract external funding, provide guidance, evaluate financial and development options, monitor progress etc.

A model utilizes assumptions on sales volumes, prices, operating costs, funding etc., to produce projected balance sheets, income statements and cashflow statements. Typically, it makes monthly projections for the first year and less detailed projections for the following years.

A model, like Exl-Plan, can handle most types of variables normally encountered in financial planning. It is the electronic equivalent of a book of reports. Each page (worksheet) contains variable descriptions in the left-hand column, titles along the top, and, in the middle, space for inputting hundreds of assumptions and holding thousands of formulae. The computer's screen serves as a small window on this electronic book as illustrated in the following simplified diagram.

| <i>Months</i> | <i>1</i> | <i>2</i> | <i>3</i> | <i>4</i> | <i>5</i> | <i>6</i> | <i>7</i> | <i>8</i> | <i>9</i> | <i>10</i> | <i>11</i> | <i>12</i> | <i>Year</i> |
|---------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-------------|
| Sales         | a        | a        | a        | a        | a        | a        | a        | a        | a        | a         | a         | a         | f           |
| Costs         | a        | a        | a        | a        | a        | a        | a        | a        | a        | a         | a         | a         | f           |
| Gross profit  | f        | f        | f        | f        | f        | f        | f        | f        | f        | f         | f         | f         | f           |
| Overheads     | a        | a        | a        | a        | a        | a        | a        | a        | a        | a         | a         | a         | f           |
| Net profit    | f        | f        | f        | f        | f        | f        | f        | f        | f        | f         | f         | f         | f           |

Note that the left-hand column and upper title rows are frozen and stay in view when scrolling around the model.  
a = assumptions    f = formulae

Because a model is fully integrated, resides in the computer's memory and all its assumption variables are linked by formulae, a change to any assumption will alter all dependent values throughout the model when it next recalculates. For example, a change to an interest rate in the third month of the first year will have an impact on the projections for the remaining months of that year and throughout the following years.

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### 2.3. Uses of a Model

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Initial assumptions can be readily altered to evaluate alternative scenarios. For example, a model could be used to:

- Explore the extent to which future sales can be increased while holding borrowings within predetermined limits.
- Assess the effects of varying selling prices and/or volumes on net income.
- Determine the optimum level and mix of future funding for a business.

For the management of an existing business, or promoters planning a substantial new venture, financial modeling can be an invaluable tool to assist the preparation of a business plan. However, business planning should not be confused with the preparation of financial projections. Sound planning should provide the basis for financial projections that can be derived arithmetically by a model. **A financial model and its forecasts should contribute to, but never dictate, the contents of a business plan.**

Once basic issues relating to markets, sales and operations have been fully researched and reviewed, a model can be used to generate the financial projections.

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### 2.4. Preparing to Plan

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Before using a financial model to help plan the future of a business, a manager or entrepreneur should:

- Decide at the very outset on the central purpose of the modeling exercise (raise funds etc.); the target audience (co-directors, financial institutions etc.); and the time horizon (one year etc.).
- Identify and think through all the critical assumptions. Prepare outline projections to confirm their overall direction, examine the critical elements in detail and consider strategic issues relating to sales, profitability, funding etc. The Quik-Plan facility (see Section 6.4 Using Quik-Plan) within Exl-Plan is ideal for preparing *first-cut* projections that can be progressively refined and expanded.
- Check that all key assumptions (e.g. sales forecasts) and data (e.g. opening balance sheet and any prior-year financial results) are to hand and have been adequately researched.
- Recognize the danger of presenting too much detail or too many reports. Most senior managers, investors and financiers seek simple financial statements, which they can readily see to have been based on detailed analysis and realistic assumptions. Detail can be provided *on request* or relegated to appendices in a report or business plan. Make use of Exl-Plan's summary reports, including its Textual Summary Report, and numerous graphs to present the highlights of a plan or projections.

### 2.5. Pitfalls & Dangers

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The veracity and usefulness of these projections will be completely determined by the quality and reliability of the underlying assumptions. For example, if sales or cost forecasts are unrealistic or inadequately researched, then the value of a model's output is greatly diminished. *An impressive set of financial projections is of little benefit if unsupported by research or simply based on speculation or wishful thinking.*

When preparing financial projections, be conscious of the following pitfalls and dangers:

- Using financial forecasting as a substitute for business planning
- Ignoring historic trends at business, sectoral and national levels
- Overstating market shares and growth, sales forecasts, and profit levels
- Underestimating costs and delays likely to be encountered
- Disregarding industry performance norms and competitors' responses
- Breaching generally-accepted financial guide lines and ratios
- Making unduly optimistic assumptions about the availability of loans, trade credit, equity etc.
- Seeking spurious accuracy while ignoring matters of strategic importance.

These problems can arise as the result of a lack of foresight or insight, or due to excessive optimism. Because they can lead to under-estimation of the resources required to develop a business with potentially disastrous consequences, it can be completely counterproductive to overstate the potential of a business.

There is often merit in compiling *worst* case projections to complement *most likely* or *best* forecasts. Exl-Plan's sensitivity-analysis facilities (See Section 6.7 Sensitivity Analysis) and Excel's Scenario Manager can be used for this purpose to temporarily override the basic assumptions. Realistic views should always be taken of a business's prospects, prospective profits, funding requirements etc.

### 2.6. More about Business Planning

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Preparing a set of projections is only a means to an end. Once plans or projections have been approved or in the course of being implemented, they should be regularly updated and compared with the results being achieved.

A plan is only useful if it is being adhered to, it serves as a benchmark for control purposes, and its projected outcomes are being realized.

While a clear business plan with sound projections cannot guarantee success, the absence of a plan or poor projections could ensure the eventual failure of a business.

**Users with limited financial expertise are urged to work closely with their professional advisers when using Exl-Plan.**

An expanded version of this section is available at Invest-Tech's PlanWare site on the Internet at:

[www.planware.org](http://www.planware.org)

This also contains other informative papers dealing with business plan preparation, strategic planning, cashflow forecasting, managing working capital, business idea generation etc.

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## 3. Introducing Exl-Plan

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### 3.1. Introduction

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This general introduction of Exl-Plan covers the following topics:

- 3.2 Versions of Exl-Plan
- 3.3 Scope of Exl-Plan
- 3.4 Facilities & Features of Exl-Plan
- 3.5 Assumptions Handled by Exl-Plan

Exl-Plan is an advanced spreadsheet-based financial modeling system for preparing comprehensive financial projections, funding applications, budgets, business plans etc. for up to three/five years ahead. It can also be used for strategic planning, financial appraisals and performance monitoring. It can handle any type of business, with annual sales ranging from about \$50,000 up to \$100 million, engaged in manufacturing, distribution or services.

Based on a user's assumptions, Exl-Plan compiles integrated financial projections (income statements, cashflows, balance sheets & ratios) for one year ahead on a monthly basis and in less detail for subsequent years. It produces numerous management and financial reports along with graphs of key variables that can be displayed on the screen or printed.

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### 3.2. Versions of Exl-Plan

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Seven primary versions of Exl-Plan are available as follows:

**Micro** for new & very small companies, sole traders or partnerships. Twelve-month projections for first year. Makes projections for the second and third years on a quarterly basis. Handles one revenue/cost group. Distributed as shareware and commercial software.

**Lite** for new & small to medium-sized companies, sole traders or partnerships. Twelve-month projections for first year. Projects for the second and third years on a quarterly basis. Handles two revenue/cost groups. Distributed as shareware and commercial software.

**Pro** for new & medium to large companies. Twelve-month projections for first year. Projects for the second and third years on a quarterly basis and for fourth/fifth years on an annual basis. Handles four revenue/cost groups. Distributed as shareware and commercial software.

**Super** for new & substantial companies. Twelve-month projections for first year. Projects for the second and third years on a quarterly basis and for fourth/fifth years on an annual basis. Similar to Pro but includes a greater range of assumptions and additional planning tools. Handles six revenue/cost groups. Distributed as shareware and commercial software.

**Super Plus** for new & substantial companies. Similar to Super but handles ten revenue/cost groups.

**Ultra** for new & substantial companies. 36-month projections for initial three year. Projects for the fourth and fifth years on a quarterly basis and, optionally, for sixth/seventh years on an annual basis. Otherwise similar to Super. Distributed as shareware and commercial software.

**Ultra Plus** for new & substantial companies. Similar to Ultra but handles ten revenue/cost groups.

All versions of Exl-Plan are available using either UK/International or US/Canadian accounting formats and terminologies. Different currency symbols and denominations (units, 000s, millions or billions) can be used.

Exl-Plan will run with Excel for Windows releases 5, 7, 8, 95, 97, 2000, XP and higher. Files created with the commercial version of Exl-Plan are compatible upwards and downwards with all these releases **provided** that the user is licensed to use Exl-Plan on more than one PC. The commercial license for Exl-Plan restricts the use of Exl-Plan to a single PC or network node. The only exception applies where a registered person uses a registered copy of Exl-Plan on a desktop PC and, exclusively, on their own Notebook computer.

Whilst most references in this manual refer to Exl-Plan Super, instructions can be readily applied to suit the other versions. A user wishing to switch to a different version of Exl-Plan should contact Invest-Tech for details of trade-up charges etc.

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### 3.3. Scope of Exl-Plan

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Exl-Plan comprises several integrated sub-models residing within the main model and covering a three/five year forecasting period as follows:

- Detailed assumptions and projections for the initial 12 months (36 months for Ultra & Ultra Plus).
- Annualized projections for the first year based on the 12-month projections (three years for Ultra & Ultra Plus).
- Less detailed assumptions and projections for the initial 12 quarters along with projections for the first four quarters derived automatically from the 12-month projections (for third year for Ultra & Ultra Plus).
- Annual projections for initial three years based on the 12-quarter projections (for third-fourth-fifth years for Ultra & Ultra Plus).
- Projections for a further two years based on simplified annual assumptions (Pro, Super, Super Plus, Ultra & Ultra Plus versions).

Projected income statements, cashflows, balance sheets and ratio analyses are generated for each month, quarter and year. There is an opening balance sheet and a summary income statement for the year preceding the start of the projections. For example, if projections start in April 2002, an income statement (estimated or actual) for the year ending March 2002 can be entered for reference and comparison purposes.

Output from Exl-Plan can be printed or viewed on a computer screen. This includes the following:

- Over thirty pro-forma reports containing assumptions, income statements, cashflow projections, balance sheets, performance reviews and summaries. These are detailed in Appendix 2 - Lists of Reports & Graphs.
- Numerous graphs showing key projections, ratios etc. as detailed in Appendix 2 - Lists of Reports & Graphs.
- A twelve-page Textual Summary Report containing a summary of the projections in textual form with embedded values and tables (\*Output | Textual).

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### 3.4. Facilities & Features of Exl-Plan

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Once loaded, Exl-Plan automatically extends Excel's menu system and adds its own toolbar.

Exl-Plan contains dozens of pre-formatted and protected worksheets incorporating thousands of formulae, assumption values etc. Its facilities and features include the following:

1. Quik-Plan to enable a user produce *first-cut* projections for three (five for Pro, Super, Super Plus, Ultra & Ultra Plus versions) years quickly (i.e. within about 15 minutes). Refer to Section 6.4 Using Quik-Plan.
2. Comprehensive set of tailored toolbar buttons. Refer to Section 5.7 Exl-Plan's Toolbar and List of Toolbar Buttons near the very front of the manual.
3. Facilities for inserting constant and varying monthly values and for entering assumptions based on seasonal patterns etc. specified by the user. Refer to Section 5.6 Fast Entry of Assumptions.
4. Selective *what-if* or sensitivity analysis covering months and quarters for the three (five) years. Refer to Appendix 5 - Guidance on Entering Assumptions.
5. Sensitivity analysis tool for globally changing selling prices, volumes, direct costs and overhead expenses for months and quarters. Refer to Section 6.7 Sensitivity Analysis. Included with Pro, Super, Super Plus, Ultra & Ultra Plus versions.
6. Automatically generated 'what-if' tables which display the impact of incremental changes in sales volumes, selling prices, cost of sales and overhead expenses on projected profitability for the first year. Refer to Section 6.8 Viewing What-If Analyses. Included with Super, Super Plus, Ultra & Ultra Plus versions.
7. Profitability chart based on the first-year projections which also allows a user to explore the impact of specific changes in key variables and assumptions on overall profitability. Refer to Section 6.9 Planning Better Profitability. Included with Super, Super Plus, Ultra & Ultra Plus versions.
8. Initial twelve-week cashflow forecasts derived from monthly cashflow projections for the first year. Refer to Section 6.10 Making Short-Term Cashflow Projections. Included with Super, Super Plus, Ultra & Ultra Plus versions.
9. Facility to produce updated first-year projections of sales and profitability by combining year-to-date actuals with projections for remaining months of the year. Refer to Section 6.11 Tracking Trading Performance. Included with Super, Super Plus, Ultra & Ultra Plus versions.
10. Tables to analyze longer term trends (five-years historical plus five-years projected) for key ratios and performance measures. Refer to Section 6.12 Analyzing Long-Term Trends. Included with Super, Super Plus, Ultra & Ultra Plus versions.
11. Book-marking facility to allow a user mark a location within a worksheet and to return quickly to it.
12. Extensive on-line help - refer to Section 1.4 Help System for further details.
13. Multiple safeguards to protect formulae etc. and help prevent accidental changes being made to worksheets. Refer to Section 5.3 Protecting Your Work.
14. Full access to worksheets and formulae to facilitate customization and expansion. Refer to Section 7 Changing Exl-Plan.
15. *Error trapping* to advise when certain types of calculation errors arise. Refer to Section 6.6 Avoiding Calculation Errors and to Appendix 6 - Calculation Error Messages.

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### 3.5. Assumptions Handled by Exl-Plan

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Exl-Plan handles a very wide variety of assumption variables and financial functions. Many of these can be expanded or altered by the user as explained in Section 7 Changing Exl-Plan in order to embrace existing spreadsheet-based data or to accommodate special user requirements.

These assumptions can be grouped as follows:

3.5.1 Sales, cost, inventory & expense assumptions

3.5.2 Fixed assets, investment & financing assumptions

**3.5.3 Credit & input/output tax assumptions**

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**3.5.1. Sales, Cost, Inventory & Expense Assumptions**

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The range of sales, cost, inventory and overhead expenses assumptions handled by Exl-Plan Super include:

- Monthly sales forecasts for thirty product/market subgroups within six main sales groups which can be defined by the user. There are facilities for forecasting either sales volumes & prices or sales values.
- Facilities for specifying the cost of materials/goods in percentage or absolute terms for the six main sales groups; for setting finished goods inventory levels (linked by formulae to sales for the current or future months); and for setting material inventory targets for each main group.
- Direct labor headcount can be specified for each main sales group. There are eight other user-definable direct/variable cost categories for which separate credit terms can be set.
- Forty user-definable categories of overhead expense for each of which credit terms can be specified.

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**3.5.2. Fixed Asset, Investment & Financing Assumptions**

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The range of fixed asset, investment and financing assumptions handled by Exl-Plan Super include:

- Four categories of fixed assets with provision for handling depreciation (based on original cost or declining balance), leases and additions/disposals for each category of asset.
- Separate interest rates for cash balances, overdraft and long-term debt.
- Facilities for increasing and decreasing long-term debt; assigning it between short- and long-term liabilities; and for making loan repayments inclusive or exclusive of interest.
- Share issues, dividend declarations and payments, corporation tax provisions and payments.

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**3.5.3. Credit & Input/output Tax Assumptions**

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The range of credit and input/output tax (e.g. sales taxes, value added tax, goods and services tax) assumptions handled by Exl-Plan Super include:

- Provision for setting different credit terms (up to 6 months ahead) for the six main sales groups and their related purchases (materials or goods for resale).
- Facilities to defer the cash payments relating to many categories of monthly expense, capital expenditure, dividends etc.
- Different sales/output tax rates can be set for the six main sales groups.
- Where taxes apply to inputs, there are facilities for setting different tax rates for inputs & capital expenditure; for specifying tax payment months; and for paying tax on an invoice or cash-received basis.

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# 4. Loading Exl-Plan for First Time

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## 4.1. Introduction

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These procedures explain how to install and load Exl-Plan for the first time with Windows 3.1 and Windows 95/98/NT/2000/XP. They should be followed by users who have not completed Very Quick Start described near the front of the manual.

**If Exl-Plan was secured as shareware and subsequently upgraded remotely via Invest-Tech, the upgraded Exl-Plan workbook file (EXLPLAN.XLS) should be kept safe and intact as the primary master version of Exl-Plan. Copies of this file should be used for normal working purposes.**

To uninstall Exl-Plan, select Uninstall within the Exl-Plan Application Group if using Windows 3.1. For W95/98/NT/2000/XP, press Start and then select Settings, Control Panel, Add/Remove Programs, and Exl-Plan.

When being loaded for the first time, Exl-Plan needs 16 Mb of disk space to enable it to automatically create backup copies (WORKPLAN.XLS and/or TESTPLAN.XLS) during set up. If this space is not available, Exl-Plan will skip their creation.

Installation takes a few minutes - depending on the speed of the PC being used. Exl-Plan must always be installed from supplied installation disk(s) or via a downloaded installation file. It will not operate correctly if it is installed by simply transferring an Exl-Plan workbook file from one PC to another.

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## 4.2. Installation of Exl-Plan (Windows 95/98/NT/2000/XP)

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When Exl-Plan starts loading, Excel may display a dialog about macros and viruses. If Exl-Plan was secured from a reliable source or directly from Invest-Tech, press the Enable Macros button. Note that Exl-Plan will not load properly if the Disable Macros button is pressed. As loading progresses, a further dialog may appear about the location of macros. This can be disabled or ignored.

If using Excel 2000 (or higher) make sure that security is set to Medium (via **Tools | Macro | Security | Security Level**) before loading Exl-Plan.

1. Close all other applications.
2. Confirm that at least 16 Mb of space is free on the hard disk to which Exl-Plan will be installed.
3. Insert the Exl-Plan Product Disk in a disk drive and use **Start | Run** to run the executable file EXLPLAN.EXE by entering A:\EXLPLAN.EXE at the Open prompt (replace A: by B: if appropriate). Follow on-screen instructions to install Exl-Plan's files into the appropriate folders. (If Exl-Plan was acquired by downloading from the Internet to a temporary folder, the downloaded executable file should be run and its on-screen instructions followed to install Exl-Plan's files into the appropriate folders.)
4. When installation has finished, go to the Exl-Plan menu within the Programs Menu and review any indicated README file.
5. Load Excel and open the main Exl-Plan workbook file EXLPLAN.XLS located in the folder specified during installation. Once loaded, follow on-screen prompts and then wait a few moments while copies of Exl-Plan are created. These copies, WORKPLAN.XLS and TESTPLAN.XLS, should be used as

the primary working copy and for experimentation respectively. EXLPLAN.XLS should be carefully retained as the original master copy.

Note: If Exl-Plan failed to detect the correct size of the screen display being used, use **\*Setup | Change Default Zoom Value**.

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### 4.3. Installation of Exl-Plan (Windows 3.1)

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Installation takes a few minutes. The procedure is as follows:

1. Close all other applications.
2. Confirm that at least 16 Mb of space is free on the hard disk to which Exl-Plan will be installed.
3. Insert the Exl-Plan Product Disk in a disk drive and use the Run option within File Manager or Program Manager to run the executable file EXLPLAN.EXE by entering A:\EXLPLAN.EXE at the prompt (replace A: by B: if appropriate). Follow on-screen instructions to install Exl-Plan's files into the appropriate sub-directories. (If Exl-Plan was acquired by downloading from the Internet to a temporary sub-directory, the downloaded executable file should be run and its on-screen instructions followed to install Exl-Plan's files into the appropriate sub-directories.)
4. Once installation is complete, go to the Exl-Plan Application Group and review any displayed README file.
5. Load Excel and open the main Exl-Plan workbook file EXLPLAN.XLS located in the sub-directory specified during installation. Once loaded, follow on-screen prompts and then wait a few moments while copies of Exl-Plan are created. These copies, WORKPLAN.XLS and TESTPLAN.XLS, should be used as the primary working copy and for experimentation respectively. EXLPLAN.XLS should be carefully retained as the original master copy.

Note: If Exl-Plan failed to detect the correct size of the screen display being used, use **\*Setup | Change Default Zoom Value**.

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## 5. Getting Started with Exl-Plan

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### 5.1. Introduction

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This section contains basic exercises (5.2 Familiarization Exercises) to introduce Exl-Plan's main features and facilities. It also explains the following matters:

- 5.3 Protection of cells, sheets etc.
- 5.4 Printing
- 5.5 Zoom settings
- 5.6 Fast entry of assumptions
- 5.7 Exl-Plan's toolbar
- 5.8 Reset All Rows/Columns
- 5.9 Freezing titles
- 5.10 Changing View of Reports.

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### 5.2. Familiarization Exercises

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To become familiar with the basics of Exl-Plan, follow the procedures below which are mainly based on the Pro, Super & Super Plus versions.

When running Exl-Plan with W95/98/NT/2000/XP, it is best to place the taskbar at the bottom of the screen in order to improve the view of reports etc.

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#### 5.2.1. Familiarization - Part 1

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1. Reload Excel with TESTPLAN.XLS. This file contains specimen assumptions that can be used for experimentation etc. and, being a copy of the original, its values etc. can be readily altered.
2. Take the Quik-Tour (**\*Exl-Plan Help | Quik-Tour**) to get an overview of Exl-Plan and its facilities and layout.
3. Run the cursor across the menu bar - **File, Edit** etc. and note that Exl-Plan has added several new menus (**\*Assumptions, \*Protection** etc.).
4. Click the M\_S worksheet tab (or the "MA" toolbar button) to go to the monthly assumptions report for sales forecasts etc. Note that assumption values (shown in blue) should be entered or altered only within the rectangular boxed-in areas opposite the ->> or <<->> arrows. Values shown in black are formulae and are normally locked (protected).



5. Try adding or changing some of the supplied assumption values for sales and recalculate (**\*Tools | Calculate All & Check**) to check the model's integrity and to update all the monthly, first-year, quarterly and annual output reports. (Note that Exl-Plan always uses manual calculation instead of Excel's automatic default setting).
6. Use the **\*Assumptions** menu, worksheet tabs and toolbar buttons (especially "<" and "->") to view other monthly and quarterly assumption reports. Change assumption values as desired and periodically recalculate with the **\*Tools | Calculate All & Check** menu command to utilize Exl-Plan's error-trapping facilities.



### 5.2.2. Familiarization - Part 2

1. Check the Summary & Diagnosis Report (**\*Output | Summary**) and Textual Summary Report (**\*Output | Textual**) or click the SUM and TEXT worksheet tabs to see the consequences of changing assumptions. Note that monthly assumption reports contain calculated values as well as assumption values. These values feed into the monthly output reports (income statements, cashflows etc.) which are summarized in the first-year output reports located immediately to the right of the monthly reports.
2. Visit the first of two Quarterly Assumptions Reports (**\*Assumptions | Quarterly Assumptions - Sales/Costs**, or press the "QA" button, or click the Q\_A1 tab). This includes monthly assumptions for the first year converted to quarterly values as well as provision for entering quarterly assumptions for the second and third years. These feed into the quarterly output reports that are summarized in the annual output reports.
3. In the Pro, Super & Super Plus versions of Exl-Plan, high-level annual assumptions are used to produce projections for the fourth and fifth years (**\*Assumptions | 4-5th Year Assumptions**, or press the "45" button, or click the 45\_A tab).
4. Experiment with Exl-Plan's facilities, within the Assumptions menu for entering series of assumption values within rows. These can be accessed using toolbar buttons (refer to Section 5.6 Fast Entry of Assumptions). They enable a user to:
  - Enter a constant monthly or quarterly assumption
  - Enter a value which is increased either arithmetically, geometrically, seasonally or pro-rata
  - Clear a row of assumption values.

Note that assumption entry facilities only operate within the boxed-in cream-colored areas assigned to assumption values.

5. Use the "M" and "J" toolbar buttons to mark the cursor's location, visit other locations and then jump back to the marked location.
6. Use menus, worksheet tabs or buttons (on certain sheets and on the toolbar) to view output reports, charts etc.
7. Use Exl-Plan's **\*Print** menus, or buttons to print assumption and output reports.
8. If using Exl-Plan Pro, Super, Super Plus, Ultra or Ultra Plus, experiment with the sensitivity-analysis facility in the SENS worksheet (**\*Tools | Sensitivity Analysis**) by entering percentage

changes for key variables and recalculating. Note that these changes temporarily over-ride existing assumptions within Exl-Plan. View their effects in the Textual Summary Report (TEXT worksheet) and in the charts. Press the "Zeroise Factors" button to revert to the original projections. See Section 6.7 Sensitivity Analysis for a more detailed description of the sensitivity-analysis facility.

### 5.3. Protecting Your Work

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To minimize the possibility of corruption of formulae, without restricting potential for expansion or tailoring, Exl-Plan contains extensive safeguards to protect and lock ranges, worksheets and workbooks. These can be removed by experienced users.

**Users should never alter Exl-Plan's toolbar, buttons, dialog boxes, macro modules, range names or worksheet names. If these are altered in any way, either by accident or design, Invest-Tech cannot accept any responsibility for support or give support in the restoration of a modified file. It is the responsibility of the user to ensure that a fully intact copy of Exl-Plan is always available as a backup or fall back.**

Do not rename an Exl-Plan file using FileMgr or Explorer as this will cause the file to 'lose' all references to its toolbar. Instead, use Excel to load the file and then save it with the desired new name.

The best way to protect a model is to:

1. Make regular use of Exl-Plan's error-trapping facilities (**\*Tools | Calculate All & Check** or the "C" button) to check for errors connected with formulae and data entry - see Section 6.6 Avoiding Calculation Errors for further information.
2. Make frequent back-up copies of error-free files.

To minimize possible disruption to formulae etc., Exl-Plan contains the following protection facilities:

- When Exl-Plan loads, all its worksheets are automatically protected.
- Exl-Plan's facilities for entering rows of assumption values will not operate if initiated while the cursor is located at a locked cell.
- As supplied, all cells within Exl-Plan are locked with the exception of the unlocked values located inside the rectangular boxed-in areas assigned to assumption values within assumption reports. *Unlocked values are shown in blue and located in rows opposite ->> or <<->> arrows.*



- Selected cell ranges can be locked or unlocked using the options within the **\*Protection** menu or the corresponding buttons on the toolbar. Locked cells cannot be changed and their values are black colored on a white background. Values in unlocked cells are colored blue on a cream background whenever Exl-Plan facilities for unlocking cells are used.
- The **\*Protection** menu includes options for protecting individual sheets or for protecting all worksheets simultaneously.
- The **\*Setup | Clear All Assumption Reports** or **Clear Current Assumption Report** menu options only clear unlocked assumption values within Exl-Plan's assumption reports (as well as unlocked cells in columns used for the prior year income statement in the Monthly Income Statements and opening balance sheet in the Monthly Balance Sheets). These facilities ignore protected assumptions within assumption reports as well as all locked and unlocked formulae and text within these reports. As this

approach could lead to a failure to remove all assumptions, Exl-Plan automatically checks whether all assumptions have been successfully removed. If it issues an advisory message, systematically check all assumption reports for formulae and text within assumption areas. *A warning is issued if all assumption values have not been removed when clearing all assumption reports.*

- In theory, either Excel's or Exl-Plan's workbook protection facilities can be used to prevent accidental changes to formulae. Unfortunately, this also restricts the functioning of Excel's and Exl-Plan's menus and leads to error messages etc. when invoking various menu options or buttons. *In practice, the **\*Protection | Protect All Worksheets** menu option is the most satisfactory method of protecting Exl-Plan.*

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### 5.4. Printing

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Exl-Plan's **\*Print** menus and its print-related toolbar buttons allow users to group reports for batch printing as well as to print individual reports.



The default orientation is portrait for most of Exl-Plan's reports. Usually, it is more satisfactory to print reports with this orientation and, if necessary, to subsequently enlarge them using a photocopier rather than to print with landscape (with Page Setup Scaling set to Fit to 1 page wide) and then have to assemble and duplicate reports dispersed over several sheets.

Page Setup and Printer Setup can be altered to a considerable extent by users. For example, the paper size can be changed for individual reports or groups of reports.

Exl-Plan's boxed-in assumption areas are formatted in a cream(ish) color to aid identification etc. If, when printing assumption reports, the printer indicates that it has run out of memory, the simplest solution is to remove this coloring from all the boxed-in areas within assumption reports. If, in other circumstances, the printer runs out of memory, break up the 'problem' report by inserting a page break at an appropriate row.

When viewing reports on screen or in print, ##### symbols signify a cell overflow due to the large numbers. Only consider widening columns as a last resort because of the adverse impact on the width of printed reports. Instead, try the following options first:

- Increase the zoom value for the report in the expectation that the cell overflows only arise on the screen and not in printed reports.
- Reduce the number of decimal places displayed.
- Remove any bold formatting from the 'problem' numbers.
- Change number formatting to remove the comma separator (as in 1,000,000).

There is an option in the **\*Setup** menu to specify whether empty rows (containing values totaling to zero) are printed within output (but not assumption) reports. This is very effective at suppressing unused variables. This facility complements Excel's outlining facilities that can be used to hide detailed rows within assumption reports. *This facility does not operate if a report is being printed via the 'Print this sheet' toolbar button.*

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### 5.5. Zoom Settings

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As Exl-Plan loads, it detects the size of display being used and automatically adjusts Excel's custom zoom (**\*View | Zoom Custom Magnification**) to display each of Exl-Plan's reports with the optimal magnification. This is based on the following display widths:

---

| <i>Maximum Possible Window Widths<br/>(Points)</i> | <i>Default<br/>Zoom Value<br/>(%)</i> |
|----------------------------------------------------|---------------------------------------|
| < 600                                              | 60                                    |
| 600 (corresponds to 800*600 display)               | 75                                    |
| > 600                                              | 90                                    |

Exl-Plan's initial zoom value can be restored at any stage using **\*Setup | Revert to Default Zoom Value**. The default zoom value can be changed via **\*Setup | Change Default Zoom Value**.



The **\*Setup** menu and toolbar both offer facilities to zoom into and out from the currently selected Exl-Plan worksheet in increments of 10%.

## 5.6. Fast Entry of Assumptions

To complement Excel's facilities for entering data series, Exl-Plan also includes facilities (accessible via the **\*Assumptions** menu and toolbar buttons) for fast entry of assumption values across rows as follows:



- Clearing a row of assumptions.
- Entering a constant value across a row.
- Entering an initial value and incrementing it by a specified fixed value.
- Entering an initial value and incrementing it by a specified percentage.
- Entering a single value and allocating it in equal amounts across the remaining periods.
- Entering a single value and having it allocated based on a seasonal index across all periods. To use this facility, the cursor must be located in the first monthly column within Monthly Assumption Reports Nos. 1 to 4.

These facilities can only operate inside the boxed-in rectangular assumption areas within the monthly and quarterly assumption reports.

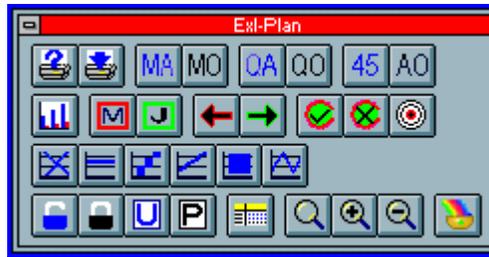
## 5.7. Exl-Plan's Toolbar

When Exl-Plan loads, it automatically loads its own toolbar along with Excel's standard bar. This may cause the message "Exl-Plan is resetting toolbars, please wait a minute or so" to display during loading.

If all Exl-Plan's toolbar buttons cannot be displayed across the top of the screen (due to the screen display), the toolbar can be dragged onto the worksheet to become a rectangular-shaped floating toolbar.

**The buttons on Exl-Plan's toolbar should never be modified or re-positioned. Do not rename an Exl-Plan file using FileMgr or Explorer as this will cause the file to 'lose' all references to its toolbar. Instead, use Excel to load the file and then save it with the desired new name.**

See List of Toolbar Buttons near the front of the manual for details. To see a button's hint, slide the mouse pointer slowly over the button.



If more than one copy of Exl-Plan is loaded at any one time, there will be a delay during loading while Exl-Plan's toolbar is reset for the second copy. Once loaded, the toolbars will automatically maintain their focus on the active window. If, for any reason, the Exl-Plan toolbar does not appear when accessing a report, use **\*Setup | Reset Toolbar Buttons**.

If a copy of Exl-Plan is loaded, after having run a copy of Exl-Plan with the same file name but located within a different folder, the tool bar buttons may not work. The solution is to save the loaded file with a new name, close it and then reload it.

If Exl-Plan 'hangs' or freezes during loading while trying to reset its toolbar, refer to the accompanying README.DOC file for directions.

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### 5.8. Reset All Rows/Columns

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The menu option **\*Setup | Reset All Rows/Columns** only needs to be used if a printer fault prevents Exl-Plan from automatically unhiding all the rows and columns which may have been temporarily hidden during print operations.

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### 5.9. Freezing Titles

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The Freeze Report Titles option within the **\*Setup** menu (also accessible via a toolbar button) is a handy way to simultaneously lock the titles and variable descriptions for each report and to automatically move the cursor to the top left corner of each worksheet.



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### 5.10. Changing View of Reports

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The Change View of Reports option within the **\*Setup** menu allows a users to globally toggle on/off the display of the formula bar, gridlines and row/column headers. This works on all worksheets excluding those for charts, Quik-Plan etc.

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## 6. Using Exl-Plan

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### 6.1. Introduction

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Exl-Plan is licensed for use on one computer or at one network node belonging to the organization/individual named on the front worksheet. However, a registered user is permitted to use a single registered copy of Exl-Plan on a desktop PC and, exclusively, on their own Notebook computer.

Licenses for multiple copies of Exl-Plan are available from Invest-Tech. DO NOT copy Exl-Plan for unlicensed users or sites, associated organizations, clients, customers, etc. This is expressly prohibited and could result in prosecution. DO NOT alter the contents of the front worksheet or modules under any circumstances. Use of Exl-Plan indicates acceptance of these terms and conditions. For details, see License Agreement near front of the manual.

This section is relevant to all new users. It offers general advice on using Exl-Plan (6.2 Starting to Use Exl-Plan) and explains how to use it to prepare financial projections for different types of businesses (6.3 Structuring a Model). It also discusses the following:

- Using Quik-Plan (Section 6.4)
- General model-building procedure (Section 6.5)
- Avoiding calculation errors (Section 6.6)
- Doing sensitivity analyses (Section 6.7).

It also describes several planning tools incorporated in Exl-Plan Super, Super Plus, Ultra & Ultra Plus:

- Reviewing 'what-if' analyses (Section 6.8)
- Planning improved profitability (Section 6.9)
- Making short-term cash projections (Section 6.10)
- Updating first-year projections (Section 6.11)
- Analyzing long-term performance (Section 6.12)

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### 6.2. Starting to Use Exl-Plan

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The sections below explain how to erase existing values from Exl-Plan and approaches to gathering assumptions for inclusion in Exl-Plan:

#### 6.2.1. Erasing Existing Values

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**Rows not needed in Assumption Reports MUST NOT be deleted.** Instead, they should be left empty or with zero values. Depending on Excel's set-up, zeros may appear as empty spaces. Note that Exl-Plan offers the option to suppress the printing of unused rows in output reports (**\*Setup | No Empty Rows Printed**). Use can also be made of Excel's outlining facilities to hide unused rows within Exl-Plan.

To ensure that formulae etc. are not accidentally erased, regularly check that **\*Protection | Protect All Worksheets** is enabled. To remove protection from a single report, use **\*Protection | Unprotect This**

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**Worksheet** or its corresponding button. To remove protection from an assumption range, use **\*Protection | Unlock Range** or its corresponding button.



To erase assumption values within an unlocked range (blue numbers within the rectangular areas bounded by lines), use the DEL key, or select the range of assumptions to be deleted and use either **\*Assumptions | Clear Assumptions** or the corresponding unlock button.

To simultaneously erase all monthly and/or quarterly assumptions, use the **\*Setup | Clear All Assumption Reports** or **Clear Current Assumption Report** menu commands. Note that these commands ignore (a) locked assumption values within assumption reports, (b) formulae<sup>2</sup> (either locked or unlocked) within these reports and (c) text (either locked or unlocked) within these reports. As this approach could lead to a failure to clear all assumptions, Exl-Plan automatically tests whether all assumptions have been successfully removed. *A warning message will be issued if it finds that any assumption values have not been removed.*

At this point, it may be worthwhile creating a copy of Exl-Plan with its assumptions removed as a template file (\*.XLT) in the Exl-Plan subdirectory (with Windows 3.1). If using Excel 7 or higher with Windows 95/98/NT/2000/XP, save the template in Microsoft Office's Templates\Spreadsheet Solutions folder. Refer to Excel's Online Help for guidance on creating and using templates.

### 6.2.2. Gathering & Entering Assumptions

Note that a user's assumptions are entered directly into Monthly, Quarterly & 4<sup>th</sup>/5<sup>th</sup> Year Assumption Reports only. Output Reports contain extensive formulae which generate the projections. The only exceptions are the prior year income statement in the Monthly Income Statements and the opening balance sheet in Monthly Balance Sheets which must be entered directly into these reports.

When starting to prepare a new set of financial projections for a business, there are likely to be some significant gaps in the information needed to plan effectively. It may be necessary to review historic accounts and budgets to derive basic cost or sales data; to conduct research and analyses of markets; to identify alternative strategies or scenarios; to make manpower projections; to consider funding issues etc.

Exl-Plan can assist this process by helping to pose the right questions and providing feedback on the financial implications of possible outcomes. However, bear in mind that, ultimately, Exl-Plan is only a high-powered calculating and printing system and that its output will only be as sound as the underlying assumptions. *Refer to Section 2.5 Pitfalls & Dangers for advice on preparing projections.*

On the first occasion that Exl-Plan is used to produce *real* projections for a business, curtail the detail of monthly assumptions relating to sales, expenses etc. and concentrate initially on producing summarized monthly income statements for the first year.

For example, start by entering just single rows of assumptions for sales and use only a few rows for *high-level* direct and overhead expenses etc. As all other sales, cost and overhead assumptions will have been previously set to zero, the range of assumptions will be manageable and it should be straight-forward to follow these through the various formulae and reports. Review the initial results and then progressively add greater detail. *A printout of Monthly Assumption Reports with all assumptions erased can be a very useful aid to collecting assumption data.*

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<sup>2</sup> These formulae could be entered by the user to link into values in other worksheets e.g. like =xxx!sum(xxxx), or they could be simple arithmetic formulae like =2\*3/4.

### 6.3. Structuring a Model

Exl-Plan can be structured to suit manufacturing, distribution or service businesses. Guidelines on using Exl-Plan to suit different types of businesses are contained in Appendix 3 - Adapting Exl-Plan to Different Business Types.

For new users, the best approach is to start using Exl-Plan exactly as supplied and then to make progressive changes according as experience is acquired and needs become clearer. *Refer to Section 7.2 Making Simple Changes for guidance on making very simple but highly effective modifications to Exl-Plan.*

For most users, it is not practicable to alter the layout of Exl-Plan's reports by moving or radically changing rows etc. Instead, where special reports are required for presentation purposes or to conform to in-house layouts, the simplest solution is to create separate specially-created reports immediately below the supplied reports. See Section 7.2.6 Changing Report Layouts for detailed guidance.

Provided that their meanings remain consistent with the formulae built into Exl-Plan, variable descriptions in column A of many worksheet reports can be readily changed to suit a particular business's terminology.

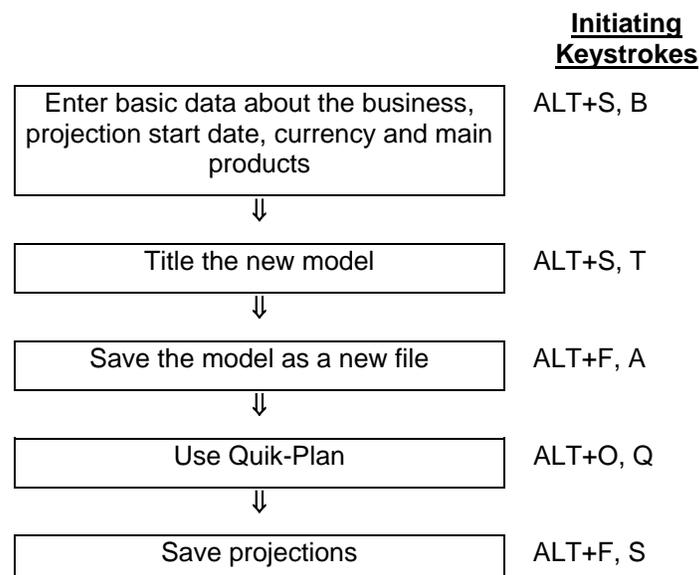
If substantial changes must be made to Exl-Plan and only limited spreadsheet expertise is available, it may be desirable to contact Invest-Tech about undertaking this work - see Section 8.2 Model Development Services.

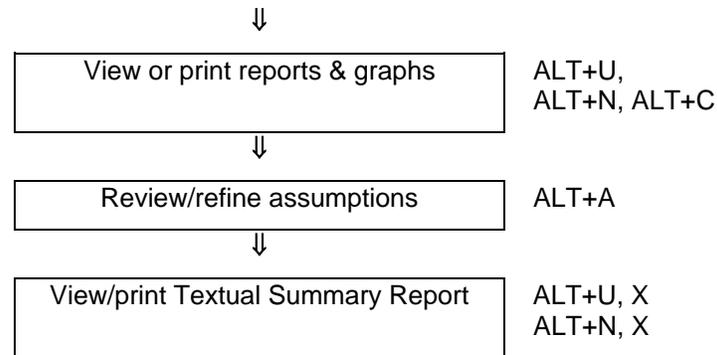
### 6.4. Using Quik-Plan

Quik-Plan is a unique facility within Exl-Plan for (a) producing simple *quick and dirty* projections for three years (five years with Pro, Super, Super Plus, Ultra & Ultra Plus versions of Exl-Plan) or (b) generating *first-cut* forecasts which can be refined and fine-tuned from within the Monthly and Quarterly Assumption Reports.

The entire process of producing financial projections is remarkably fast if Quik-Plan is used to generate the projections and these are subsequently printed in summary form via the Textual Summary Report. This approach could be particularly useful to professional advisers, banks and other organizations providing *front-line* support to new and small enterprises.

#### 6.4.1. Outline Procedure for using Quik-Plan





### 6.4.2. Procedure for setting up Exl-Plan prior to using Quik-Plan

To get started with Quik-Plan, load Excel and open an existing Exl-Plan file (e.g. a copy of WORKPLAN.XLS). Immediately, save this file with a new file name and then undertake the following preparatory tasks:

1. Enter basic information about the business via the Basic Information dialog (**\*Setup | Enter Basic Model Info**) as follows:
  - Enter the business's (not the software licensee's) name;
  - Indicate whether the business is a corporation or sole trader/partnership;
  - Specify the year relating to the first month to be covered by the projections;
  - Select the first month to be covered by the projections;
  - Specify the currency symbol to be used throughout the model (preferably use a single character such as \$, £ etc.);
  - Indicate the primary currency denomination (units, 000s, Mln or Bn) to be used;

- Describe the main sales groups<sup>3</sup> most appropriate to the business. Not applicable to the Micro version.
- 2. After pressing Done, this data will be automatically entered throughout the model and the appropriate months and years will be entered in all report headings, graph titles etc.
- 3. Give the new model a title, for example *First Attempt*, using **\*Setup | Enter Model Title**. This title will be inserted automatically in the footer of each printed report.

### 6.4.3. Procedure for Using Quik-Plan

As the procedure for using Quik-Plan is virtually self-explanatory, the following guidelines are intended to serve only as a general introduction:

1. To access Quik-Plan, select the QUIK tab or **\*Tools | Quik-Plan**.
2. Use the displayed button to clear any existing values in the Quik-Plan Assumptions Report.
3. Enter assumptions. Refer to Appendix 4 - How Quik-Plan Handles Assumptions to see how Quik-Plan handles these assumptions and makes additional assumptions to complete the projections.
4. Once assumption values have been entered into the Quik-Plan Assumptions Report, press *Run Quik-Plan* and wait a minute or two while Exl-Plan removes all existing assumptions from the Monthly and Quarterly Assumption Reports; inserts the Quik-Plan assumptions; adds its own assumptions; undertakes several recalculations; and updates the output reports. Note that Quik-Plan will abort this process if it detects any pre-existing assumption values within Monthly and Quarterly Assumption Reports that could not be cleared (see Section 6.2.1 Erasing Existing Values).
5. Make a backup copy using the **File | Save with Backup** menu command.

This completes the Quik-Plan process and a full set of projections, including a balanced opening balance sheet, will have been compiled for three years (for Micro & Lite) or five years (for Pro, Super, Super Plus, Ultra & Ultra Plus). Graphs and reports showing all the detailed projections can be viewed or printed. For a quick synopsis of the projections, go to the Summary & Diagnosis Report (**\*Output | Summary**) or refer to the Textual Summary Report (**\*Output | Textual**).

Assumptions introduced by means of Quik-Plan can be changed or expanded within the Monthly & Quarterly Assumption Reports. For guidance on this, go to Entering Monthly Assumptions within Section 6.5.4.

## 6.5. Model-Building Procedure

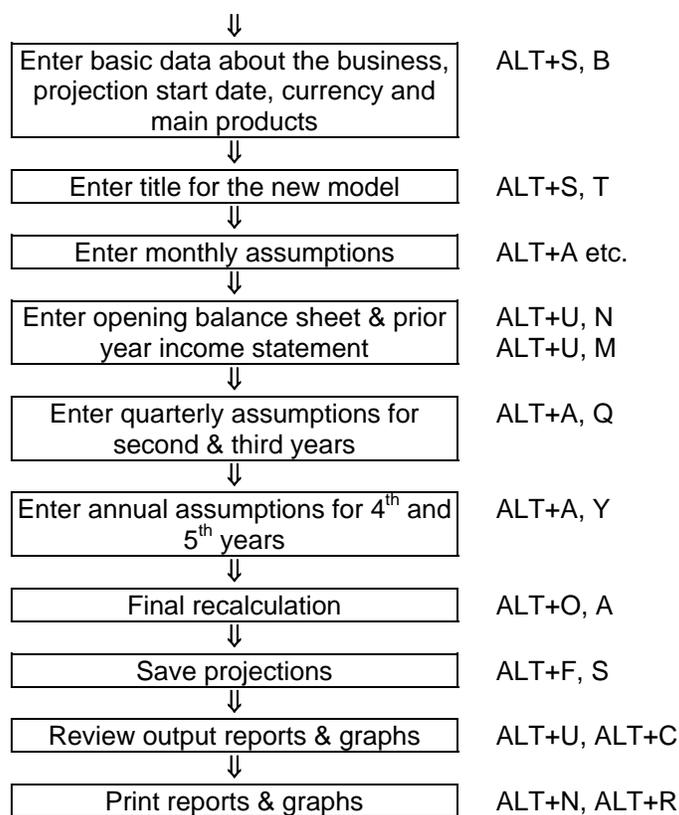
The procedures for using Exl-Plan to make projections for a particular business are summarized in Section 6.5.1 and explained in detail in Section 6.5.2.

### 6.5.1. Summary of Procedure for Generating Projections

Remove all existing assumptions

**Initiating  
Keystrokes**  
ALT+S, L

<sup>3</sup> These can relate to major product categories, market segments, customer groups, different input/output tax (sales taxes, GST, VAT etc.) rate categories etc. Select definitions that are most relevant from the perspective of forecasting sales, material costs, credit terms etc. Detailed sales forecasts can be entered for user-definable subgroups within each main group.



### 6.5.2. Detailed Guidance on using Exl-Plan to Generate Projections

To use Exl-Plan to make projections for a particular business, proceed as described in this four-step procedure:

- Set up Exl-Plan
- Enter Monthly Assumptions
- Enter Prior Year Income Statement & Opening Balance Sheet
- Complete the Projections

Note that calculation errors should be ignored until the procedure for Entering Prior Year Income Statement & Opening Balance Sheet has been completed.

Regularly use **File | Save with Backup** to make file copies when building a model. In addition to saving the current file, make copies using incrementing file names e.g. ABC-1.XLS, ABC-2.XLS and so on. This will help ensure that if a serious error arises within a model, it will always be possible to revert to an earlier error-free version.

### 6.5.3. Setting up Exl-Plan

1. Load WORKPLAN.XLS and immediately re-save it using an appropriate new file name e.g. as XYZ-1.XLS.
2. Decide how Exl-Plan's main sales groups should be utilized. These could refer to major product categories, market segments, customer types etc.

3. Enter basic information about the business via the Basic Information dialog (**\*Setup | Enter Basic Model Info**) as follows:

- Enter the business's (not the software licensee's) name;
  - Indicate whether the business is a corporation or sole trader/partnership;
  - Specify the year relating to the first month to be covered by the projections;
  - Select the first month to be covered by the projections;
  - Specify the currency symbol to be used throughout the model (preferably use a single character such as \$, £ etc.);
  - Indicate the primary currency denomination (units, 000s, Mln or Bn) to be used;
  - Describe the main sales groups<sup>4</sup> most appropriate to the business. Not applicable to Micro.
4. After pressing Done, this data will be automatically entered throughout the model and the appropriate months and years will be entered into all report headings, graph titles etc. If using multiple currencies, empty rows below assumption reports can be used to handle mixed currencies and their conversion into the model's base currency (refer to Section 7.2 Making Simple Changes to Exl-Plan).
5. Give the new model a title, for example *First Attempt*, using **\*Setup | Enter Model Title**. This will be inserted automatically in the footer of each printed report.
6. Use the **\*Setup | Clear All Assumption Reports** menu command to remove all unprotected assumption values throughout the model. Exl-Plan will advise if it detects any assumptions that could not be automatically cleared (see Section 6.2.1 Erasing Existing Values for further information).

<sup>4</sup> These can relate to major product categories, market segments, customer groups, different input/output tax (sales taxes, GST, VAT etc.) rate categories etc. Select definitions that are most relevant from the perspective of forecasting sales, material costs, credit terms etc. Detailed sales forecasts can be entered for user-definable subgroups within each main group.

### 6.5.4. Entering Monthly Assumptions

1. Use the **\*Assumptions | Monthly - Sales** menu command to go to Monthly Assumption Report No. 1 for Sales & Finished Goods Inventory Targets.
2. Enter monthly assumptions in this report and then work through the remaining Monthly Assumption Reports. Concentrate initially on entering approximate or *high-level* values with a view to refining them once a full picture starts to emerge. For further assistance, refer to Appendix 5 - Guidance on Entering Assumptions and the Glossary of Terms. Make use of Exl-Plan's special facilities for entering constant and variable monthly values (**\*Assumptions | Constant Assumptions** etc.) and their toolbar buttons. Save the file frequently and make regular back-up copies.
3. Explanatory notes can be added to individual assumptions using Excel 5's **Insert | Note** facility or **Insert | Comment** in Excel 97 or higher.
4. Use blank rows below Monthly Assumption Reports to build up detailed schedules, lists etc. and then use simple cell referencing to plug their total values into the appropriate assumption areas (see Section 7.2.3 Plugging New Variables into an Existing Variable for further information on this technique).
5. Note that calculation errors may be indicated whenever the model recalculates using the **\*Tools | Calculate All & Check** menu command or the "C" button. These can be safely ignored until all the monthly assumptions and opening balance sheet data have been entered.

### 6.5.5. Entering Prior Year Income Statement & Opening Balance Sheet

1. If desired, enter a summary of the prior year's income statement. Use the **\*Output | Monthly - Income Statements** menu command to access the Monthly Income Statements, go to column F which is reserved for last/latest year's actual or anticipated income statement results and enter values in the unlocked (boxed-in) cells.
2. Enter the outstanding data in unlocked (boxed-in) cells for the opening balance sheet (**\*Output | Monthly - Balances**). If using Exl-Plan Pro, Super, Super Plus, Ultra or Ultra Plus, note that:
  - Values for fixed assets and accumulated depreciation within the opening monthly balance sheet are picked up from entries in column F in Monthly Assumption Report No. 5.
  - Values for total opening finished goods and material inventories are secured from column F in Monthly Assumption Reports Nos. 1 and 2 respectively.

Monthly Assumption Report No. 7 should be used to phase out the opening balances for certain items that appear in the opening balance sheet. If the totals being phased out differ from the opening balances, Exl-Plan will report an error whenever it recalculates using the **\*Tools | Calculate All & Check** menu command. If this happens, return to Report No. 7 and revise the assumption values in rows showing ERR instead of arrows in column B so that their total equates to the indicated opening value.

After entering all the necessary opening values, press F9 (or the crossed "C" button) and make sure the opening balance sheet is balanced by viewing the row for *CHECK balance sheets balance* immediately below the opening balance sheet. If this does not show a zero opening balance, review values entered for the opening balance sheet.

3. Once the opening balance sheet balances, use the **\*Tools | Calculate All & Check** menu command to calculate and ensure that no calculation errors arise (see Section 6.6 Avoiding Calculation Errors). Note that Exl-Plan's error trapping system only works when the **\*Tools | Calculate All & Check** menu command or the "C" button are used to recalculate.

### 6.5.6. Completing the Projections

1. Re-save the file and make a further back-up copy.

Initial 12-month and first-year projections have now been completed and the appropriate reports and graphs can be viewed on the screen or printed. Monthly assumptions can be fine-tuned and the resultant projections can be subjected to critical examination to determine their veracity etc. Be watchful for the following:

- Undesired blips in the cashflow projections arising from unsound assumptions about the phasing out of opening accounts receivable and payable (see Notes 1 and 2 in the Monthly Cashflow Projections).
  - Data-entry errors like entering 300 instead of 3,000.
  - Negative or excessively low/high production requirements arising from unrealistic changes in inventory levels. (Pro, Super, Super Plus, Ultra & Ultra Plus versions.)
  - Unplanned surges in finished goods inventory. (Pro, Super, Super Plus, Ultra & Ultra Plus versions.)
2. Finish all the monthly projections before starting to enter quarterly assumptions. Use the two Quarterly Assumption Reports to prepare projections for the second and third years (**\*Assumptions | Quarterly**). Refer to the calculated values for the first four quarters for guidance when entering assumptions for the subsequent quarters. Use Exl-Plan's calculation & check menu command (**\*Tools | Calculate All & Check**) to recalculate and ensure that no calculation errors arise.
  3. For Exl-Plan Pro, Super & Super Plus, go to the 4th-5th Year Assumptions Report (**\*Assumptions | 4-5th Year Assumptions**). Add annual assumptions for the fourth and fifth years using the calculated values for the second and third years as guides. Select **\*Tools | Calculate All & Check** to recalculate and ensure that no calculation errors arise. In the case of Ultra & Ultra Plus, the entry of assumptions and generation of projections for sixth-seventh years is optional. If Exl-Plan detects zero growth in sales for these years, it will automatically suppress the printing of columns for the sixth-seventh years in its output reports.
  4. Save the updated model and make a back up with a new file name.

This completes the procedure for building a multi-year model. At this stage, assumptions can be further refined or Exl-Plan's sensitivity-analysis facility can be used to explore alternative scenarios (See Section 6.7 Sensitivity Analysis). In the case of Exl-Plan Super, Super Plus, Ultra and Ultra Plus, additional planning tools can be utilized:

- Reviewing 'what-if' analyses (See Section 6.8 What-If Analysis for First-Year Projections)
- Planning improved profitability (See Section 6.9 Profitability Planner)
- Making short-term cash projections (See Section 6.10 Short-Term Cashflow Projections & Chart)
- Updating first-year projections (See Section 6.11 Trading Performance Tracker Report & Charts)
- Analyzing long-term performance (See Section 6.12 Long-Term Trend Analysis & Charts).

## 6.6. Avoiding Calculation Errors

When using Exl-Plan, it is important to ensure that no calculation errors arise; that its sub-models produce identical results; and that no imbalances occur in the opening or projected balance sheets. When using Exl-Plan Pro, Super, Super Plus, Ultra & Ultra Plus, a temporary imbalance will always occur in the opening

balance sheet until all values have been entered in the Monthly Assumption Reports as well as in the opening balance sheet.

Because Exl-Plan does not use floating values to balance its balance sheets, it is very sensitive to formulae errors and consequently all structural changes to the model must be applied correctly. For example, if an additional monthly cashflow-related item is introduced into the model as an assumption row, changes may be needed in the monthly income statement, cashflow and balance sheet output reports as well as in their corresponding first-year output reports. In addition, corresponding changes may also be required in all the quarterly and annual output reports. For further guidance, see Section 7.3 Making Complex Changes.



Exl-Plan displays *on-screen* messages when it detects calculation errors when the **\*Tools | Calculate All & Check** menu command or "C" button are used. These messages, detailed in Appendix 6 - Calculation Error Messages, cover the most likely error situations. In addition, Exl-Plan opens a help procedure window describing the detected error and explaining how it can be resolved. This facility can be turned on and off using **\*Setup | Toggle Help for Calculation Errors**.

The following general procedure should help locate and eliminate errors:

1. Scan the rows showing *CHECK balance sheets balance* immediately below the Monthly and Quarterly Balance Sheets for imbalances. Make sure that the opening balance sheet balances correctly. If it does not show a zero opening balance at the third decimal place, review all the values entered for the opening balance sheet.
2. Check the right-hand column of the Check Balances Report in the CHECK worksheet (**\*Output | Check**) for any differences between the key values computed by Exl-Plan's four sub-models.
3. Examine Monthly Assumption Report No. 7 for errors and revise the assumption values in rows showing ERR instead of arrows in column B.
4. If necessary, save the model with a new file name. Then, locate the source of the error by progressively removing all assumption values and recalculating using the **\*Tools | Calculate All & Check** menu command or "C" button.
5. If the error cannot be located or easily fixed, the best option may be to revert to an error-free backup copy of the model.

### 6.7. Doing Sensitivity Analyses

Once base assumptions have been entered into an Exl-Plan model, these can be readily altered to explore alternative scenarios.. In addition, Excel's Scenario Manager can be used to maintain multiple scenarios. The most significant changes are likely to cover the following:

- Changes in sales volumes. To apply these change, it will be necessary to modify other direct costs. For example, direct costs might need to be increased to accommodate a sales volume increase. It might also be necessary to revise projected inventory levels.
- Changes in sales prices. If the effect of increasing selling prices is being explored, it may be necessary to reduce the material cost percentages in Monthly Assumption Report No. 2 to offset the increased sales due to higher prices. Unless this is done, material costs will rise in line with increased sales.
- Changes in materials/packaging costs. These changes can be applied by altering the material cost percentages and, possibly, inventory levels.
- Changes in overhead expenses

Exl-Plan Pro, Super, Super Plus, Ultra & Ultra Plus incorporates a powerful sensitivity-analysis facility which enables a user to temporarily override existing assumptions and to make global changes to the following key variables on a month-by-month basis in the first year and quarterly for the following years:

- Sales volumes
- Sales prices
- Materials/packaging costs
- Overhead Expenses

To carry out global sensitivity analysis, the procedure is as follows:

1. Access the Sensitivity Analysis Factors Report in the SENS worksheet (**\*Tools | Sensitivity Analysis**). Insert values for the appropriate months and/or quarters expressed as percentage increases/decreases for sales volumes, selling prices, material costs and/or overhead expenses.
2. Press *Recalculate & Check*. When undertaking sensitivity-analysis calculations, Exl-Plan makes selective adjustments throughout the Monthly and First-year sub-models as well as in the Quarterly and Annual sub-models. As a consequence, some values in the Monthly and Quarterly Assumption Reports may not sum correctly or be reconcilable with the original assumptions used. For example, total monthly sales may have changed in Monthly Assumption Report No. 1 but the underlying sales volumes and prices remain unaltered.
3. To revert to the initial position, remove all the values in the Sensitivity Analysis Factors Report by pressing *Zeroise Factors*.

Exl-Plan will indicate if sensitivity analysis is in operation whenever the **\*Tools | Calculate All & Check** menu command or "C" button are used.

Generally, the sensitivity-analysis factors modify assumptions in exactly the same way as could be achieved by altering every single one of the underlying relevant assumptions directly. For example, if monthly sales volumes are increased by a specified percentage using its sensitivity factor, sales turnover would be increased by the same percentage as would be inventory levels, materials/goods purchases, direct costs (including direct labor), receipts/payments relating to input/output taxes (sales taxes, GST, VAT etc.), accounts receivable/payable levels etc. In contrast, an increase in selling prices would only increase sales turnover, input/output tax receipts and accounts receivable while leaving costs, inventory and accounts payable all unchanged.

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### 6.8. Viewing What-If Analyses

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Once first-year projections have been completed, Exl-Plan Super, Super Plus, Ultra & Ultra Plus automatically generates 'what-if' tables which show the impact on projected first-year profitability of incremental changes in (i) sales volumes and/or selling prices and (ii) cost of sales and/or overhead expenses.

Access the What-If Analysis via the WHAT-IF worksheet (**\*Tools | What-If Analysis**). Observe that it incorporates some dynamically-linked interpretations of what-if analyses.

Any changes to underlying monthly assumptions are immediately reflected in the 'what-if' tables as soon as Exl-Plan recalculates (**\*Tools | Calculate All & Check**).

## 6.9. Planning Better Profitability

The Profitability Planner in the PROFIT worksheet (**\*Tools | Profit Planner**) within Exl-Plan Super, Super Plus, Ultra & Ultra Plus comprises a DuPont-type profitability chart derived from the first-year projections. It focuses on Return on Total Assets (net income before taxes as % total assets) as the prime measure of profit and shows graphically how this index is derived from first-year assumptions and forecasts.

This Planner also allows a user to explore the impact of specific changes in key variables and assumptions on overall first-year profitability.

The procedure for using this facility is as follows:

1. Compile preliminary first-year projections using either Quik-Plan or, preferably, by entering detailed assumptions into the Monthly Assumption Reports.
2. Press the Update Values button on the PROFIT worksheet to copy projected values (located in the upper cells of boxes) for each variable down one row into the yellow-colored unprotected cells. These values are derived by formulae from the first-year and monthly projections.
3. Change values within the yellow-colored, unprotected cells individually (or in combinations to take account of interactions). Examples:
  - An increase in selling prices might require a corresponding increase in debtors as well as possible reductions in sales volumes leading to lower cost of sales and reduced creditors. Values in the yellow-colored cells must be changed manually and one-by-one to reflect management's assessments of the possible consequences of increased in prices.
  - A substantial increase in sales volumes could entail a higher cost of sales and might also need additional fixed assets as well as higher debtor, creditor & stock levels and possibly increased overhead expenses.
4. Press the Recalculate Ratios button on the PROFIT worksheet to update the profitability projections shown in the uncolored, lower cells of boxes.

Once a creditable and more profitable scenario has been formulated, the underlying monthly assumptions can be revised in detail to produce updated, integrated projections.

## 6.10. Making Short-Term Cash Projections

Once first-year projections have been compiled using Exl-Plan Super, Super Plus, Ultra & Ultra Plus, monthly cashflow projections for the first three months of the first-year can be expanded into approximate weekly projections using the CASH worksheet (**\*Tools | Short-Term Cashflow**).

This process entails estimation of the percentage weekly distribution of the monthly cashflows. For example, in a non-cash business, receipts of payables often peak during the first week or two of a month while payments of receivables may be concentrated towards the month end. This pattern can be reflected by setting the percentage distributions for each cashflow item (row) within the unprotected (cream) areas of the CASH worksheet.

To clear existing percentage values, locate the cursor within the CASH worksheet and use **\*Setup | Clear Current Assumption Report**.

To update values in the CASH worksheet, use **\*Tools | Calculate Sheet**, or **\*Tools | Calculate All & Check**, or the corresponding toolbar buttons. Note that the total percentage distribution for each item (row) must equate to either 100% or 0% otherwise an error will be indicated on the worksheet when it recalculates.

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## **6.11. Tracking Trading Performance**

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This facility is located at the TRACK worksheet (**\*Tools | Performance Tracker**) within Exl-Plan Super, Super Plus, Ultra & Ultra Plus. It allows a user to produce updated first-year projections of sales and profitability by combining year-to-date actuals with projections for the remaining months of the year. It focuses on strategic items and is not intended to serve as a detailed performance analyzer (see Section 7.4 Extending Exl-Plan for procedures to expand Exl-Plan). Once projections have been compiled, TRACK can be used to help identify significant variations in performance and to prompt the updating of plans and projections so that necessary actions are initiated in good time.

Pre-formatted charts highlight any deviations in sales forecasts for each main sales group and present updated projections combining year-to-date actuals with projections for remaining months of the year.

This facility provides feedback on the accuracy of key projections and can be used to trigger a review of projections and their underlying assumptions. This can be done within Exl-Plan as indicated in the following example:

Assume that, after trading for the first five months of the current financial year, cumulative sales are running 10% below projected. By using TRACK to combine year-to-date actual sales with the original projections for the remaining seven months of the year, a quick forecast of the likely full-year outcome can be secured.

However, this forecast could be erroneous as there is no guarantee that future sales will pick up suddenly (by 10%) and match the projections originally made for the final seven months of the year. In these circumstances a revision of the monthly projections could be called for. In the first instance, this could be done quickly using Exl-Plan's monthly sensitivity analysis to depress sales volumes or prices for the outstanding months and generate updated full-year forecasts.

Depending on the degree of divergence between actuals and projected, a complete review of assumptions and projections might be justified and this could result in a completely new set of projections of trading performance and cashflow. In the example above, these should be started at the sixth month of the financial year rather than at the first month.

The procedure for using the tracking facility is as follows:

1. Compile and finalize first-year projections by entering assumptions throughout the Monthly Assumption Reports.
2. To clear any existing historic values, locate the cursor within the TRACK worksheet and use **\*Setup | Clear Current Assumption Report**.
3. Enter actuals for each completed month within unprotected (cream) areas of the TRACK worksheet for the main sales groups, gross profit, overhead expenses and net income before taxes.
4. Update the TRACK worksheet using **\*Tools | Calculate Sheet**, or **\*Tools | Calculate All & Check**, or the corresponding toolbar buttons.

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## **6.12. Analyzing Long-Term Performance**

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This facility is located at the TRENDS worksheet (**\*Tools | Long-Term Trends**) of Exl-Plan Super, Super Plus, Ultra & Ultra Plus. It allows an established business to compile tables which combine actuals for the past five years with projections for the next five and to generate ratios and performance measures for up to ten years.

Once the TRENDS worksheet has been updated, the resultant ratios and charts can be reviewed to identify any significant fluctuations in performance and to assess the realism of projections by reference to historic performance.

To use this facility, proceed as follows:

1. Compile preliminary five-year projections using either Quik-Plan or, preferably, by entering assumptions in the Monthly, Quarterly & Annual Assumption Reports and by inserting values for the prior-year income statement in the M\_IS worksheet and opening balance sheet within M\_BS.
2. To clear any existing actual values, locate the cursor within the TRENDS worksheet and use **\*Setup | Clear Current Assumption Report**.
3. Enter historic income and balance sheet values for one or more years. Note that the cells within the range B3 to E4 are unprotected to allow historic year numbers and month numbers to be manually inserted.
4. Update the TRENDS worksheet using **\*Tools | Calculate Sheet**, or **\*Tools | Calculate All & Check**, or the corresponding toolbar buttons.

Once the TRENDS worksheet has been updated, the resultant ratios and charts can be reviewed to identify any identify significant fluctuations in performance and to assess the realism of projections by reference to historic performance.

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## 7. Changing Exl-Plan

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### 7.1. Introduction

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Whilst many users will use Exl-Plan exactly as supplied, others may wish to take advantage of their Excel expertise to tailor or extend it to meet specific requirements.

Sections 7.2 and 7.3 guide users on making simple and complex changes to Exl-Plan respectively and Section 7.4 describes how Exl-Plan can be extended to provide additional facilities for planning and managing a business.

Some general advice:

- Never delete or alter the supplied range or worksheet names or interfere with the macros supplied with Exl-Plan.
- When starting to change an Exl-Plan model, always work off a **copy** of an error-free version.
- Whenever a model has been changed or extended, always **fully test** it to ensure that the changes work as intended and have no undesirable knock-on consequences.
- When making large-scale changes, use **\*Protection | Unprotect All Worksheets** to disable protection throughout the model, or use **\*Protection | Unprotect This Worksheet** to remove protection from the current report.
- **\*Protection | Unlock Range** can be used to unlock a selected range.
- Having removed protection to make changes within a workbook, **always restore protection** as soon as practicable.

It may be worthwhile saving a modified version of Exl-Plan as a template file (\*.XLT) in the Exl-Plan subdirectory (with Windows 3.1). If using Excel 7 or higher with Windows 95/98/NT/2000/XP, save the template in Microsoft Office's Templates\ Spreadsheet Solutions folder. Refer to Excel's Online Help for guidance on creating and using templates

**Users should never alter Exl-Plan's toolbar, buttons, dialog boxes, macro modules, range names or worksheet names. If these are altered in any way, either by accident or design, Invest-Tech cannot accept any responsibility for support or give support in the restoration of a modified file. It is the responsibility of the user to ensure that a fully intact copy of Exl-Plan is always available as a backup or fall back.**

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### 7.2. Making Simple Changes

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This section explains how simple but **highly effective** changes can be made to Exl-Plan by users with only minimal expertise with Excel:

- 7.2.1 Changing the name of an existing variable
- 7.2.2 Entering new assumption rows
- 7.2.3 Plugging new variables into an existing variable
- 7.2.4 Extending the Power of Plugging In
- 7.2.5 Using formulae instead of values

## 7.2.6 Changing report layouts

## 7.2.7 Combining simple changes.

Note that the **\*Setup | Clear All Assumption Reports** or **Clear Current Assumption Report** menu commands only remove assumption values in unlocked cells within assumption reports. To use this facility after adding new assumption rows or new blocks of assumption values, the newly added cells must be unlocked (using the **\*Protection | Unlock Range** option or the unlock button) to enable their assumption values to be cleared by the foregoing commands.

### 7.2.1. Changing the Name of an Existing Variable

To change the name (but not the underlying context) of a locked variable, e.g. to replace the description of an expense item in the Monthly Assumption Report for Overhead Expenses, follow the procedure below.

1. Get into the M\_O worksheet.
2. Go to the cell in question; unlock it (**\*Protection | Unlock Range** or unlock button).
3. Make the desired change.
4. Lock the cell again (**\*Protection | Lock Range** or lock button).

Repeat this procedure if the original description appears in any of the output reports and is not updated automatically using built-in formulae.

### 7.2.2. Entering New Assumption Rows

It is a simple matter to insert new rows for assumptions within the existing boxed-in areas for accommodating assumptions. To ensure that the values in new rows are always embraced by SUM formulae etc., for the boxed-in area, do NOT insert new rows as replacement top or bottom rows.

| <i>Months:</i> | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 12-<br>Month<br>Totals |
|----------------|----|----|----|----|----|----|----|----|----|----|----|----|------------------------|
| Sales (£000):  |    |    |    |    |    |    |    |    |    |    |    |    |                        |
| - Product A    |    |    |    |    |    |    |    |    |    |    |    |    | fc                     |
| - Product B    |    |    |    |    |    |    |    |    |    |    |    |    | fc                     |
| - Product C    |    |    |    |    |    |    |    |    |    |    |    |    | fc                     |
| - Product D    |    |    |    |    |    |    |    |    |    |    |    |    | fc                     |
| Total sales    | fr                     |

fr =SUM formulae embracing rows

fc = SUM formulae embracing columns

In the example above, new rows should be inserted between Product A and Product D. Note that additional SUM formulae (fc) for the twelve-month totals must be inserted for each new row.

### 7.2.3. Plugging New Variables into an Existing Variable

This involves using empty rows **below** an Assumption Report and then *plugging* their values into an existing row within the Report by entering simple addition or summing formulae in lieu of assumption values. *This is one of the easiest and most powerful changes that can be made to an Exl-Plan model.*

For example, it is desired to expand assumptions relating to monthly sales volumes for a particular sales group to accommodate monthly forecasts for, say, twenty individual products. To do this, follow the procedure below.

1. Go to Monthly Assumption Report No. 1 (M\_S) and turn off protection for its worksheet (**\*Protection | Unprotect This Worksheet**).
2. In empty rows below the Report, add appropriate product description labels for each of the twenty products in column A and then enter monthly sales forecasts in columns G to R (AP for Ultra & Ultra Plus). Unlock these new assumption cells.
3. Within the Assumptions Report, insert SUM formulae in one of the original assumption rows for the sales group to total all the monthly values entered into the new rows.
4. Restore the worksheet's protection (**\*Protection | Protect This Worksheet**).

No other changes are required aside from inserting weighted average selling prices for the expanded main sales group for each month in the appropriate row for *Net selling prices*. If different prices are available for each product, proceed as follows:

1. Add a further twenty rows to accommodate the various monthly prices.
2. Use twenty more rows to calculate total monthly sales for each product.
3. Calculate weighted average prices for each month.
4. Use formulae to *plug* these into the row for *Net selling prices*, which relates to the extended sales group.

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### 7.2.4. Extending the Power of Plugging In

Logical extensions of the use of simple formulae to plug into existing variables within an Exl-Plan model include the following:

- Inserting new worksheets to incorporate very detailed sales projections (for individual products, customers etc.). These could be summarized and *plugged* into the existing main sales groups using SUM formulae.
- Using **Copy & Paste Special | Link** to pull aggregated sales data from another Excel file into the Exl-Plan model.
- Simply copying & pasting values into existing assumption blocks or into specifically designated blocks below assumption reports within Exl-Plan.

The potential to expand Exl-Plan in this way is virtually unlimited. For example, it could be used to incorporate parts explosions, lists of materials, detailed cost analyses, manning levels, capital expenditure schedules and much more. *Very detailed or specialized reports could be created and their total values plugged into the rows and variables supplied with Exl-Plan.*

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### 7.2.5. Using Formulae Instead of Values

By inserting formulae instead of values in assumption rows, it is possible to reduce the number of values to be entered every time the model is altered. For example:

- Formula could be used to determine the production headcount by relating planned production to projected labor output rates, working hours per month etc. As a result, every change in sales or inventory would be automatically reflected in production headcount levels.
- A formula could be used to repeat a constant assumption value entered for the first month in the cells for each subsequent month.

The scope for using formulae is considerable. For example, they could be used to incorporate foreign currency exchange rates, seasonal factors and to determine output or sales on the basis of workdays per month.

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### 7.2.6. Changing Report Layouts

Where special report layouts must be used for presentation purposes or to conform with in-house styles, the simplest solution is to insert additional worksheets containing these new reports laid out exactly as desired and incorporating simple cell reference formulae (e.g. +A10) to link back into cells within existing Exl-Plan reports. This approach completely avoids the need to make any structural changes to Exl-Plan's existing output reports. *The summary monthly output report (M\_SY) and all the first-year and annual reports are examples of this type of easily constructed report.*

Using this approach, it is very simple to construct reports in foreign languages which utilize the same data as the underlying model.

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### 7.2.7. Combining Simple Changes

The changes described above can be readily combined to make very substantial alterations to the supplied model and to turn it into an extremely comprehensive planning tool which combines very detailed projections for the first year with broader strategic forecasts for subsequent years.

A modified version of Exl-Plan can be saved as a template file (\*.XLT) in the Exl-Plan subdirectory. If using Excel 97 or higher, save the template in the Program Files\Microsoft Office\Templates\Spreadsheet Solutions folder.

Note that, provided its integrity has not been compromised as result of modifying any supplied formulae, Exl-Plan's facility for global sensitivity-analysis can be used to temporarily over-ride existing forecasts for sales volumes, sales prices, material costs and overhead expenses without having to manually change all the underlying detailed assumptions.

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## 7.3. Making Complex Changes

The methods described in Section 7.2 Making Simple Changes should be used wherever possible in preference to making any of the following more complex changes:

- 7.3.1 General procedure for complex changes
- 7.3.2 Inserting a new main sales group
- 7.3.3 Inserting an additional monthly expense item
- 7.3.4 Inserting a new balance sheet item
- 7.3.5 Deleting a row
- 7.3.6 Changing intervals and time horizons
- 7.3.7 Changing column widths.

To alter the basic structure, logic etc. of Exl-Plan, proceed on a step-by-step basis with great care to avoid possible knock-on errors etc. For example, if a completely new type of variable needs to be added to a Monthly Assumption Report, it may also be necessary to change several Monthly Output Reports **as well as** all the First-year, Quarterly and Annual Output Reports.

As it can take much more time to test changes than to make them in the first instance, complex changes should only be introduced when adequate time is available to fully test the altered model and to check that existing formulae have not been disrupted. *While Exl-Plan's error-trapping facilities will help locate mathematical errors, they will never detect mistakes created by faulty logic etc.*

Only users who are very familiar with both Exl-Plan and Excel should undertake the structural changes described below. Substantial changes should be made only when strictly necessary and where workarounds based on the simpler solutions described in Section 7.2 Making Simple Changes are likely to be much easier and quicker to implement. Where substantial changes are required, consideration should be given to engaging Invest-Tech to undertake the required modifications (Refer to Section 8.2 Model Development Service).

### 7.3.1. General Procedure for Complex Changes

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Use the Check Balances Report (CHECK) to help identify any errors resulting from changes. Also, refer to the *CHECK balance sheets balance* rows immediately below the Monthly and Quarterly Balance Sheet Reports to locate possible errors. Compare the output of the altered model with that of the original to help locate errors and to check calculations and results. When making any substantial changes to Exl-Plan, always adhere to the general procedure indicated below.

If making changes to formulae in the Quarterly Assumptions Report, bear in mind that completely different formulae are used for each of the **first four quarters**. Accordingly, all changes to these formulae must be done on a cell-by-cell basis.

1. Confirm that the initial model has no calculation errors.
2. Save **and back up** the original model before it is modified and give a new file name to the model that is about to be changed.
3. Think through the planned changes from a financial perspective by assessing their impacts on income statements, cashflows, balance sheets for months, quarters and years ahead and their possible consequences for the model.
4. Complete major changes one at a time.
5. Test each change by using dummy values that can be readily recognized, for example, 1000.
6. Always recalculate using Exl-Plan's **\*Tools | Calculate All & Check** menu command or the "C" button in order to avail of its error-trapping facilities.
7. Eliminate errors as soon as detected and confirm that no calculation or formulae errors exist before starting the next change.
8. Check that the changes give the desired or expected results by experimenting with very large positive (and negative, where appropriate) values.
9. Save the modified version of Exl-Plan as a template file (\*.XLT) in the Exl-Plan subdirectory. If using Excel 97 or higher, save the template in the Program Files\Microsoft Office\Templates\Spreadsheet Solutions folder.

### 7.3.2. Inserting a New Main Sales Group

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Where the supplied main sales groups and their sub-groups are insufficient, an extra main sales group can be added to various assumption and output reports. The procedure is as follows:

1. Insert new rows in the midst of every block of rows used for existing main sales groups within each Monthly and Quarterly Report. This will ensure that values for the new group are automatically embraced by SUM formulae used to total values for the sales groups. When inserting new rows, always sure that they go into the same relative position within each block e.g. always the second one down or second last from the bottom.
2. Specify an appropriate description for the new group and enter assumption values for sales, prices, inventory, labor, materials, input/output taxes (sales taxes, GST, VAT etc.) etc. into all newly-inserted assumption rows.

3. For newly-inserted rows which require formulae instead of assumption values, use Copy & Paste to copy formulae from an adjacent row either downwards or upwards into the new rows.
4. Enter test assumption values, which are easily recognized, check for errors and scrutinize the new rows and all relevant totals for possible errors or anomalies.
5. Check that totals in the First-Year and Annual Reports are correct.

### 7.3.3. Inserting an Additional Monthly Expense Item

To insert an additional monthly expense item (where it is not practical to rename an existing expense item or to *plug* into an existing item), a new row must be inserted for the item in the appropriate Monthly Assumption Report as well as in the Monthly Cashflow Projections.

If, for example, it is essential to insert a new variable within a specific monthly overhead expense category (such as Operational Expenses, Management/Admin Staff Expenses etc.), proceed as indicated below.

1. Go to the Assumption Report for Monthly Overhead Expenses and remove its protection. Insert a new row immediately below an existing variable within the relevant overhead expense category. Enter the new variable's name and monthly values. (If using Exl-Plan Pro, Super, Super Plus, Ultra & Ultra Plus, indicate the expected credit period in column B).
2. Edit the first month's formula for total costs for the overhead expense category to embrace the new row and then copy it across the twelve months. Enter a SUM formula for the full-year total for the new row.
3. Insert a new row in the Monthly Cashflow Projections Report immediately below the row for the pre-existing variable referred to in Point 1 above. Copy all the formulae in this variables row downward into the newly created row.
4. The new expense item may also need to be included in the tax calculation formulae for inputs in Assumption Report No. 8 in the row entitled *Total tax on non-pay expenses*.
5. If the new row relates to an additional employment category, it will be necessary to ensure that related payroll costs are included in the monthly income statements and that the formulae for calculating wages & salaries and payroll taxes/benefits in the Monthly Cashflow Projections are adjusted. Formulae in the Monthly Performance Review Report used to calculate average number of employees would also need to be revised. *Note that formulae for calculating payroll taxes/benefits in the Monthly Cashflow Projections extend from column G to hidden column S.*
6. Finally, it may be necessary to make provision for the new row to be adjusted by the appropriate sensitivity-analysis factor for sales volumes, sales prices, material costs or overhead expenses.

### 7.3.4. Inserting a New Balance Sheet Item

To add a new balance sheet item, additional rows must be inserted in the appropriate Monthly Assumption Reports to accommodate the related assumptions. Additional rows containing formulae will be required in the Monthly and First-year Cashflow Projections and Balance Sheets as well as in some Quarterly and Annual Reports. In addition, it may be necessary to alter formulae in the Monthly, First-Year, Quarterly and Annual Performance Reviews. The new item may also need to be included in the input/output tax (sales taxes, GST, VAT etc.) calculation formulae in Monthly Assumption Report No. 8.

### 7.3.5. Deleting a Row

Delete a row only where strictly necessary as this may require adjustments to numerous formulae in several reports. Instead, consider hiding the row or suppress its printing (using **\*Setup | No Empty Rows Printed**).

In most circumstances, it is likely to be much simpler and quicker to create specially tailored reports as described in Section 7.2.5 Changing Report Layouts than to modify Exl-Plan's existing output reports by deleting rows.

The procedure for deleting rows is indicated below.

1. Save the unaltered model.
2. Delete the first row, calculate using the F9 function key and then proceed to search column-wise for #REF signs.
3. Locate the first formula initiating an error, remove references to the deleted row in this formula and recalculate.
4. Continue this search process until the model is error-free as confirmed by the Check Balances Report (CHECK).
5. Delete the next row and repeat the foregoing procedure for locating and removing any errors.

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### 7.3.6. Changing Intervals & Time Horizons

It is possible to modify Exl-Plan to extend its monthly projections into a second year by carefully inserting additional monthly columns and moving and copying formulae in such a way that their contents and range names remain intact. However, if monthly projections are required for a second year, the simplest solution is to daisy-chain two copies of Exl-Plan using **Copy & Paste Special | Link** so that the closing balance sheet for the first year is used as the opening balance sheet for the second year within the second copy.

To create a 13-period year, instead of 12-months, an additional column must be inserted into each monthly assumption and output report. Formulae for calculating wages, depreciation, interest etc. on the basis of 4.33 weeks per month or 12 month per year will need adjustment. Integration and allocation of a 13-period first year between the four quarters for the first year within the Quarterly Assumptions Report will also need to be addressed.

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### 7.3.7. Changing Column Widths

As an alternative to changing column widths, consider changing cell formats (by reducing decimal places or removing the punctuation used to indicate 000s) or use a higher currency denomination (e.g. Mln instead of 000s).

When changing column widths, apply the new widths consistently and bear in mind the need to accommodate the printing of reports. Do not change the widths of columns A to F.

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## 7.4. Extending Exl-Plan

Exl-Plan can be used without modification to create financial projections for a business; assist with the preparation of budgets; or contribute to business appraisal or planning exercises. It provides all the reports normally used for these purposes.

Exl-Plan can be extended with little effort to perform other functions to assist the planning and management of a business. The following procedures are described:

7.4.1 Incorporating *actuals* with projections

7.4.2 Updating *projections* with *actuals*

7.4.3 Consolidating projections.

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### 7.4.1. Incorporating Actuals with Projections

Exl-Plan can be extended to generate a detailed analysis of projections and *actuals* and to produce monthly and year-to-date totals and variance reports. *Before contemplating expansion of Exl-Plan, check out the Section 6.11 Tracking Trading Performance for a simple built-in performance monitoring facility.*

An extension to Exl-Plan should use additional worksheets to accommodate separate reports for each month. Each monthly report should contain rows of variable descriptions derived from those used in Exl-Plan's assumption and output reports. The following columns should be created for each monthly report:

1. *Projected monthly values* obtained by means of simple cell references to sales and expense values within Exl-Plan's assumption and output reports.
2. *Actual monthly values* to be entered manually or imported
3. *Monthly variances* (absolute amounts and percentages) based on the projected and actual monthly values
4. *Cumulative projected values* derived by summing projected monthly values for the year-to-date
5. *Cumulative actual values* derived by summing actual monthly values for the year-to-date
6. *Cumulative monthly variances* (absolute amounts and percentages) based on cumulative projected and actual year-to-date values.

To create this system, only a basic understanding of Exl-Plan and a moderate level of spreadsheet expertise are required.

If Exl-Plan is being used to compare *actuals* with projections, its global sensitivity-analysis facility can still be used to flex assumptions and projections for the **remaining months** of the year.

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### 7.4.2. Updating Projections with Actuals

Whilst Exl-Plan was never intended to serve as a management accounting system, its projections can be updated by *actuals* using one of the two methods described below. *Before contemplating expansion of Exl-Plan, check out the Section 6.11 Tracking Trading Performance for a simple built-in performance monitoring facility.*

The first and simplest method is to create a duplicate Monthly Income Statements Report which combines *actuals* year-to-date with *projections* for the remaining months of the year. This straightforward task is explained below.

1. Save a copy of the unmodified model as a back up in case any unforeseen problems arise.
2. Use the space below the Monthly Income Statements to create a duplicate copy of the Accounts. Use a simple cell referencing formula to link the top left-hand cell in the duplicate income statement to the corresponding cell in the original income statement. Next, copy and paste this formula across columns (A to U) and downwards in order to create the duplicate income statement.
3. Next, enter SUM formulae in the full-year column (S) of the duplicate income statement to total the monthly values. Insert new formulae for the *As % Sales* and *% Change in Year* columns.
4. Lock all the cells in the duplicate income statement.
5. The duplicate income statement report should now be complete and any changes made in the original income statement will be automatically reflected in the duplicate.
6. As the year progresses, unlock and over-write the cell reference formulae in the **duplicate** report by entering *actuals* abstracted from management accounts. Whenever the model recalculates, the full-

year totals in the duplicate income statement report will contain *actuals* for the year-to-date and *projections* for the remaining months of the year.

7. Because none of Exl-Plan's original formulae have been disrupted, monthly assumptions impacting on projected income statements for the remaining months of the year can be updated at any stage to take account of recent performance trends and to give a more reliable indication of the likely out-turn for the full year.

A second method of updating projections with actuals involves overwriting assumptions within the Monthly Assumption Reports by actuals that have been abstracted from monthly accounts. Projections for the remaining months can then be updated in the light of experience or changing circumstances. With some experience of overwriting and updating projections, it should be possible to make relatively accurate adjustments to the original assumptions for sales, costs etc. in order to reflect actual achievements. However, it is likely to be more difficult to tune the cashflow projections and balance sheets to reflect results because of interactions and complexity of the formulae and calculations involved.

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### 7.4.3. Consolidating Projections

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Several different Exl-Plan models can be used to produce consolidated projections for a group of businesses. These can be used in conjunction with Excel's **Data | Consolidate** menu option.

The procedure is described below. This ensures that changes to assumptions and resultant projections for subsidiary businesses will be automatically reflected in the consolidated projections.

1. Use Exl-Plan to build separate models for each business to be consolidated. Add a new worksheet to each model and create **identical** summary consolidation reports incorporating all the elements that need to be consolidated. Typically, each consolidation report would comprise monthly or annual income statements, cashflows and balance sheets. Use simple cell referencing to extract the appropriate values from within Exl-Plan's worksheets.
2. In a newly created consolidation file, construct a copy of the summary consolidation report on the first worksheet and insert as many worksheets as there are businesses to be consolidated.
3. Use **Copy & Paste Special Link** to replicate the summary consolidation reports for each business in the stacked worksheets behind the first sheet within the consolidation file. Let the first business's report become the second sheet, the second business's report become the third sheet and so on.
4. Within the consolidation file, make adjustments to take account of inter-business trading, foreign currency conversion etc.
5. Enter simple SUM formulae in the first worksheet of the consolidation file to aggregate values in the stacked worksheets.

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## 8. Support & Assistance

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### 8.1. Support Policy

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Exl-Plan is supplied under license to users strictly on an *as is* basis. Once a user gets Exl-Plan to load satisfactorily, Invest-Tech considers its role and commitment as supplier to have concluded. This limitation is due to the very open nature of Exl-Plan and the difficulties involved in assisting users who may have altered Exl-Plan, either intentionally or by accident. However, Invest-Tech will provide support to **registered bona fide users** for three months (and longer at Invest-Tech's discretion) to ensure that, in the unlikely event of problems arising, these are kept to the minimum and are quickly resolved. This support is primarily intended to cover the following:

- Initial macro failures.
- Calculation errors where the layout, logic, formulae, worksheet & range names and macros in Exl-Plan have NOT been altered by the user.
- Guidance to users encountering *unexpected* results when entering assumptions in an unaltered model.

Before contacting Invest-Tech about a possible problem or error, a user should carefully check the manual for guidance. When seeking help from Invest-Tech, provide precise details of the events leading up to the difficulty; indicate the hardware system being used; and describe any changes made to Exl-Plan. In some circumstances it may be necessary to forward a copy of the model, in strictest confidence, to Invest-Tech for detailed examination. *For general support queries about Exl-Plan, refer to the page of Frequently Asked Questions within Invest-Tech's PlanWare web site at [www.planware.org/exlfaq.htm](http://www.planware.org/exlfaq.htm).*

Invest-Tech cannot support Exl-Plan users who acquire future releases of Excel on the grounds that Exl-Plan cannot be future-proofed to anticipate any incompatibilities or changes introduced in future releases of Excel. However, Invest-Tech intends to upgrade and enhance Exl-Plan in step with new releases of Excel. These upgrades will be offered to existing users at discounted prices. If users of Exl-Plan upgrade their copies of Excel, they should retain their earlier release of Excel until (a) they are completely satisfied that Exl-Plan runs satisfactorily with the new release of Excel or (b) they have upgraded Exl-Plan to match the new release of Excel.

For help on hardware and printer problems, users should contact their dealer in the first instance and specific Excel problems should be addressed to Microsoft Corporation.

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### 8.2. Model Development Services

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Invest-Tech will give limited general guidance at no charge to users wishing to make structural changes to Exl-Plan. It also offers a model-building or tailoring service on a fee-paying basis to help users to expand or modify Exl-Plan to meet particular requirements. This work is undertaken on a confidential basis and to the highest professional standards in accordance with the Code of Professional Conduct of the Institute of Management Consultants in Ireland. The fee arrangements are as follows:

- A written proposal describing the proposed work, fees, etc. will be presented to the prospective client and written acceptance will be requested before any work commences.

- Fees will be charged at Invest-Tech's standard rates on the basis of the actual time input. Telephone/fax/courier expenses will be recharged at cost. VAT (currently 20%) will be added in the case of Irish-based clients and unregistered clients in other EU countries.

Invest-Tech can also provide one-to-one or in-company training on Exl-Plan which can be linked to its development and use for a specific modeling application.

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### 8.3. Other Products

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Exl-Plan is one product in a very wide range of *stand-alone* and *spreadsheet-based* financial planning software packages developed by Invest-Tech. As similar basic structures, menus etc. are used throughout the range, conversion from one product to another is very straightforward.

Latest information on products, access to downloadable shareware versions and general advice on many aspects of business planning and development are available at Invest-Tech's WWW site located at the following URL:

[www.planware.org](http://www.planware.org)

Invest-Tech welcomes feedback from users and invites suggestions for improving and extending Exl-Plan.

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### 8.4. Contacting Invest-Tech

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Invest-Tech can be contacted as follows:

Tel: 283 4083 (24-hr answering)

Fax: 278 2391

Dial codes: IRL: 01- UK: 00-353-1- US: 011-353-1- Other: +353-1-

Email: [info@planware.org](mailto:info@planware.org)

Address: Invest-Tech Limited, 27 Ardmeen Park. Blackrock, Co Dublin, Ireland

WWW: [www.planware.org](http://www.planware.org)

## Appendix - 1

# License Agreements

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Commercial Version License Agreement

Shareware Version License Agreement

Shareware Distribution License Agreement

Association of Shareware Professionals Ombudsman Statement

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## **Shareware Version License Agreement**

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SHAREWARE VERSION. These additional terms apply to the unregistered shareware version of the SOFTWARE. This "try-before-you-buy" version of the SOFTWARE is a shareware program and it is not "freeware", "public domain" software etc. Users are granted a license to use the shareware version only under the terms and conditions specified in this entire agreement.

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## Shareware Distribution License Agreement

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## Association of Shareware Professionals Ombudsman Statement

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Invest-Tech is a company member of the Association of Shareware Professionals (ASP).

The ASP wants to make sure that the shareware principle works for you. If you are unable to resolve a shareware-related problem with an ASP member by contacting the member directly, ASP may be able to help. The ASP Ombudsman can help you resolve a dispute or problem with an ASP member, but does not provide technical support for members' products. Please write to the ASP Ombudsman at 545 Grover Road, Muskegon, MI 49442, USA or FAX (616) 788-2765, or email <mailto:omb@asp-shareware.org>

## Appendix - 2

### Lists of Reports & Graphs

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These listings mainly refer to the Super & Super Plus versions (US/Canadian editions) of Exl-Plan. There will be some variations in the names and numbers of reports and charts for other versions and editions.

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#### List of Reports

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##### **Monthly Assumptions:**

1. Sales & Finished Goods Inventory Targets
2. Cost of Materials/Goods, Inventory & Purchases
3. Direct Labor, Other Direct Costs & Cost of Sales
4. Overhead Expenses
5. Fixed Assets
6. Funding, Interest Rates & Related Items
7. Opening Balance Sheet Items, Receivables & Payables
8. Sales & Related Taxes

##### **Monthly Projections:**

Income Statements (with prior year actual/estimated)  
Cashflow Projections (with notes)  
Balance Sheets (with opening balance sheet)  
Performance Review  
Summary

##### **First-year Projections:**

Income Statements (with prior year actual/estimated)  
Cashflow Projections (with notes)  
Balance Sheets (with opening balance sheet)  
Performance Review  
Summary

##### **Quarterly Assumptions & Projections:**

Assumptions for 2nd & 3rd Years and Projections for 1st Year - Sales & Costs  
Assumptions for 2nd & 3rd Years and Projections for 1st Year - Other Items  
Income Statements (with prior year actual/estimated)  
Cashflow Statements (with reconciliation to Income Statements)  
Balance Sheets (with opening balance sheet)  
Performance Review

##### **Five-year Projections:**

Assumptions for 4th & 5th Years  
Income Statements (with prior year actual/estimated)  
Cashflow Statements (with reconciliation to Income Statements)  
Balance Sheets (with opening balance sheet)  
Performance Review

**Other Reports:**

Check Balances Report  
Quik-Plan Assumptions Report  
Textual Summary Report  
Sensitivity Analysis Report  
Summary & Diagnosis Report - 3 Years  
What-If Analysis for First-Year Projections  
Profitability Planner  
Short-Term Cashflow Projections  
Trading Performance Tracker Report  
Long-Term Trend Analysis

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**List of Graphs**

**Months:**

Fig 1. Sales Analysis  
Fig 2. Sales & Income  
Fig 3. Cost Analysis  
Fig 4. Key Indicators  
Fig 5. Cashflow  
Fig 6. Headcount  
Fig 7. Material Costs  
Fig 8. Gross Margin Contributions

**Quarters:**

Fig 9. Sales & Income  
Fig 10. Cashflow  
Fig 11. Key Indicators  
Fig 12. Financial Ratios  
Fig 13. Working Capital  
Fig.14. Capital Expenditure

**Five Years:**

Fig 15. Sales & Income  
Fig 16. Cashflow  
Fig 17. Key Indicators  
Fig 18. Financial Ratios  
Fig 19. Working Capital

**Other Charts:**

Short-Term Cashflow Chart  
Trading Performance Tracker Charts  
Long-Term Trend Analysis Charts

## Appendix - 3

### Adapting Exl-Plan to Different Business Types

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This appendix offers suggestions for adapting Exl-Plan to suit manufacturing, distribution, services or hybrid or multi-site business types. For illustrative purposes, the \$ currency symbol and 000s denomination have been used.

As it refers specifically to the Pro, Super, Super Plus, Ultra & Ultra Plus versions of Exl-Plan, certain items may not fully apply to the Micro & Lite versions as these do not differentiate between inventories for finished goods and materials (or goods for resale).

Refer to Appendix 5 for detailed guidance on entering assumptions.

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#### Manufacturing Businesses

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If appropriate, **Sales** in Monthly Assumption Report No. 1 can refer to sales values (expressed as \$000s) rather than to volumes (as 000s)<sup>5</sup>. In this case, enter 1.0 as the **Net selling prices** throughout Report No. 1 and express the **Unit cost of materials/packaging** in Report No. 2 as decimal values, for example, enter 0.45 if unit costs are equivalent to 45% of sales.

To build up the **Cost of sales** in Report No. 3 proceed as follows:

1. Indicate the **Desired finished goods inventory as % sales**<sup>6</sup> in Report No. 1.
2. Estimate the opening values of **Desired finished goods inventory**<sup>7</sup> in Report No. 1. Finished goods inventory targets can include a provision to cover work-in-progress.
3. Enter estimates for the **Unit cost of materials/packaging** and opening and target **Desired inventory of materials/packaging** in Report No. 2.
4. Enter projected **Direct labor, Average payroll cost, Other direct costs** and opening values (at prime cost) of **Finished goods inventory** in Report No. 3.

From this data, Exl-Plan will derive the **Finished goods required** and **Purchases of materials/packaging** in Report No. 2 and **Cost of sales** in Report No. 3.

As far as practicable, only include variable or semi-variable costs as **Other direct costs** in Report No. 3. Fixed and general overhead costs specifically related to manufacturing can be entered as **Operational expenses** in

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<sup>5</sup> The units used for **Sales** and **Net selling prices** can be reversed from 000s of units & \$/unit to single units & \$000/unit provided that the **Net cost of materials/packaging** in Report No. 2 is also expressed as \$000/unit instead of as \$/unit.

<sup>6</sup> These inventory target percentages should relate to the eventual sales value of the inventory. The indicated inventory levels will be revalued at a later stage in the model to correspond to their prime costs on the basis of the cost of materials and other direct costs indicated in Report Nos. 2 & 3. For example, if a business with monthly sales of \$100,000 plans to hold finished goods inventory equivalent to six weeks sales, the indicated inventory level is \$150,000 (valued at selling prices). However, if the direct cost of manufacture etc. is calculated to be 45% of sales, the value of the inventory will be reduced in Report No. 3 to \$67,500. This is the inventory value that appears in balance sheets.

<sup>7</sup> Enter volumes, or values, based on the expected sales value (not cost) of the opening **Desired finished goods inventory**. These estimates are used to project production requirements for the first month.

Report No. 4. This Report also contains a provision to enter **Freight expenses** and **Selling expenses** expressed as percentages of sales.

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### Distribution Businesses

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If appropriate, **Sales** in Monthly Assumptions Report No. 1 can refer to sales values (expressed as \$000s) rather than to volumes (as 000s)<sup>8</sup>. In this case, enter 1.0 as **Net selling prices** throughout Report No. 1 and express the **Unit cost of materials/packaging or goods for resale** in Report No. 2 as decimal values, for example, enter 0.45 if unit costs are equivalent to 45% of sales.

Two alternative approaches to determining **Cost of sales** are explained below.

The first method can be used if the normal convention within the business is to exclude all expense items from **Cost of sales** other than those directly connected with the cost of purchased goods for resale. The approach is as follows:

1. Enter zeros for the **Desired finished goods inventory as % sales** and for the opening values of the **Desired finished goods inventory** in Report No. 1.
2. Enter appropriate values for the **Unit cost of materials/ packaging or goods for resale** and for the opening and target **Desired inventory of materials/packaging & goods for resale** in Report No. 2.
3. Enter zeros throughout Report No. 3.

Use the second method if some direct costs are usually included in the **Cost of sales**, for example to cover certain variable packaging or processing costs. Proceed as follows:

1. Indicate the **Desired finished goods inventory as % sales**<sup>9</sup> in Report No. 1.
2. Enter opening values of the **Desired finished goods inventory**<sup>10</sup> in Report No. 1.
3. Enter the **Unit cost of materials/packaging or goods for resale** and the opening & target **Desired inventory of materials/packaging & goods for resale** in Report No. 2.
4. Enter any projected **Direct labor, Average payroll cost, Other direct costs** and opening values (at prime cost) of **Finished goods inventory** in Report No. 3.

From this data, Exl-Plan will derive the **Finished goods required** and **Purchases of materials/packaging & goods for resale** in Report No. 2 and **Cost of sales** in Report No. 3.

As far as practicable, only variable or semi-variable costs should be included as direct costs in Reports Nos. 2 or 3. Variable selling and distribution costs linked to sales (but treated as overhead expenses instead of as components of the **Cost of sales**) can be entered in Report No. 4.

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<sup>8</sup> The units used for **Sales** and **Net selling prices** can be reversed from 000s of units & \$/unit to single units & \$000/unit provided that the **Net cost of materials/packaging or goods for resale** in Report No. 2 is also expressed as \$000/unit instead of as \$/unit.

<sup>9</sup> These closing inventory target percentages should relate to the eventual sales value of the inventory. The indicated inventory levels will be revalued at a later stage to correspond to their prime costs on the basis of the cost of the goods for resale and other direct costs indicated in Report Nos. 2 & 3. For example, if a business with monthly sales of \$100,000 plans to hold inventory of goods for resale equivalent to six weeks sales, the indicated inventory level is \$150,000. However, if the direct cost of supplying the goods etc. is calculated to be 45% of sales, the value of the inventory will be reduced to \$67,500 in Report No. 3. This is the inventory value that appears in balance sheets.

<sup>10</sup> The units used for **Sales** and **Net selling prices** can be reversed from 000s of units & \$/unit to single units & \$000/unit provided that the **Net cost of materials/packaging or goods for resale** in Report No. 2 is also expressed as \$000/unit instead of as \$/unit.

## Service Businesses

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For a service business, **Sales** volumes in Monthly Assumptions Report No. 1 could be interpreted as referring to unit sales (in thousands) for items such as time sold, numbers of calls or jobs etc. and **Selling prices** can be set to indicate job or charge out rates etc.<sup>11</sup>

If sales volumes cannot be used, **Sales** should refer to sales values (in \$000s) and 1.0 should be entered as **Net selling prices** throughout Report No. 1.

If the business is strictly labor-only, proceed as follows:

1. Enter zeros for the **Desired finished goods inventory as % sales** and opening values of the **Desired finished goods inventory** in Report No. 1. See comments later on about handling work-in-progress.
2. Enter zeros for the **Unit cost of materials/packaging or goods for resale** and for the opening & target **Desired inventory of materials/packaging & goods for resale** in Report No. 2.
3. Enter details of the **Direct labor, Average payroll cost** and **Other direct costs** in Report No. 3 and enter zeros for the opening values of the **Finished goods inventory**.

If the business involves the supply of some products, materials, parts etc., as well as labor, proceed as follows in order to include these costs in the **Cost of sales**:

1. Enter zeros for the **Desired finished goods inventory as % sales** and opening values of the **Desired finished goods inventory** in Report No. 1.
2. Specify unit costs or decimal amounts for the **Unit cost of materials/packaging or goods for resale** in Report No. 2. For example, enter 0.25 if service materials etc. are equivalent to 25% of sales, and enter values (if appropriate) for opening and target **Desired inventory of materials/packaging & goods for resale** elsewhere in Report No. 2.
3. Enter details of **Direct labor, Average payroll cost** and **Other direct costs** in Report No. 3 and enter zeros for the opening values of the **Finished goods inventory**.

To provide for work-in-progress (WIP), include appropriate values within **Finished goods inventory** in Reports Nos. 1 & 3 and **Unit cost of materials/packaging or goods for resale** in Report No. 2. Exl-Plan will automatically calculate the value of purchases of materials etc. needed to accommodate changes in WIP arising from changes in **Sales** and/or **Finished goods inventory targets**.

To accommodate changes in WIP in a predominantly labor-only business, values for **Direct labor** in Report No. 3 must be manually increased or decreased to take account of any projected changes in WIP and/or sales. For example:

If the sales value of WIP jumps from 25% to 50% of monthly sales, this percentage should be entered for the appropriate month as the **Desired finished goods inventory as % sales** in Report No. 1. Once Exl-Plan recalculates, **Finished goods required** in Report No. 2 will increase accordingly. When projecting **Direct labor** in Report No. 3, account must be taken of this increase in requirements as Exl-Plan does not automatically adjust **Direct labor** levels. Any increase in **Direct labor** will not alter the **Cost of sales** but it will result in accelerated cash outflows and changes in inventory values (i.e. WIP) in the balance sheets.

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<sup>11</sup> The units used for **Sales** and **Net selling prices** can be reversed from 000s of units & \$/unit to single units & \$000/unit provided that the **Net cost of materials/packaging or goods for resale** in Report No. 2 is also expressed as \$000/unit instead of as \$/unit.

## Hybrid & Multi-site Businesses

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For businesses involving mixed trades, the simplest approach might be to assign each trade to a different main sales group and to treat each group as a manufacturing, distribution or services business. Alternatively, treat each trade as a strategic business unit, develop separate Exl-Plan models and consolidate the key outputs for each model as explained in Section 7.4.3 Consolidating Projections.

## Appendix - 4

### How Quik-Plan Handles Assumptions

The following tables explain how Quik-Plan allocates its assumptions to Exl-Plan's Monthly Assumption Reports (Nos. 1 - 8) and Quarterly Assumption Reports. It refers specifically to the Pro, Super, Super Plus, Ultra & Ultra Plus versions of Exl-Plan and certain items may not fully apply to the Micro & Lite versions. US/Canadian terminology have been used.

Refer to Section 6.4 for guidance on setting up and using Quik-Plan.

#### First Year Assumptions

| Variable                                                                                            | Allocation                                                                                                                                                                                                                                                              |
|-----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Average monthly sales                                                                               | To <b>Sales</b> for the first sales subgroup in Assumption Report No. 1                                                                                                                                                                                                 |
| Desired average finished inventory                                                                  | To <b>Desired finished goods inventory</b> for first sales group in No. 1                                                                                                                                                                                               |
| Cost of materials/goods                                                                             | To <b>Unit cost of materials etc.</b> for the first sales group in No. 2                                                                                                                                                                                                |
| Target materials/goods inventory                                                                    | To <b>Desired inventory of materials/packaging or goods for resale</b> in No. 2                                                                                                                                                                                         |
| Average monthly direct costs                                                                        | To first <b>Other direct costs</b> category in No. 3                                                                                                                                                                                                                    |
| Average monthly overhead expenses                                                                   | To first item under <b>Administration overhead expenses</b> in No. 4                                                                                                                                                                                                    |
| Opening total cost of fixed assets<br>Accumulated opening depreciation<br>Average depreciation rate | To the first category of fixed assets in No. 5                                                                                                                                                                                                                          |
| Planned capital expenditure for year                                                                | To <b>Capital expenditure</b> in the fifth month for the first category of fixed assets in No. 5                                                                                                                                                                        |
| Interest rate for cash balances                                                                     | To <b>Cash at bank rate</b> in No. 6                                                                                                                                                                                                                                    |
| Interest rate for all debt/notes                                                                    | To <b>Short-term loan/line of credit and longterm debt/loan rates</b> in No. 7                                                                                                                                                                                          |
| Opening cash balance (deficit)<br>Opening longterm debt/notes                                       | To opening monthly balance sheet                                                                                                                                                                                                                                        |
| Net change in longterm debt/loans in yr                                                             | Assigned to the fifth month for <b>Increases in longterm debt/notes</b> in No. 6                                                                                                                                                                                        |
| Opening accounts receivable<br>Opening accounts payable                                             | To opening monthly balance sheet. Receipts and payments are phased out in the table for <b>Phasing out of opening balance sheet items</b> in No. 7 on basis of 40% during the first month; 30% in the second month; 20% in the third month; and 10% in the fourth month |
| Average credit given on sales<br>Average credit taken for materials/goods                           | Converted to percentage distributions for the first sales group in the table for the <b>Collection patterns for payables &amp; receivables for current year</b> in No. 7                                                                                                |
| Expected federal/state tax rate                                                                     | To the <b>Effective federal/state tax rate</b> in No. 6. Any actual tax payment is made in the second quarter of the second year                                                                                                                                        |

|                              |                                                                                                               |
|------------------------------|---------------------------------------------------------------------------------------------------------------|
| Planned dividend for year    | Declared in the twelfth month of the first year in No. 6 and paid during the first quarter of the second year |
| Opening number of shares     | To <b>No. of shares issued &amp; fully-paid at opening balance sheet date</b> in No. 6                        |
| Proceeds of new stock issues | To <b>Proceeds of stock issues</b> in No. 6                                                                   |
| Number of new shares issued  | To <b>No of new shares issued</b> in No. 6                                                                    |

### Assumptions for Following Years<sup>12</sup>

| Variable                            | Allocation                                                                                                                                                                             |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| % annual change - sales             | To <b>Sales</b> for the first sales group in the Quarterly Assumptions Report - Sales & Costs                                                                                          |
| Cost of materials/goods             | To <b>Matls/pack &amp; goods for resale as % sales</b> for the first main sales group in the Quarterly Assumptions Report - Sales & Costs                                              |
| % annual change - direct costs      | Converted to <b>Direct costs as % sales</b> for labor in the Quarterly Assumptions Report - Sales & Costs                                                                              |
| % annual change - overhead expenses | Converted to <b>Overhead costs - administration expenses</b> in the Quarterly Assumptions Report - Sales & Costs                                                                       |
| Planned capital expenditure         | Assigned to the second quarters in each year. Actual payments are made during the third quarters in the Quarterly Assumptions Report - Other Items                                     |
| Net change in longterm debt/notes   | To <b>Increases in longterm debt/notes or repayments</b> in the second quarters of each year in the Quarterly Assumptions Report - Other Items                                         |
| Expected federal/state tax rate     | To <b>Effective federal/state tax rate</b> for each year. Payments are made in the second quarter of the following year in the Quarterly Assumptions Report - Other Items              |
| Planned dividends                   | To <b>Dividends declared</b> in the fourth quarter of each year. Actual payments are made in the first quarter of the following year in the Quarterly Assumptions Report - Other Items |
| Proceeds of new stock issues        | To <b>Proceeds of stock issues</b> in the Quarterly Assumptions Report - Other Items                                                                                                   |
| Number of new shares issued         | To <b>No of new shares issued</b> in the Quarterly Assumptions Report - Other Items                                                                                                    |

<sup>12</sup> Quik-Plan automatically carries forward the rates for interest, depreciation, inventory, accounts receivable and payable from the first year into the subsequent years.

## Appendix - 5

# Guidance on Entering Assumptions

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This appendix offers detailed guidance on entering assumptions into the Monthly Assumption Reports, opening Balance Sheet, prior-year Income Statement and the Quarterly Assumption Reports. For illustrative purposes, the \$ currency symbol and 000s denomination and US/Canadian terminology have been used.

As this guidance refers mainly to the Pro, Super, Super Plus, Ultra & Ultra Plus versions of Exl-Plan, certain items may not fully apply to the less detailed and powerful Micro & Lite versions.

Exl-Plan contains many variables and features that may not be required by users. These can be left blank or with zero values as Exl-Plan runs satisfactorily with only minimal assumptions relating to sales, costs, etc., together with an opening balance sheet.

The entry of assumptions for the main sales groups in Exl-Plan is entirely optional. Careful consideration should be given to the most effective use of these groups as they provide the basis not only for sales forecasts but also for calculating direct costs, inventory levels, input/output taxes (sales taxes, GST, VAT etc.), accounts receivable/payable etc.

Assumptions should be entered only in rows containing ->> or <<->> arrow signs. The <<->> arrows in several of the Monthly Assumption Reports indicate that values entered in column B can be used to create delay between expensing items and their related cash outflows. Do this by entering zeros to signify immediate cash payments or integers from 1 and 4 to represent credit periods of between one and four months. *With the exception of opening accounts receivable and payable in the opening balance sheet, all assumption values should be entered net of input/output taxes (sales taxes, GST, VAT etc.).*

When entering payroll costs always include employees' income tax (payroll taxes/benefits etc.) and related social insurance/security items which are usually payable a month in arrears to the State (or other comparable organizations).

This appendix augments the Glossary of Terms which lists the variables used in the Monthly Assumption Reports and provides additional guidance on entering assumptions and explanations of formulae.

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## Monthly Assumption Report No. 1 - Sales & Finished Goods Inventory Targets

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Refer to Appendix 3 - Adapting Exl-Plan to Different Business Types for guidance on accommodating manufacturing, distribution and service businesses.

In the case of Exl-Plan Ultra & Ultra Plus, this report relates to monthly projections for three years.

### Seasonal Index

If the business is **not** seasonal, enter 1.00 as a constant factor for each month or simply ignore this row which is used in conjunction with the **\*Assumptions | Seasonal Assumptions** menu command.

If the business is seasonal, enter monthly values corresponding to the expected pattern of sales. For example, if sales are closely related to the number of work days per month, enter the appropriate number of days for each month and use the **\*Assumptions | Seasonal Assumptions** menu command to allocate estimated annual sales to each month on the basis of this distribution.

**Sales (000 units or \$000):****Net selling prices (\$/unit):**

The identities of the main sales groups can be changed by accessing Exl-Plan's Basic Information dialog (\*Setup | Enter Basic Model Info) and entering appropriate names. This dialog is also used to enter the name and form of the business for which the projections are being prepared; the start month and year of the projections; and the currency symbol and denomination.

Enter descriptions and monthly projections for the product subgroups. The subgroups within each main group must be closely related to each other as only the totals for each main group are used by Exl-Plan to calculate input/output taxes (sales taxes, GST, VAT etc.), purchases of materials/packaging/ goods, inventory levels, accounts receivable/payable, total direct costs, sales group profitability etc.

When entering sales data, the model offers the option of entering sales volumes or revenue values for the subgroups within each main group. If volumes are being used for the subgroups within a particular group, the *Net selling prices* should reflect the weighted-average selling price for the group. If sales values are being used, enter \$1.00 throughout as the notional *Net selling prices* for the group. It is permissible to use volumes for one group and values for another group, provided this is done in a consistent way throughout the model. *When entering Sales or Net selling prices, exclude input/output taxes (sales taxes, GST, VAT etc.) and deduct any discounts allowable.*

The units used for *Sales* and *Net selling prices* can be reversed from 000s units & \$/unit to single units & \$000/unit provided that the *Unit cost of materials/ packaging* in Report No. 2 is also expressed as \$000/unit instead of as \$/unit.

Of all the assumptions entered into Exl-Plan, the sales forecasts could have the greatest impact on the reliability of overall projections. Consider using Exl-Plan's sensitivity-analysis facility to explore *best, most likely* and *worst* cases using different values for sales volumes and/or prices.

**Total sales (\$000):**

Based on sales volumes \* selling prices or, if volumes were not used, sales values.

**Bad debts as % sales**

Enter an appropriate percentage. Sales receipts and input/output taxes (sales taxes, GST, VAT etc.) will be automatically adjusted to take account of the bad debt percentage. The cost of bad debts is treated as an expense in the income statements.

**Change descriptive term for sales or input/output tax:**

For UK/International editions only: Enter a short description or use an abbreviation, e.g. "sales tax", "GST" or "VAT", and press the F9 function key to update descriptions embedded in remaining rows of the report. Note: For US/Canadian editions, this facility is included in Monthly Assumption Report No. 8.

**Desired finished goods inventory as % sales for X months ahead:**

For each month, enter the desired monthly finished goods inventory levels expressed as percentages of projected sales. For example, if target finished goods inventory levels (when valued at sales price) should be equivalent to one month's sales, enter 100%. In the table immediately below, these targets will be converted into inventory levels, expressed as either units or valued at selling prices. Subsequently, these inventories will be devalued to their prime cost in Monthly Assumptions Report No. 3. See Appendix 3 - Adapting Exl-Plan to Different Business Types for a more detailed explanation of this process.

Use the cells to the left of the <<->> arrows, to link desired inventory levels to projected sales for the current month (Enter 0 in these cells) or for 1, 2, 3 or 4 months ahead (Enter 1, 2, 3, or 4 respectively). This allows

inventory levels to be linked to projected sales to facilitate inventory-building ahead of rising demand, etc. or to accommodate seasonal fluctuations in sales. For example, if a 2 is used and 150% is entered across the row, the sales value of inventory for each month will be set at 1½ times the level of sales projected for two months ahead.

The interactions arising from the use of inventory targets can be very complex and may produce results that are mathematically correct but confusing, unexpected or undesired. For example, if sales are fluctuating significantly and inventory targets are linked to future sales values, then *Desired finished goods inventory* (in this Report) and *Finished goods required* (in Report No. 2) could vary over a huge range of values. They could even generate negative values for *Finished goods required* or *Purchases of materials/packaging or goods for resale* (when **\*Tools | Calculate All & Check** is used an error message will indicate this problem).

The ideal solution is to systematically fine-tune the percentages or sales-ahead factors (1, 2, 3 or 4) used in *Desired finished goods inventory as % sales* one month at a time while monitoring calculated values for *Desired finished goods inventory*, *Finished goods required* and *Purchases of materials/packaging or goods for resale*. If these interactions become too complex, a much simpler solution might be to ignore finished goods inventory targets etc. and to include values for finished goods inventory within the projected values for *Desired inventory of materials/packaging or goods for resale* (Report No. 2). This simplification may not cause any significant errors for many businesses.

### **Desired finished goods inventory (000 units or equivalent sales value in \$000):**

Enter opening values based on volumes or equivalent selling prices. These should tie in with the opening values (at prime cost) of *Finished goods inventory* in Report No. 3. They are used to help calculate *Finished goods required* for the first month (in Report No. 2). If precise values are not available, make provisional estimates that can be revised at a later stage when their impact on *Finished goods required* becomes more evident.

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## Monthly Assumption Report No. 2 - Cost of Materials/Goods, Inventory & Purchases

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Refer to Appendix 3 - Adapting ExI-Plan to Different Business Types for guidance on accommodating manufacturing, distribution and service businesses.

In the case of ExI-Plan Ultra & Ultra Plus, this report relates to monthly projections for three years.

### **Seasonal Index**

If the business is **not** seasonal, enter 1.00 as a constant factor for each month or ignore this row which is used in conjunction with the **\*Assumptions | Seasonal Assumptions** menu command.

If the business is seasonal, enter monthly values to correspond with the expected pattern of costs. For example, if sales are closely related to the number of work days per month, enter the appropriate number of days for each month and use the **\*Assumptions | Seasonal Assumptions** menu command to allocate an estimated annual cost to each month on the basis of this distribution.

### **Finished goods required (000 units or equivalent sales value in \$000):**

Derived from *Total sales* and *Desired finished goods inventory* in Report No. 1.

**Unit cost of materials/packaging or goods for resale (\$/unit or \$0.xx if units not used):**

Enter unit costs. If sales volumes are **not** being utilized, enter unit costs as decimal amounts, e.g. \$0.50, based on the notional selling price of \$1.00 per unit that should have been previously specified in Report No. 1.

**Cost of materials/packaging or goods required:**

Based on calculated results for Finished Goods Required and the entered Unit Costs of Materials.

**Desired inventory of materials/packaging or goods for resale (\$000):**

Enter opening values in the first column and target monthly levels in the following columns. The opening total for the main sales groups will be automatically incorporated in Exl-Plan's opening balance sheet.

Consequently, this total should be the same as that which appears in the published or projected opening balance sheet for the business.

**Purchases of materials/packaging & goods for resale**

Based on: Finished goods required + closing Material inventory - opening Material inventory.

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**Monthly Assumption Report No. 3 - Direct Labor, Other Direct Costs & Cost of Sales**

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Refer to Appendix 3 - Adapting Exl-Plan to Different Business Types for guidance on accommodating manufacturing, distribution and service businesses.

In the case of Exl-Plan Ultra & Ultra Plus, this report relates to monthly projections for three years.

Try to include only directly attributable variable or semi-variable costs as distinct from fixed costs in this report. All costs entered into this report will be included in the *Cost of sales* in Report No. 3. Assumptions made for *Direct labor* and *Other Direct costs* should be related to the values or quantities of *Finished goods required* as calculated in Report No. 2 and should not be based solely on projected *Total sales* in Report No. 1.

**Seasonal Index**

If the business is **not** seasonal, enter 1.00 as a constant factor for each month or ignore this row which is used in conjunction with the **\*Assumptions | Seasonal Assumptions** menu command.

If the business is seasonal, enter monthly values to correspond with the expected pattern of costs. For example, if these costs are closely related to the number of work days per month, enter the appropriate number of days for each month and use the **\*Assumptions | Seasonal Assumptions** menu command to allocate the estimated annual cost to each month on the basis of this distribution.

**Direct labor (Persons):**

Enter projected headcount for direct staff. If it is completely impracticable to allocate labor between the main sales groups, enter the estimated total direct headcount opposite the first main sales group but bear in mind that this will distort the gross margin analysis in the Monthly Performance Review Report.

If it is not possible to enter any estimated numbers for projected *Direct labor*, enter the estimated total monthly payroll cost (as \$'s and not as \$000's) for each sales group in the rows designated for *Direct labor* and then set the *Average payroll cost* to "1" (i.e. 10 persons at \$1,000 per month equates to 1 at \$10,000 per month.). If

this approach is used, the calculation of the total headcount in the Monthly Performance Review Report will not be correct.

**Sales/output per direct person:**

These productivity measures refer to sales or output values, or to units and equivalent sales values, depending on the basis used to enter assumptions for *Sales* and *Finished goods inventory targets* specified in reports Nos. 1 and 2.

**Average payroll cost (\$000/pers/mth)**

Use a weighted average monthly payroll cost. This should include employees' income tax (payroll taxes/benefits) and related items, such as social security/insurance, payable to the State (or other organization) a month in arrears.

**Other direct costs (\$000):**

Insert values (0, 1, 2, 3 or 4) under the "X" to defer the payments related to these costs by up to four months. The supplied variable descriptions that are unprotected can be altered or ignored. Note that any revised descriptions will be automatically changed in the Monthly Cashflows. Not applicable to Micro or Lite versions.

**Allocation of other direct costs on the basis of direct payroll costs (or sales) (\$000):**

For this allocation to work as indicated, *Direct labor* levels should have been entered for each of the main sales groups otherwise *Other direct costs* will be allocated between the main sales groups in proportion to their respective sales.

If neither *Direct labor* nor *Sales* are projected for a particular month, *Other direct costs* will be assigned equally to the main sales groups.

If no *Direct labor* levels were specified but it is desired to allocate *Other direct costs* between groups on a different basis, simply enter notional *Direct labor* headcounts which reflect the desired allocation and set the *Average payroll cost* to zero for each month. If this approach is used, the calculation of total employment numbers in the Monthly Performance Review Report will not be correct.

**Direct cost per unit (\$/unit or \$0.xx if units not used):**

For each month, Exl-Plan calculates monthly unit costs for each main sales group. If sales values have been used instead of sales volumes, the unit costs are expressed as decimal amounts, e.g. as \$0.50, based on a notional selling price of \$1.

The projected unit costs in this table should not vary significantly from one month to another. If the differences are substantial, check the cost assumptions used in Report No. 3 and review the volatility of projected *Total sales* and *Desired finished goods inventory* in Report No. 1 and *Finished goods required* in Report No. 2.

**Finished goods inventory (\$000):**

Enter opening values for each group in the first column. The opening total for the main sales groups will be automatically incorporated in Exl-Plan's opening balance sheet. Accordingly, this total should be identical to that appearing in the published or projected opening balance sheet for the business.

The *Direct cost per unit*, calculated in the previous table, is used in conjunction with the *Desired finished goods inventory* (in Report No. 1) to calculate the projected monthly values for *Finished goods inventory* (based on total prime costs) given in this table.

The interactions between inventory levels, production requirements and direct costs can be complex especially if these are fluctuating independently of each other and vary from month to month. If there is an unexpected jump in *Finished goods required* (in Monthly Assumptions Report No. 2) for the first month of projections, review assumptions for the opening values of *Desired finished goods inventory* (Report No. 1). These should be based on selling prices and not on cost values. To achieve a smooth transition between inventory values for the beginning and end of the first month, use the first month's projected *Direct cost per unit* (in Monthly Assumption Report No. 3) to inflate or deflate the sales values of opening *Finished goods inventory* (in Report No. 1).

Large fluctuation in monthly gross margins may arise if percentage targets have been set for *Desired finished goods inventory* (in Report No. 1) and if projected monthly sales vary widely from month to month. These fluctuations are most likely due to a failure to adjust *Direct labor* and *Other direct costs* in Monthly Assumption Report No. 3 to move in step with the levels of *Finished goods required* as calculated in Monthly Assumption Report No. 2. To solve this problem, adjust the *Direct labor* and *Other direct costs* in line with calculated requirements where it is realistic to assume that these are, in practice, fully (or partly) variable. This should smooth out the fluctuations in gross margins. If this approach is not feasible, a much simpler approach is to set the percentage targets for the *Desired finished goods* and their opening values to zero (in Report No. 1) and increase *Raw material inventory* (in Report No. 2) to reflect all inventory movements.

### **Cost of Sales:**

Based on: Total direct costs + opening Finished goods inventory -closing Finished goods inventory.

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## Monthly Assumption Report No. 4 - Overhead Expenses

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In the case of ExI-Plan Ultra & Ultra Plus, this report relates to monthly projections for three years.

Insert values (1, 2, 3 or 4) underneath the "X's" in column B within this report to defer the actual cash payments by up to four months. Enter zeros where payments are made within the month. Not applicable to Micro or Lite versions.

Any supplied variable descriptions, which are unprotected, can be altered or left empty. Note that any changed descriptions will be automatically updated in the Monthly Cashflows.

### **Seasonal Index**

If the business is **not** seasonal, enter 1.00 as a constant factor for each month or ignore this row which is used in conjunction with the **\*Assumptions | Seasonal Assumptions** menu command. If the business is seasonal, enter monthly values to correspond with the expected pattern of costs.

If, for example, costs are closely related to the number of work days per month, enter the appropriate number of days for each month and use the **\*Assumptions | Seasonal Assumptions** menu command to allocate the estimated annual cost to each month on the basis of this distribution.

### **Operational (indirect) expenses (\$000):**

Include all fixed and indirect operating expenses, not already included in Report No. 3.

**Selling & freight expenses (\$000):**

This expense group includes two sets of variable selling expenses expressed as percentages of monthly sales for the current month or for up to four months ahead. To use these, enter expenses expressed as percentages of sales for up to four months ahead and insert 0, 1, 2, 3 or 4 in the appropriate cells immediately under the "X" to express them as percentages of sales for the current (0) or subsequent (1-4) months.

Use the unlocked variables further down to handle fixed selling and freight expenses. Enter 0,1,2,3 or 4 under the "X" to secure up to four months credit on these costs.

Note: If it is appropriate to include freight expenses in direct costs, enter appropriate values in *Other direct costs* in report No. 3.

**Indirect payroll/benefits (\$000/pers/mth)**

**Supervisory payroll/benefits (\$000/pers/mth)**

**Sales & marketing staff payroll/benefits (\$000/pers/mth)**

**Clerical payroll/benefits (\$000/pers/mth)**

**Management payroll/benefits (\$000/pers/mth)**

**Staff payroll/benefits (\$000/pers/mth)**

If it is not feasible to enter projected staff numbers with projected average payroll costs, use "1" as the total staff number. Then, enter a combined **total** payroll cost instead of an average **individual** payroll cost (this works on the basis that 10 staff at \$2,000 per month equate to 1 at \$20,000 per month). If this approach is used, the calculation of total employment numbers in the Monthly Performance Review Report will be incorrect.

**Administration expenses (\$000):**

**Occupancy/general expenses (\$000):**

The expense descriptions within these groups can be changed. Enter 0,1,2,3 or 4 below the "X" to take credit of up to four months on these items.

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**Monthly Assumption Report No. 5 - Fixed Assets**

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In the case of ExI-Plan Ultra & Ultra Plus, this report relates to monthly projections for three years.

This report handles four categories of fixed assets in the case of ExI-Plan Pro, Super, Super Plus, Ultra & Ultra Plus. The supplied initial categories - land, buildings & improvements, plant & equipment, computers & equipment, automobiles, vehicles etc. - can be changed by the user. Total values for the four categories are contained in a summary table at the end of the report. The combined total opening cost less accumulated depreciation for the four categories is used as the total opening value of fixed assets in ExI-Plan's opening balance sheet. This opening total value should be identical to that appearing in the published or projected opening balance sheet for the business.

**Cost or valuation (\$000)**

**Accumulated depreciation (\$000)**

**Base depreciation on original cost or use double declining balance**

**Depreciation rate (% pa)**

Enter (a) original cost or up-to-date valuation as at the opening balance sheet date, (b) accumulated depreciation as at the opening balance sheet date and (c) current-year annual depreciation rate. Indicate whether depreciation should be based on the straight-line method applied to the original cost (enter "0" - zero) or the double-declining-balance method for accelerated depreciation (enter "1" - digit one).

**Capital expenditure excluding lease (\$000)**

Enter a value (0, 1, 2, 3 or 4 as appropriate) under the "X" to provide for up to four months of credit on any planned capital expenditure. Not applicable to Micro or Lite versions.

**New leases (\$000)**

**Interest on new leases (\$000)**

**Repayments on new leases (\$000)**

These entries should refer to **new** finance and capital leases only. Projections relating to any **existing** leases should be entered in Report No. 6. The capital values of newly leased items are automatically included in the fixed asset totals.

**Disposal of fixed assets (\$000):**

Enter details of the proceeds, costs and related accumulated depreciation. Profits/losses derived from the sale of fixed assets are included in the income statements. Fixed asset and depreciation balances are automatically reduced to take account of fixed asset sales.

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**Monthly Assumption Report No. 6 - Funding, Interest Rates & Related Items**

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In the case of ExI-Plan Ultra & Ultra Plus, this report relates to monthly projections for three years. The funding variables described below may not be fully applicable to the Micro or Lite versions.

**Interest rates (% pa):**

**-Cash at bank**

**-Short-term loans/line of credit**

**-Long-term debt/notes**

**Interest payable on 'other loans' (\$000)**

**Increases in long-term debt/notes (\$000)**

**Long-term debt/note repayments (\$000)**

**Increases in 'other loans' (\$000)**

**'Other loan' repayments (\$000)**

The principal difference between *Long-term debt/notes* and *Other loans* is that interest payable on the former is calculated automatically by ExI-Plan from the interest rate specified for *Long-term debt/notes* whereas interest for the latter is entered directly by the user as an absolute amount at *Interest payable on other loans*.

When calculating interest on *Short-term loans/line of credit*, the model applies the specified interest rate to the previous month's closing balance (if any) plus 50% of the current month's pre-interest cashflow (if this negative).

To calculate interest on *Cash at bank*, the model uses the specified interest rate and the previous month's closing cash balance (if any) plus 50% of the current month's pre-interest cashflow (if this is positive). Once interest for the month has been calculated, any positive net cashflow for the month is used to reduce any existing *Short-term loans/line of credit* and the balance is then treated as *Cash at bank*. If the net cashflow is negative, it is used to reduce any *Cash at bank* and/or added to any existing *Short-term loans/line of credit*.

*Long-term debt* interest is based on the specified *Long-term debt* interest rate and the previous month's closing balance for any *Long-term debt* plus half the net change for the month arising from any repayment or increase in the balance outstanding.

**Leases from prior years (\$000):**

These refer to existing finance or capital leases taken out in previous years. Details of newly created leases for the current year should be entered in Assumption Report No. 5.

**Total long-term debt/notes (\$000)****Total other loans (\$000)****Total leases (\$000)****Proportions payable within one year:**

Estimate approximate percentages so that liabilities for these loans etc. can be allocated between current and long-term liabilities in the projected balance sheets. When using this facility, account must be taken of any repayments anticipated during the second year as well as any increases in loans likely to arise during the current year. *To ignore this facility and treat all liabilities for loans etc. as long-term liabilities, enter zeros throughout.*

**Miscellaneous income (\$000)**

This is credited to the monthly income statement. Consider whether it should be entered gross or net of any taxes.

**Operating lease payments (\$000)**

These should exclude finance and capital leases, which should be entered into Report No. 5.

**Intangible asset amortization (\$000)**

Enter the amounts by which these assets should be written down. Use a negative number to increase the value of intangible assets.

**Purchases of intangible assets (\$000)**

Super, Super Plus, Ultra and Ultra Plus only: Enter assumption values. It is assumed that these purchases are funded by projected cash resources (or overdraft/ short-term credit). If desired, loans or share issues can be used instead.

**Changes (+/-) in accrued expense (\$000)****Changes (+/-) in prepaid expenses (\$000)**

These two rows enable adjustments to be made to the projected cashflows and balance sheets to take account of prepaid and accrued expenses. It is not essential to use this feature unless it is desired to make specific adjustments in order to improve the accuracy of the cashflow projections or to accommodate substantial cash movements, which cannot be handled elsewhere.

**Adjustments (+/-) to receivable levels (\$000)****Adjustments (+/-) to payable levels (\$000)**

Ultra and Ultra Plus only: To supplement the monthly receivable/payable (debtor/creditor) levels which are

automatically calculated using credit assumptions in the second table in the M\_B worksheet, these levels can be adjusted by entering (positive and/or negative) values. The adjustments will automatically modify relevant cash flows in worksheet M\_CF and the balances in worksheet M\_BS. Note that if calculated levels are adjusted, the relevant working capital assumptions for the 4th and 5th years in the worksheet Q\_A2 may also need updating. Use this facility to make seasonal, temporary or exceptional adjustments to the credit levels calculated using the credit assumptions in M\_B. In most cases, increases in levels (using positive values) would be reversed after some months by entering reductions (using negative values) to revert to the calculated levels.

**Approximate percent of total payroll costs relating to taxes & benefits for all staff (%)**

These percentages refer to income taxes and related social insurance/security items usually paid by the employer to the State within a month of net wages/salaries being paid to employees.

Enter approximate percentages. These are likely to be in the range 30-50% and can be derived from recent income and payroll tax returns. In the Monthly Cashflow Projections, income taxes and related social insurance/security items are automatically paid one month in arrears of salaries and wages. For example, if the total payroll for a particular month is \$20,000 and the overall percentage for income taxes and social insurance/security is estimated at 30%, then \$14,000 will be paid as net salaries to staff during that month and \$6,000 (representing income taxes withheld from employee wages/salaries and related social insurance/security items) will be paid to the State during the following month.

**Proceeds of stock issues (\$000)**

Enter amounts net of expenses and commissions.

**No. of new ordinary shares issued (000s)****No. of ordinary shares issued & fully paid at opening balance sheet date (000s)**

These numbers are used to calculate share-based values such as earnings per share etc. in the Quarterly and Annual Performance Review Reports.

**Effective federal/state tax rate for year (%)**

Enter an effective combined tax rate after taking account of net operating loss carryforwards etc. Tax liabilities arising in previous years but payable during the current year are handled in Assumption Report No. 7 within the table for phasing out opening balances. Exl-Plan assumes that tax is paid during the second quarter after a financial year-end. *Ignore this item if the business is a sole trader or partnership.*

**Federal/state tax payments (\$000)**

Ultra and Ultra Plus: Only applies when Exl-Plan has been set up for a corporation. Specify the payments to the State of taxes on profits (e.g. Corporation Tax etc.) by entering monetary values. These payments should only relate to the future years covered by projections. Tax payments for prior years (which should be shown as liabilities in the opening balance sheet within worksheet M\_BS) should be phased out using Table 1 within the M\_B worksheet. Care should be taken to ensure that aggregate tax payments for each year (in the M\_F and Q\_A2 worksheets) do not exceed the value of taxes calculated by Exl-Plan within the Profit & Loss Accounts (Income Statements) for that year. If this should happen, tax liabilities will appear as negative values in balance sheets.

**Dividends for the current year (\$000)**

Enter a value (0, 1, 2, 3 or 4) in the cell under the "X" to defer the payment of dividends declared in the

current year by up to four months. Dividends declared in previous years, but payable during the current year, are handled in Assumption Report No. 7 within the table for phasing out opening balances.

If the business is a sole trader or partnership this item changes automatically to *Drawings (\$000)* and the following two rows facilitate the entry of income tax liabilities and payments.

**Income tax provisions (\$000)**

**Income tax payments (\$000)**

Enter estimated amounts. This item does not apply when Exl-Plan has been set up for a corporation.

**Monthly Assumption Report No. 7 - Opening Balance Sheet Items, Receivables & Payables**

This report contains two tables for phasing out specific opening balance sheet items and handling current-year accounts payable and receivable respectively. Avoid creating calculation ERRORS when completing these tables.

In the case of Exl-Plan Ultra & Ultra Plus, this report relates to monthly projections for three years.

**Phasing out of opening balance sheet items**

The total amount to be phased out for each item is indicated in the left-hand column of the table. This is the value (if any) previously entered into Exl-Plan's opening balance sheet. (If no values have yet been entered in the opening balance sheet, the totals in this table will be zero until values have been entered into the opening balance sheet and Exl-Plan recalculates).

The total amount to be phased out during the current year for each item must be the same as the total in the left-hand column. This total will have been entered already, or has still to be entered, into the opening balance sheet. Otherwise, a calculation error will arise. This error will be reported when Exl-Plan next recalculates and the item causing the error will be identified by *ERR* appearing in lieu of an ->> arrow in column B.

**Collection patterns for payables & receivables for current year**

Use the six columns in this table to enter the percentage distributions of credit expected to apply during the current year to the projected sales and purchases of materials/packaging & goods for each of the main sales groups. The total for each row must always equal 100%; otherwise an *ERROR* will be displayed in the right-hand column and will be reported when Exl-Plan next recalculates.

The following table shows how this method of allocating credit works in practice for two groups of debtors:

| <b>Debtors:</b> | <b>Months Credit Given/Taken (% Total):</b> |            |            |            |            |           | <b>Total %</b> |
|-----------------|---------------------------------------------|------------|------------|------------|------------|-----------|----------------|
|                 | <b>Under 1</b>                              | <b>1-2</b> | <b>2-3</b> | <b>3-4</b> | <b>4-5</b> | <b>5+</b> |                |
| Group 1         | 80                                          | 20         |            |            |            |           | 100            |
| Group 2         | 20                                          | 20         | 20         | 20         | 20         |           | 100            |

In this example, eighty percent of the Group 1 debtors are expected to pay cash or settle within one month and the remaining twenty percent are expected to pay during the second month. The average credit taken works out at 21 days. In the case of Group 2, one-fifth are expected to pay within one month, a further fifth are projected to pay within one to two months and so on. The average credit is about 75 days.

## Monthly Assumption Report No. 8 - Sales & Related Taxes

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This report is included with the US/Canadian editions of ExI-Plan. In the case of the UK/International editions, the items described below are dispersed within the other monthly assumption reports.

In the case of ExI-Plan Ultra & Ultra Plus, this report relates to monthly projections for three years.

This report focuses on input and output taxes, for example, sales taxes in the US, Goods & Services Tax (GST) in Canada and Value Added Tax (VAT) within the EU. Its facilities should be flexible enough to accommodate most types of input and/or output taxes for most tax regimes either individually or in combination.

### **Specify descriptive term for sales or input/output taxes:**

Enter a short description or use an abbreviation, e.g. "sales tax", "GST" or "VAT", and press the F9 function key to update descriptions embedded in remaining rows of the report. Note: For UK/International editions, this facility is included in Monthly Assumption Report No. 1.

### **Average output tax rates on sales (%):**

When entering the output tax (sales taxes, GST, VAT etc.) rates, different rates can be used for each main sales group. If necessary, composite or weighted average rates can be used for each group to take account of mixed rates, exports etc. The rates used need not correspond to official rates.

### **Calculate input/output taxes on an invoice or cash-received basis?**

These taxes refer to sales taxes, GST, VAT etc. Enter "0" (zero) to indicate invoice basis or "1" (digit one) for cash-received basis.

### **Mark months when input/output tax paid to State**

These taxes refer to sales taxes, GST, VAT etc. If the business pays these taxes etc. every month, enter a " 1" (digit one) for each month. If a two-month cycle applies, enter a " 1" (digit one) every second month. Enter a "1" every third month for a three-month cycle. All other months should contain zeros.

### **Average input tax rate for purchases of materials/packaging & goods (%)**

### **Percent of all non-payroll expenses (operating expenses etc.) subject to input taxes (%)**

### **Average input tax rate for non-pay expenses (%)**

### **Percent of capital expenditure, lease repayments and interest subject to input taxes (%)**

### **Average input tax rate for capital expenditure, lease repayments and interest (%)**

These input taxes refer to GST, VAT etc. which apply in Canada, EU etc. No input taxes operate in the US and consequently these items can be ignored (set to zeros) by US-based businesses.

Estimate approximate percentages and rates. Use weighted average rates to take account of expense categories using different rates. For most businesses, the percentage of non-payroll expenses subject to input taxes are likely to exceed 90% as these taxes are usually payable on almost all types of expenses. The entered tax rates need not coincide with official published rates.

## Opening Balance Sheet

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To complete the entry of assumptions for the first twelve months, all outstanding values must be entered into the opening balance sheet. This is accessed via the **\*Output | Monthly Balances** menu command. Once these values have been entered, recalculate (using **\*Tools | Calculate All & Check** to confirm that the opening balance sheet balances and that there are no calculation errors in the model. *If there is an imbalance, CHECK balance sheet balances at the very bottom will indicate the magnitude and direction of the imbalance.*

If using Exl-Plan Pro, Super, Super Plus, Ultra or Ultra Plus, note that:

1. Values for the opening fixed assets and accumulated depreciation within the opening monthly balance sheet are picked up from entries in column F in Monthly Assumptions Report No. 5.
2. Values for total opening finished goods and material inventory are secured from column F in Monthly Assumption Reports Nos. 1 and 2 respectively.

Monthly Assumptions Report No. 7 should be used to phase out the opening balances for certain items that appear in the opening balance sheet. If the totals being phased out differ from the opening balances, Exl-Plan will report an error when it next recalculates using the **\*Tools | Calculate All & Check** menu command. If this happens, return to Report No. 7 and revise the values in rows showing ERR instead of arrows in column B.

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## Prior Year Income Statement

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If desired, an income statement for the year preceding the projections can be entered alongside the projected income statements. Access the prior year's income statement via the **\*Output | Income Statements** menu command. This income statement is used within Exl-Plan's First-year and Textual Summary Reports to compare the full-year projections with the *actuals* for the previous year. If final full-year figures are unavailable, estimates can be used.

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## Assumptions for 2<sup>nd</sup> & 3<sup>rd</sup> Years and Projections for 1<sup>st</sup> Year - Sales & Costs

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This report incorporates quarterly projections for the first year derived from the monthly assumptions previously entered. These offer guidance on the first-year trends to assist the preparation of forecasts for the next eight quarters.

In the case of Exl-Plan Ultra & Ultra Plus, this report refers to the fourth-fifth years.

All monthly assumptions should be entered (and checked) and the model recalculated to update projections for the initial four quarters **before** entering assumptions for the second and third years.

Enter assumptions for the last eight quarters to the right of rows with ->> arrows.

### Sales (000s or \$000):

#### - New products/services in 2nd & 3rd years

The units used for *Sales* and *Net selling prices* can be reversed from 000s units & \$/unit to single units & \$000. Provides for the introduction of sales forecasts for an additional main sales group for the 2nd and 3rd years.

**Net selling prices (\$/unit):**

The units used for *Sales* and *Net selling prices* can be reversed from 000s units & \$/unit to single units & \$000. When entering *Sales* or *Net selling prices*, exclude output taxes (sales taxes, GST, VAT etc.) and deduct any discounts allowable.

**Mats/pack & goods for resale as % sales:**

These percentages should embrace all the cost categories included in Monthly Assumption Report No. 2.

**Direct costs as % sales:**

These percentages should embrace all the cost and expense categories included in Monthly Assumption Report No. 3.

**Overhead expenses (\$000):**

The projected costs should embrace all the expense categories in Monthly Assumption Report No. 4.

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### Assumptions for 2<sup>nd</sup> & 3<sup>rd</sup> years and Projections for 1<sup>st</sup> Year - Other Items

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In the case of Exl-Plan Ultra & Ultra Plus, this report refers to the fourth-fifth years.

**Annualized sales per employee (\$000)**

Estimate for the purpose of forecasting headcounts. Use the first-year forecasts as guides.

**Dividends declared (\$000) Dividend payments (\$000)** Separate values must be entered for dividend declarations and payments. Payment details in the second year should include any dividends declared during the first year but not scheduled for payment until the second year. *If the business is a sole trader or partnership, these items automatically change to Drawings (\$000) and Miscellaneous opening payables (\$000).*

**Effective federal/state tax rate (%)****Federal/state tax payments (\$000)**

Enter an effective rate that takes account of allowances etc. Exl-Plan assumes that tax is paid during the second quarter after a financial year-end.

If the business is a sole trader or partnership, these items automatically change to *Income tax provision for year (\$000)* and *Income tax payments (\$000)*.

**Composite depreciation rate (%)**

For second and subsequent years, depreciation is calculated on a straight line basis. Use the first year's calculated values as guides. Take account of the possible impact of having used the double-declining-balance method during the first year.

**Capital expend - excluding leases (\$000)****Capital expend payments (\$000)**

These rows accommodate any differences in the timing of capital expenditure and the actual payments made to suppliers. Include payments relating to any capital expenditure incurred but not actually paid for during the first year.

**Accounts receivable (days sales)**

**Inventory (days sales)**

**Accounts payable (days costs & expenses)**

Use the first year values as guides. Exclude output taxes (sales taxes, GST, VAT etc.) from sales when calculating *inventory days*. Include input/output taxes relating to accounts payable and receivable when estimating the *accounts payable and receivable days outstanding*

**Effective output tax rate on sales (%)**

**Effective input tax rate on inputs (%)**

These taxes refer to sales taxes, GST, VAT etc. Use the first year values as guides. These rates should be based on total sales and total inputs before taking account of any non-taxable items. Consequently, they will not necessarily correspond to any official tax rates.

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### 4<sup>th</sup> & 5<sup>th</sup> Year Assumptions

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These assumptions apply to ExI-Plan Pro, Super, Super Plus & Ultra.

Complete the second and third-year projections before embarking on the fourth and fifth year projections and use the calculated values for the second and third years as guides. Note that the projections made for the fourth quarter of the third year are automatically carried forward into the fourth and fifth years for the following items:

- Interest rates
- Allocation of loans between long and short-term
- Composite depreciation rate
- Effective input/output tax rates on sales and inputs.

In the case of ExI-Plan Ultra & Ultra Plus, this report refers to annual projections for sixth-seventh years. If no provision is made for any sales growth in these two years, then the columns referring to the sixth-seventh years are automatically hidden when ExI-Plan's output reports are printed.

## Appendix - 6

# Calculation Error Messages

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Exl-Plan was extensively tested during its development to ensure that it is robust and does not contain or cause any errors. It was tested with zero values throughout to eliminate *divide by zero* errors; with large values for every assumption to test for possible imbalances between the sub-models; and with values entered and calculated on a progressive basis to detect errors caused by the interaction between variables. *All Exl-Plan's calculations and formulae were checked manually and the entire model was extensively checked using an auditing system.*

Invest-Tech cannot guarantee that all possible errors or sources of error have been removed and cannot anticipate errors that may be introduced by users. Accordingly, users should always review the detailed output reports for possible anomalies and calculation errors. *In some circumstances, values may not appear to add up correctly due to rounding off or when Exl-Plan's sensitivity-analysis facility is being used.*

The following messages will be displayed immediately after Exl-Plan recalculates using the **\*Tools | Calculate All & Check** menu command (or "C" button) if a calculation error is detected. Errors will only be reported if outside pre-set tolerance limits as Exl-Plan automatically filters out and ignores trivial errors due to rounding off and calculation differences etc. arising after the third decimal place.

In addition, when Exl-Plan detects a calculation error, it opens a help window describing the error and explaining how it can be resolved. This facility can be turned on and off using **\*Setup | Toggle Help for Calculation Errors**.

The explanations given below of errors specifically relate to the Pro, Super, Super Plus, Ultra & Ultra Plus versions of Exl-Plan.

### **All percentage distributions of credit are not equal to 100%!**

Go to Monthly Assumption Report No. 7 and locate the row containing an ERROR message in the right-hand column of the table for the Collections patterns for accounts payable & receivable for the current year. This message signifies that the percentage distribution of credit for the row does not equal 100%. Change the percentages used.

### **Error in the phasing out of opening balance sheet items!**

Locate the error within the first table in Monthly Assumption Report No. 7. Go to the row indicating ERR instead of an ->> arrow in column B. This signifies that the total amount being phased out for an item (row) over the twelve months differs from its opening value in the opening balance sheet. Check and change appropriate entries.

### **Negative Finished Goods Required have been encountered!**

Negative values have been detected for Finished goods required (Report No. 2). These could produce unexpected, and undesired, results in the Monthly Cashflow Projections etc. In real life, negative values are not possible, so review the monthly targets for Finished goods inventory (Monthly Assumptions Report No. 1).

**Negative Purchases of Materials/Packaging have been encountered!**

Negative values have been detected for Purchases of materials/packaging or goods for resale (Report No. 2). These could produce unexpected, and undesired, results in the Monthly Cashflow Projections etc. In real life, negative values are not possible, so review the monthly targets for Desired inventory of materials/packaging or goods for resale (Report No. 2).

**One or more monthly balance sheets for the first year are unbalanced!**

Refer to Check balance sheet balances at the bottom of Monthly Balance Sheets to determine the magnitude and direction of the balance sheet error. Determine whether the value of the error increases each month or remains constant. This can provide a clue to its source. Try to locate the source by progressively removing assumption values and recalculating using the \*Tools | Calculate All & Check menu command or "C" button. If the error's source cannot be located or easily fixed, the best option is often to revert to an error-free backup copy of the model.

**One or more quarterly balance sheets for second or third years are unbalanced!**

Refer to Check balance sheet balances at the bottom of Quarterly Balance Sheets to determine the magnitude and direction of the balance sheet error. Determine whether the value of the error increases each quarter or remains constant. This can provide a clue to its source. Try to locate the source by progressively removing assumption values and recalculating using the \*Tools | Calculate All & Check menu command or "C" button. If the error's source cannot be located or easily fixed, the best option is often to revert to an error-free backup copy of the model.

**Opening monthly balance sheet is unbalanced!**

Go to the first column of the Monthly Balance Sheets and refer to *Check balance sheet balances* at the bottom of the opening balance sheet to determine the magnitude and direction of the opening balance sheet error. Particularly examine the opening values for finished goods inventory, material inventory and fixed assets derived from values entered in Monthly Assumption Reports Nos. 2, 3 and 5. To identify the item causing an imbalance, it may be necessary to increase the number of decimal places being displayed.

**Some formulae are generating errors!**

This may be due to the use of Cut & Paste to move assumption values whose cells are referenced in formulae. If possible use Undo to remove the change. Also, review reports for #DIV/0! and #REF!. If the problem cannot be eliminated, reload an earlier version of the same model and confirm that it is error-free. Instead of using Cut & Paste, use Copy & Paste and then delete the copied item.

**The four sub-models are not producing identical results!**

Go to the Check Balances Report and from the Differences column of this report identify the sub-model and element causing the difference. If the error cannot be easily located, endeavour to restore the model to its state immediately before the error was detected and then progressively reinsert values in batches while recalculating frequently to track down the source of the error. Failing this, reload an earlier version of the same model and confirm that it is error-free.

## Appendix - 7

# Glossary of Terms

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The terms in this glossary refer to variables in the Monthly Assumption Reports. The definitions provide additional guidance on entering assumptions and explanations of formulae. They supplement Appendix 5 - Guidance on Entering Monthly Assumptions.

For illustrative purposes, the \$ currency symbol and 000s denomination have been used and the terminology relates to the US/Canadian editions of Exl-Plan.

The Glossary specifically refers to the Pro, Super, Super Plus, Ultra & Ultra Plus versions of Exl-Plan.

### **Accumulated depreciation**

Enter **Accumulated depreciation** as at the planned opening balance sheet date. The opening **Cost or valuation** less opening **Accumulated depreciation** will be automatically entered into the opening balance sheet.

### **Allocation of other direct costs on the basis of direct payroll costs**

These costs are allocated between the main sales groups on the basis of their respective **Direct payroll costs**. If no **Direct payroll costs** were specified, costs are allocated between the groups on the basis of their respective sales.

### **Approximate percent of total payroll costs relating to taxes & benefits for all staff**

Enter estimates which include employees' income taxes and related taxes/benefits. Typically, the percentages could be in the range of 30% to 40%. These percentages will be automatically deducted from total monthly payroll costs and will be paid to the State one month in arrears. For example, if the total payroll for a particular month is \$20,000 and the overall percentage for income taxes and social insurance/security is estimated at 30%, then \$14,000 will be paid as net salaries to staff during that month and \$6,000 (representing income taxes withheld from employee wages/salaries and related social insurance/security items) will be paid to the State during the following month.

### **Average input tax rate for non-pay expenses**

The tax refer to GST, VAT etc. which apply in Canada, EU etc. They do not operate in the US and consequently can be ignored by US-based businesses. When estimating an average rate, exclude all payroll expenses.

### **Average output tax rates for sales**

The tax refers to sales taxes, GST, VAT etc. Estimate weighted average rates to take account of mixed rates, exports etc. These rates need not correspond to official rates.

### **Average payroll & benefits cost**

Cost comprises gross wages and all payments made by employer to cover employees' social taxes and related add-on payroll charges.

**Calculate input/output taxes on an invoice or cash-received basis**

This facility allows businesses to calculate their input/output tax liabilities (sales taxes, GST, VAT etc.) on a cash-received basis rather than the more usual invoice-basis. Regulations relating to this facility vary from one country to another.

**Capex**

Capex = Capital Expenditure

**Capital expenditure**

Indicate planned **Capital expenditure (Capex)** commitments and the number of month's credit to be secured (enter 0,1,2,3 or 4 below the "X").

**Changes (+/-) in accrued expenses**

Use + for an increase and - for decrease. The projected cashflows and balance sheets are automatically adjusted to take account of these changes.

**Changes (+/-) in prepaid expenses**

Use + for an increase and - for decrease. The projected cashflows and balance sheets are automatically adjusted to take account of these changes.

**Clerical payroll/benefits**

Include gross salaries and all payments made by employer to cover an employees' social taxes and related add-on payroll charges.

**Collection patterns for accounts payable & receivable for current year**

Indicate the percentage distribution of credit for each item. ERROR in column L for a specific row indicates that the percentage distribution of credit for that row does not equal 100% exactly.

**Cost or valuation**

Enter the total original cost (not the written-down value) as at the planned opening balance sheet date.

**Depreciation rate**

Enter the average annual depreciation rate that will apply throughout the year.

**Desired finished goods inventory (000 units or equivalent sales value in \$000)**

These inventory levels were derived from the sales forecasts and **Desired finished goods inventory** percentages. Enter 'best' estimates for the opening inventory levels to help Exl-Plan determine the total **Finished goods required** (Report No. 2) to meet sales and any inventory-building planned for the first month. Set all values to zero if business is distribution or *labor*-only services.

**Desired finished goods inventory as % sales for X months ahead**

Set target inventory levels for each main sales group. Express targets as percentages of projected sales for between 0 and 4 months ahead. Enter the month numbers (0, 1, 2, 3 or 4) in the cells immediately below the X. Set all values to zero if business is in distribution or *labor*-only services.

**Desired inventory of materials/packaging or goods for resale**

Enter opening values and make estimates for subsequent months. The total opening amount for the main sales groups is used in the opening balance sheet.

**Direct cost per unit**

Indicates unit costs based on **Total direct costs** and on projected **Finished goods inventory required** (as calculated on Report No. 2).

If sales volumes were NOT used in Report No. 1, then the unit costs correspond to decimal percentages for selling prices (previously set at 1.00). For example, a cost of 0.77 would signify costs equivalent to 77% of selling prices.

**Direct labor**

Assign headcount to groups as far as practicable. This will help improve the accuracy of calculations of the relative profitability of the main sales groups. If all direct costs should be excluded from **Cost of sales**, set direct labor values to zero.

**Disposals of fixed assets**

Give details of any planned fixed asset disposals.

The **Proceeds** refer to the consideration to be received. The **Cost** refers to the original cost (or latest valuation) of the fixed assets being disposed of. The **Accumulated depreciation** covers the total depreciation of the assets being disposed of right up to the disposal date.

**Dividends for the current year**

Use the cell below the "X" to defer payment of dividends by up to 4 months by entering 0, 1,2,3, or 4. This item does not apply when Exl-Plan has been set up for businesses operating as sole traders or partnerships.

**Effective federal/state tax rate for year**

Enter estimated rate after taking account of any losses forward etc. This item does not apply when Exl-Plan has been set up for businesses operating as sole traders or partnerships.

### **Finished goods inventory**

Enter the opening inventory values for each main sales group at the opening balance sheet date. The total value is incorporated in Exl-Plan's opening balance sheet. These values must be consistent with any estimates for opening **Desired finished goods inventory**, based on selling prices, previously entered in Report No. 1.

For subsequent months, the values for **Finished goods inventory** are derived from the **Direct costs per unit** and the **Desired finished goods inventory** (if any) contained in Report No. 1.

### **Finished goods required**

These values, expressed as units or valued on the basis of estimated selling prices, are calculated from **Sales** + closing **Finished goods inventory** - opening **Finished goods inventory**.

If there is an unexpected dramatic change in projected requirements for the first month, review the estimated values of opening **Finished goods inventory** in Report No. 1.

### **Indirect payroll/benefits**

Include gross salaries and all payments made by employer to cover an employees' social taxes and related add-on payroll charges.

### **Interest on new leases**

These refer to the 'interest' component of payments to lessors.

### **Interest payable on 'other loans'**

Enter estimated values. These payments may need to be adjusted to take account of any increases or decreases in outstanding balances for **Other loans**.

The difference between **Other loans** and **Longterm debt/notes** is that the actual amount of interest payable is specified for the former and for the latter it is calculated automatically based on closing monthly balances and the specified interest rates.

### **Interest rates**

Enter annual, not monthly, rates.

### **Leases from prior years**

**Interest** refer to the 'interest' component of projected payments to lessors in respect of leases taken out in previous years. Interest for projected new leases should be entered in Report No. 5.

**Repayments** refer to the 'capital' component of projected payments to lessors in respect of leases taken out in previous years. Repayments for projected new leases should be entered in Report No. 5.

### **Longterm debt/notes**

Enter annual rate of interest. The interest amount for **Longterm debt/notes** is derived from the projected interest rates. It is calculated automatically based on closing monthly balances and the specified interest rates.

The difference between **Other loans** and **Longterm debt/notes** is that the actual amount of interest payable is specified for the former and for the latter it is calculated automatically based on closing monthly balances and the specified interest rates.

### **Management payroll/benefits**

Include gross salaries and all payments made by employer to cover an employees' social taxes and related add-on payroll charges.

### **Mark months when input/output taxes paid to State**

These taxes refer to sales taxes, GST, VAT etc. Enter zeros ("0") for **all** months that are not tax payment months.

### **Net selling prices**

Enter prices net of sales and other output taxes and customer discounts. Use weighted average prices to take account of mix within each main sales group. Enter \$1.00 if NOT using sales volumes.

### **New leases**

Assets acquired through finance (or capital) leasing are treated as fixed asset purchases and corresponding liabilities are automatically created to reflect these purchases.

### **Operational overhead expenses**

Use the cells below the "X" to enter the number of months (0 to 4) of credit being obtained on the corresponding cost items. Only enter integers - 0, 1, 2, 3 or 4. The unlocked descriptions can be changed or ignored.

### **Other direct costs**

As far as practicable, enter only variable or semi-variable costs that can be attributed to production and operations here. Fixed costs are treated as overhead expenses and entered into Report No. 4. Use the cells below the "X" to enter the number of months (0 to 4) of credit being obtained on these cost items. Enter only integers (0, 1, 2, 3 or 4).

If all direct costs (aside from the cost of materials or goods for resale) are conventionally excluded from **Cost of sales**, set all values for **Other direct costs** to zero and enter the overhead expenses in Report No. 4.

### **Percent of all other non-payroll expenses (operating expenses etc.) subject to input taxes**

These taxes refer to GST, VAT etc. which apply in Canada, EU etc. They do not operate in the US and can be ignored by US-based businesses. When estimating an average rate, exclude all payroll expenses.

### **Phasing out of opening balance sheet items**

If ERROR appears in column B for a specific row, the total amount being phased out during the year for the row differs from the total shown in column F (entered via the opening balance sheet).

### **Proportions payable within one year**

Use this table to apportion **Longterm debt/notes**, **Other loans** and **Leases** between Current and Longterm Liabilities within the projected monthly balance sheets. Enter approximate percentages that take account of repayments or increases expected during the initial two years. If this feature is not required set all the percentages to zero.

### **Repayments on new leases**

These refer to the 'capital' component of payments to lessors.

### **Sales**

Enter sales volumes as 000s or, if using \$000, set **Net selling prices** in table lower down to \$1.00. You can swap from 000s and \$/unit to units and \$000/unit. The unlocked descriptions for the sales sub-groups can be changed.

To change descriptions for the main groups, use **\*Setup | Enter Basic Model Info**.

### **Sales payroll/benefits**

Include gross salaries and all payments made by employer to cover an employees' social taxes and related add-on payroll charges.

### **Seasonal Index**

Values in this row can be used to allocate a total over rows assigned to assumption values within this report. Enter appropriate values (e.g. work days per month) within the seasonal index and then use **\*Assumptions | Seasonal Assumptions** to pro-rata a total value across the assumption rows to the right of the cursor. Note: Cursor must be located within a boxed in and unlocked block.

### **Selling & freight expenses**

Use the cells below the "X" to enter the number of months (0 to 4) of credit being obtained on the corresponding cost items. Only enter integers - 0, 1, 2, 3 or 4. The unlocked descriptions can be changed or ignored.

### **Short-term loans/line of credit**

These loans arise when negative cash flows drive *Cash at bank* into the 'red'. Interest, based on the rate specified in Report No.6, is charged on the resulting monthly balances. The steady and sustained build up of short-term loans signifies the need for a longer term cash injection.

### **Staff payroll/benefits**

Include gross salaries and all payments made by employer to cover an employees' social taxes and related add-on payroll charges.

**Supervision payroll/benefits**

Include gross salaries and all payments made by employer to cover an employees' social taxes and related add-on payroll charges.

**Unit cost of materials/packaging or goods for resale**

If sales volumes are not being used, enter unit costs as \$0.xx to correspond to xx%. For example, 0.55 would indicate that costs are equivalent to 55% of selling prices (provided **Net selling prices** have already been set at \$1.00 in the price table in Report No. 1).