


Welcome!

"Enterprise Financial model" software is:

- A simple tool designed for execution of financial estimates.
- A training program that allows improving the level of your knowledge on the Economics.
- Large quantity of examples with comments and recommendations.
- Analytic unit that enables to estimate financial results from the position of property owner, creditor or management.

We recommend you to get quick training (~20 min.) to facilitate the use of the product.

To begin the training press button  in the software toolbar.

Designations applied



Signalizes about availability of advices and recommendations to the effected calculations



Marks especially important comments or warns against problems



Displays managerial decisions and summary that can be done on the basis of adequate index analysis

Settings

Settings window is assigned to enter general information concerning the project.

New project function enables to organize a new (blank) Project.



To use «New project» function it is necessary to install the software

The screenshot shows the 'Settings' dialog box with the 'General data' tab selected. The fields are as follows:

Field	Value
Company name:	Company 1
Plan name:	Plan 1
Prepared by:	Petrov A.A.
Currency code:	th. rub.
Natural unit of meas.:	th. tons

Buttons: New project, OK, Cancel, Help.

See also:

[General data](#)

[Period data](#)

[Taxes names](#)

[Taxes rates](#)

[Payment period](#)

[Specify for each item](#)

[Others](#)

General data

Company name - name of the company.

Plan name - name of the plan to be calculated.

Prepared by - information about the author of the calculations.

Currency code - description of currency of the calculations.

Natural unit of measurement - description of natural unit of operating expenses.

Period data

Initial plan year - initial year of the software calculations.

Forecast period (years) - period of making calculations (from 1 to 10 years).

Including by months - quantity of years that the software displays by month.

Taxes description

Name - contains list of four standard taxes that are calculated by the software automatically.

- Value Added Tax (VAT);
- Social;
- Income Tax;
- Property Tax.



The software also provides for possibility of specific taxes accounting see table ["Financial parameters" \(taxes\)](#)

Name	Rate (%)	Payment period	Specify for each item
Value added tax (VAT):	18	grace period 1 m.	<input type="checkbox"/>
Social:	26	grace period 1 q.	<input type="checkbox"/>
Income tax:	20	grace period 1 m.	<input type="checkbox"/>
Property tax:	2,2	grace period 1 q.	<input type="checkbox"/>

☐ Account repayment of VAT

Buttons: New project, OK, Cancel, Help

Value added tax (VAT) is the tax on the amount of increment value, calculated in the form of margin between sales revenue, service revenue and cost of raw materials, semi-products that are purchased from other manufacturers. Tax rate can differ depending on type of production. VAT is included into product price by the seller and is paid by the customer. Assignments to budget are calculated as the difference between VAT paid by the customer and VAT paid on the expenditures included in cost of products sold.

Social is payment tax charged by the employer in favor of the employee. The tax amount is calculated as the multiplication of appropriate interest rate by salary fund.

Income tax is the tax payable from the income of organization, i.e. from received revenues, reduced by the amount of all incurred expenses. It is calculated as the multiplication of income by tax rate.

Property tax is the tax chargeable to the property that is on balance of the company. It is calculated as the multiplication of tax rate by average annual net book value of fixed and intangible assets.



1. *Property tax is not charged to the property belonging to investments in progress*
2. *Property tax is also charged to the net book value of fixed assets which is determined in the section "Balance influences"*

Account repayment of VAT repayment out of budget: enables to set VAT received.

Tax rates

Rate (%) – percentage rate is specified regarding each of the taxes.

Payment period

Payment period – concerning each of the four taxes, the opportunity to select the following payment periods is given to user:

- **In the current month** - tax payment occurs in the month of accruing;
- **Grace period 1 month** - tax payment occurs in the month, next to the month of accruing;
- **Grace period 1 quarter** - tax payment occurs quarterly.



Regardless of selected tax treatment charge (automatic or manual) in the table "[Financial parameters](#)", payments of taxes into budget occur in conformity with the periods defined in this column (except VAT)

Specify for each item

Specify for each item enables to set different tax rates for each item of revenues and expenses. If the selected type of accruing is "for each item", tax rates data, entered in this window, are ignored. It is allowed to specify VAT and social for each item.

Others

Discount rate (%) is used for efficiency assessment of investments made. Economically discount rate is rate of return of invested capital required by investor. In other words, using the discount rate, it is possible to determine the amount necessary for the investor to pay today to obtain the right to get estimated income in future. That is why making of key decisions depends on the discount rate value, including choice of investment project (see [example](#)).

Enable software sheets protection enables or disables protection of software sheets.



1. In the case of disabling the protection of software sheet, user gets access to all the formulae of the software. Occasional or intended change of the latter may lead to **incorrect calculation results**. We strongly recommend you **NOT** to disable the protection of software sheets!

2. Checking of box protection is fulfilled by feature "Protected cell" of Microsoft Excel sheet. When copying data from another book, remember that all Microsoft Excel cells have "Protected cell" status by default and, therefore, will be protected from changes during copying in the software!

3. Presented examples are made to the settings, in which the separator between integer and fractional numbers is a comma. Remember that your operating system settings may differ from those given in Figures

Recalculate manually enables or disables manual recalculation of programmed formulae. To recalculate manually press «F9» key. When changing into manual mode symbol «M» (manual) appears in the upper left corner of each table.



Manual recalculation of the tables is necessary if there is large quantity of datum, because Microsoft Excel may brake software functioning in this case

Table view

Display % advance / credit purchase gives the user opportunity of detailed planning of advance payment and grace period by specifying percentage of payments for each item of revenue and expenses. When selecting this position additional column «[% advance / credit purchase](#)» appears in the tables of the program.

Display 0 period data in the tables "Financial parameters" and "Balance" displays or hides [balance influences](#) that enables to take into account influence of the activity occurred before the beginning of calculations. When selecting this item in the table "Balance", additional section "[Starting balance](#)" appears.

Display other incomes and expenses in the table "Financial parameters" displays or hides [block of calculations](#) associated with other incomes and expenses of the project.

User's draft

<< open the previous table.

>> open the next table.

Add - create a new clear sheet ([User's draft](#)).

Rename - rename the selected sheet.

Delete - delete the selected sheet.

Additional trends

See [here](#) for detailed use of the trends.

Trends of Table "Sales Plan" enables to specify modifications of prices for each type of products.

Trends of Table "Variable Expenses" enables to specify modifications of prices for each type of variable costs.

[Example of use of additional trends in Table "Sales plan"](#)

[Example of use of additional trends in Table "Variable Expenses"](#)

Toolbar



Add entry

Adds new position of products, expenses, investments or credits in the tables of the software.



Delete entry

Deletes marked positions of products, expenses, investments or credits in the tables out of the software.



Display years only / all periods

Displays / hides yearly data in the selected table.



Display / hide trends

Displays / hides general string of trends in the selected table.



To previous table

Opens the previous table.



To the next table

Opens the next table.



Settings

Opens [settings window](#) of the software.



Mark table for printing

Performs marking of selected table of the software for printing. Possibility of separate marking exists in the program with the help of module "[Print reports](#)".



Run the program "Checking of calculations"

Starts [application](#) of the program "Enterprise Financial Model" that enables to check calculations for compliance with basic rules of investment projects estimation.



Help

Opens this help file.



Software operation training

Opens file of training.

Trends

Trends enable to simulate rapidly different scenarios of business development without laborious selection of initial data and also to take into consideration seasonality and inflation when calculating. Trends are available in the tables: «Sales Plan», «Variable Expenses», «Fixed Expenses», «Personnel cost», «Plant&Equipment», «Loans».



Additional trends that enable to take into account [modification of prices](#) for each type of products and expenses are available in the tables «Sales plan», «Variable Expenses»

To add the trend click button «Display / hide trends» on [user's toolbar](#).

To hide the trend click button «Display / hide trends» on [user's toolbar](#).

[Example of use the trends](#)

Totals line of minimal balance

String «**Min. balance**» enables to check financial feasibility of the project (positive balance of cash in each period data). Resulting column displays minimal value of cash within the whole range of calculations. Value in each period displays accumulated balance of cash.



When calculating it is necessary to control positive total balance in each period. Otherwise, even in spite of high economic parameters, project will be impossible to realize (the project is **financially unrealizable**)

[Example of financially realizable / unrealizable project](#)

	A	B	C	D	E	F	G	H	I	J	K
1					Min. balance	0 period	jan 2010	feb 2010	mar 2010	apr 2010	may 2010
2				Table 10. Cash Flow Statement (th. rub.)	-90,00	0,00	0,00	4,00	10,00	-90,00	10,00
3											
4											
5											
6											
7				Table 10. Cash Flow	The project is financially unrealizable		Negative balance of cash in separate period data				
8				Plan 1, currency: th. rub.							
9											
10											
11				Rs	DESCRIPTION	TOTAL	0 period	jan 2010	feb 2010	mar 2010	apr 2010
12											
13				▲ ▼	CASH FLOW FROM OPERATIONS						
14				1	Cash in	0,00	0,00	0,00	0,00	0,00	0,00
15				2	Receivable Payments	0,00	0,00	0,00	0,00	0,00	0,00
16				3	Cash out	100,00	0,00	0,00	0,00	0,00	100,00
17				4	Variable payments	0,00	0,00	0,00	0,00	0,00	0,00

Results of calculations

Each table of the software contains vertical and horizontal results of calculations. User may get acquainted with them having double clicked symbol ▲ ▼.

There is opportunity to get additional information regarding each type of products, expenses, investments and credits in the tables «Sales plan», «Variable expenses», «Fixed expenses», «Personnel cost», «Plant&Equipment», «Loans» and others. To do this, double click underlined number in the column "№" of respective position in the table.

Table 1. Sales Plan (th. rub.)										
		Adv. purch. (0-100 days)	Purch. on credit (0-100 days)	Sales price (th. rub.)	Min. balance 0,00	0 period 0,00	jan 2010 0,00	feb 2010 1 954,00	mar 2010 1 771,86	
Table 1. Sales Plan Plan 1, currency: th. rub.										
№	Description	Adv. purch. (0-100 days)	Purch. on credit (0-100 days)	Sales price (th. rub.)	TOTAL ↕	0 period (units)	jan 2010 (units)	feb 2010 (units)	mar 2010 (units)	
1	Product 1			1,00	550,00			50,00	50,00	
	L Unit sales price trend (%)									
	L Revenues (incl. VAT)				550,00		0,00	50,00	50,00	
	L VAT on revenues						0,00	7,63	7,63	
	L Advance sales					0,00	0,00	0,00	0,00	
	L Advances received from customers & buyers (balance)					0,00	0,00	0,00	0,00	
	L Credit sales						0,00	0,00	0,00	
	L Accounts receivable from customers & buyers (balance)						0,00	0,00	0,00	
2	Product 2				40,00			40,00	40,00	
	= TOTAL: Volume of sales (in tons):				990,00		0,00	90,00	90,00	
	= TOTAL: Revenues (excl. VAT):				9 788,14		0,00	889,83	889,83	
	= TOTAL: VAT on revenues:				1 761,86		0,00	160,17	160,17	
	= TOTAL: Revenues (incl. VAT):				11 550,00		0,00	1 050,00	1 050,00	
	= TOTAL: Cash receipts from customers & buyers:				11 550,00	0,00	0,00	1 050,00	1 050,00	
	= TOTAL: Advances received from customers & buyers:				-	0,00	0,00	0,00	0,00	
	= TOTAL: Accounts receivable from customers & buyers:				-		0,00	0,00	0,00	

Double-clicking display / hide
additional parameters of
calculations

Table 6. Other Source of Finance (th. rub.)										
		Min. balance 0,00	0 period 0,00	jan 2010 10,00	feb 2010 1 100,00	mar 2010 1 838,86	apr 2010 2 508,73	may 2010 3 312,80		
Table 7. Other Source of Finance Plan 1, currency: th. rub.										
№	Description	TOTAL ↕	0 period	jan 2010	feb 2010	mar 2010	apr 2010	may 2010		
1	Owners' equity	275,00		10,00	40,00	25,00	60,00	60,00		
2	Dividends (amount)	0,00								
3	Other loans received	0,00								
Table 6. Other Source of Finance (th. rub.)										
		Min. balance 0,00	0 period 0,00	jan 2010 10,00	feb 2010 1 100,00	mar 2010 1 838,86	apr 2010 2 508,73	may 2010 3 312,80		
Table 7. Other Source of Finance Plan 1, currency: th. rub.										
№	Description	TOTAL ↕	0 period	jan 2010	feb 2010	mar 2010	apr 2010	may 2010		
1	Owners' equity	275,00		10,00	40,00	25,00	60,00	60,00		
2	Dividends (amount)	0,00		0,00	10,00	50,00	75,00	135,00		195,00
3	Other loans received	0,00								
4	Principal payments	0,00								

Row
opens

User's work space

Work space is additional feature of the software giving user an opportunity to:

- effect approximate calculations independently;
- perform necessary decryptions;
- make conclusions and notes regarding fulfilled calculations.

Display / hide button opens or hides user's work space. With that entered data are not deleted.



The software includes additional sheet "Sheet 1", which is user's draft, that can be used for every extra calculations

"Copy to future periods" function

When calculating the project fairly often situation arises when original data are not modified in the course of time (for example, sales volume of products remains constant). There is special function in the program "**Enterprise Financial model**" (EFM) that enables to move entered data to future periods using one click. To do this, highlight the cell, which value is necessary to copy, and then press right mouse button and select menu item "**EFM: Copy to future periods**" or simply press "**ALT+S**".

Table 1. Sales Plan

Table «**Sales plan**» contains list of descriptions of salable products (services), terms of payment (advance / credit purchase), unit sales price, VAT (%) (see «[Specify for each item](#)»), and also sales volumes (in natural units) in each period data.

In the result of calculations totals of the table will be obtained:

- total volume of sales;
- sales revenues (is calculated as the multiplication of sales volume by unit sales price considering trends);
- payments for VAT on revenues;
- cash in from sales of products.



This table enables to browse results of calculations in detailed and general variant. See [here](#) for detailed results of calculations

User's step-by-step actions

1. Determine quantity of production types using «Add entry» / «Delete entry» buttons of [toolbar](#).
2. Specify product names.
3. Enter unit sales price of each type of product.
4. Specify sales volume in natural units for each type of product.
5. Enter terms of payment for the products and percentage of products (% advance / credit purchase) in the string «advance/credit purchase (days)». The products are shipped on terms of advance/credit purchase (see «[Display % advance / credit purchase for each item](#)»).
6. If necessary, enter Value Added Tax (VAT) for each type of product, (see «[Specify VAT for each item](#)»).

See also:

[Description](#)
[Advance / credit purchase](#)
[% advance / credit purchase](#)
[Sales price](#)
[Value Added Tax](#)
[Period data](#)

Description

Enter names of salable products in the column «**Description**».



Names of products cannot match!

Advance / credit purchase

Sale (purchase) of products and services on terms of advance payment is sale (purchase), whereby the customer pays total value or a part of the value of the products before delivery.

Sale (purchase) of products on credit is sale (purchase), whereby the customer pays total value or a part of the value of received products after delivery.

Table 1. Sales Plan (th. rub.)		Adv. purch. (0-180 days)	Purch. on credit (0-180 days)	Sales price (th. rub.)
Table 1. Sales Plan Plan 1, currency: 'th. rub.'				
№	Description	Adv. purch. (0-180 days)	Purch. on credit (0-180 days)	Sales price (th. rub.)
1	Product 1	15		1,00
2	Product 2		30	25,00
3	Product 3	10		

Calculation of advance and credit purchase subject to the following conditions:

1. Advance / credit purchase are entered in days. For advance purchase this is quantity of days between the date of advance payment and the date of shipment of the products. For credit purchase this is quantity of days between the date of shipment and payment date for delivered products. Minimal advance / credit purchase is 0 days, maximal is 180 days.

2. The software minimal period data is **1** month. Thereat it is accepted that cash inflows (outflows) are paid regularly during month. Therefore if advance (credit) purchase period **is not integer number of months** (for example, it is 45 days), and cash inflows (outflows) are paid **irregularly** during a month (for example, lease payment occurs non recurrently for 45 days), then for correct book keeping of cash inflows (outflows) it is necessary to round up the date of payment receipt to greater integer quantity of months (see [example](#) of rounding advance purchase):

1-29 days up to 30 days;

31-59 days up to 60 days;

61-89 days up to 90 days;

91-119 days up to 120 days, etc.

[Example of sales on terms of advance payment](#)

[Example of sales on postponed payment terms \(credit purchase\)](#)

% Advance / credit purchase

% advance / credit purchase determines percentage of income that the seller obtains before / after sale of products. Minimal percentage of advance (credit) purchase is 0%, maximal is 100% (see «[Specify % advance / credit purchase for each item](#)»).

Sales price

Sales price for the products is entered in currency that is specified as [primary currency of the project](#). Price is indicated for each type of product and includes VAT. To take into account seasonality of price change it is necessary to use [trend](#) for calculations.

Value added tax

Value added tax (VAT) is entered in percentage for each type of product. This column (see «[Specify for each item](#)») is necessary if VAT rates differ for entered types of products. Minimal value of the tax is 0%, maximal is 100%.

Period data

Volumes of sales of products in natural units in each period data are entered in columns "**Period data (units)**".

Table 1. Sales Plan (th. rub.)			Min. balance	0 period	jan 2010	feb 2010	mar 2010	apr 2010	may 2010	jun 2010
			0,00	0,00	22,50	112,50	188,40	180,30	242,67	325,04
Table 1. Sales Plan Plan 1, currency: 'th. rub.'										
№	Description	TOTAL	0 period (units)	jan 2010 (units)	feb 2010 (units)	mar 2010 (units)	apr 2010 (units)	may 2010 (units)	jun 2010 (units)	
1	Product 1	550,00			50,00	50,00	50,00	50,00	50,00	
	= TOTAL: Volume of sales (th. tons):	550,00		0,00	50,00	50,00	50,00	50,00	50,00	
	= TOTAL: Revenues (incl. VAT):	550,00		0,00	50,00	50,00	50,00	50,00	50,00	

Table 2. Variable Expenses

Table «**Variable expenses**» contains descriptions of variable expenses (for example, expenses to purchase raw materials and components), terms of payment to suppliers (advance / credit purchase), VAT, and also amount of expenses as result of multiplication of the volume of [selected product type](#) by the price and expenditure rate in each period data.

In the result of calculations these totals will be obtained in the table:

- variable expenses;
- VAT on Variable expenses;
- cash outflow concerning variable expenses.

User's step-by-step actions

1. Specify the number of variable expenses using «Add entry» / «Delete entry» buttons.
2. Specify descriptions for each type of variable expenses.
3. Specify type of products, which sales volume will be base for calculation of variable expenses or select "Total volume of sales".
4. Specify price of variable expenses per unit.
5. Enter payment terms concerning variable expenses: advance or credit purchase (days).
6. Specify percentages of variable expenses that have advance or credit purchase granted (see «[Display % advance / credit purchase](#)»).
7. Enter Value Added Tax (VAT) if necessary (see «[Specify for each item](#)»).
8. Specify expenditure rate of variable expenses per unit of selected product type.

See also:

[Description](#)
[Type of products](#)
[Advance / credit purchase](#)
[% Advance / credit purchase](#)
[Sales price](#)
[Value Added Tax](#)
[Period data](#)

Description

Enter descriptions of variable expenses in column «**Description**».

Type of products

Type of products is used to select description of product, which sales volume is the base to calculate variable expenses.

	Table 2. Variable Expenses (th. rub.)	Type of products	Ac (0-
Table 2. Variable Expenses <i>Plan 1, currency: 'th. rub.'</i>			
№ ▲ ▼	Description	Type of products	Ac (0-
	Units sales price trend (%)		
1	Variable expenses 1		
2	Variable expenses 2		
3	Variable expenses 3		
4	Variable expenses 4		

Advance / credit purchase

Advance / credit purchase [see](#) table «Sales plan».

% Advance / credit purchase

% advance / credit purchase determines percentage of variable expenses that is paid before / after receipt of products (services). Minimal percentage of advance (credit) purchase is 0%, maximal is 100% (see «[Specify % advance / credit purchase for each item](#)»).

Sales price

Sales price of variable expenses is entered in currency specified as [primary currency of the project](#). Specify the price (includes VAT) for each type of variable expenses. To display seasonality of price change use [trend](#) for calculations.

Value Added Tax

VAT (%) [see](#) Table «Sales plan».

Period data

Period data is used to enter values of variable expenses as expenditure rate of selected type of product in each period data.

Table 2. Variable Expenses (th. rub.)		Type of products	Adv. purch. (0-180 days)	Purch. on credit (0-180 days)	Sales price (th. rub.)	Min. balance 0,00	0 period 0,00	jan 2010 0,50	feb 2010 100,00
Table 2. Variable Expenses <i>Plan 1, currency: th. rub.</i>									
#	Description	Type of products	Adv. purch. (0-180 days)	Purch. on credit (0-180 days)	Sales price (th. rub.)	TOTAL «»	0 period (rate)	jan 2010 (rate)	feb 2010 (rate)
	Units sales price trend (%)					-			
1.	Variable expenses 1	Product 1				-		0,50	0,50
2.	Variable expenses 2	Product 2				-		0,40	0,40
3.	Variable expenses 3					-			
4.	Variable expenses 4					-			
= TOTAL: Variable expenses (excl. VAT):						0,00			0,00
= TOTAL: VAT on variable expenses:						0,00		0,00	0,00
= TOTAL: Variable expenses (incl. VAT):						0,00		0,00	0,00
= TOTAL: Cash outflow:						0,00	0,00	0,00	0,00
= TOTAL: Advance payments to suppliers:						-	0,00	0,00	0,00
= TOTAL: Accounts payable to suppliers:						-		0,00	0,00

Table 3. Fixed Expenses

Table «**Fixed expenses**» contains descriptions of fixed expenses (for example, costs of maintaining buildings, leasing of premises), terms of payment to suppliers (advance / credit purchase), VAT, and also values of fixed expenses in each period data.

In the result of calculations these totals will be obtained in the table:

- fixed expenses;
- VAT on fixed expenses;
- cash outflow concerning fixed expenses.

To take into account changes of fixed expenses it is necessary to use [trend](#) for calculations.

User's step-by-step actions:

1. Specify the number of fixed expenses using «Add entry» / «Delete entry» buttons.
2. Specify descriptions for each type of fixed expenses.
3. Specify values of fixed expenses in each period data.
4. Enter terms of payment: advance / credit purchase (days).
5. Specify percentages of fixed expenses that have advance or credit purchase granted (see «[Display % advance / credit purchase](#)»).
6. Enter Value Added Tax (VAT) if necessary (see «[Specify for each item](#)»).

See also:

[Description](#)
[Advance / credit purchase](#)
[% Advance / credit purchase](#)
[Value Added Tax](#)
[Period data](#)

Description

Column «**Description**» serves to specify the descriptions of fixed expenses.

Advance / credit

Advance / credit purchase: [see](#) table «Sales plan».

[Example of work with suppliers on terms of advance purchase \(rounding of advance\)](#)

[Example of work with suppliers on terms of advance purchase](#)

[Example of work with suppliers on terms of credit purchase](#)

% Advance / credit purchase

% advance / credit purchase determines percentage of fixed expenses that is paid before / after receipt of products (services). Minimal percentage of advance (credit) purchase is 0%, maximal is 100% (see «[Display % advance / credit purchase](#)»).

Value added tax

VAT (%) – [see](#) table «Sales plan».

Period data

Period data is used to enter fixed expenses in each period data.

Table 4. Personnel cost

Table «**Personnel cost**» contains descriptions and number of divisions, terms of salaries payments and average salaries of employees. Personnel cost expenses are calculated as the product of quantity of employees by average salary of an employee. To take into account change of salary in time it is necessary to use [trend](#) for calculations.

In the result of calculations these totals will be obtained in the table:

- resulting value of personnel cost expenses (calculate as the multiplication of quantity of employees by average salary of an employee);
- social on salary accrued;
- cash outflow concerning personnel cost.

User's step-by-step actions:

1. Specify number of enterprise's divisions using «Add entry» / «Delete entry» buttons.
2. Specify names of the divisions.
3. Enter number of employees in each division into column «Employees».
4. Specify average salary of division's employee in each period.
5. Enter salary payment delay (days).
6. Enter payroll tax rate if necessary (see «[Display % advance / credit purchase](#)»).

[Example of accounting of variable personnel cost in calculations](#)

See also:

[Description](#)

[Days payable salaries](#)

[% of days payable salaries](#)

[Employees](#)

[Social](#)

[Period data](#)

Description

Column «**Description**» serves for specification of names of company divisions.

Payable salaries

Payable salaries is number of days between salary accrual date and date of salary payment. Minimal delay is 0 days, maximal is 180 days.

% payable salaries

Enter column "**% payable salaries**" in percentage. It specifies percentage of Personnel cost, which is paid by grace. Minimal percentage of grace is - 0%, maximal is 100%. (see «[Display % advance / credit purchase](#)»).

Employees

Column «**Employees**» is used to specify number of employees of each division.

Social

Enter percentages in column "**Social (%)**" for each division. It specifies social on salary accrued of the employees (see «[Specify for each item](#)»). Minimal tax value is 0%, maximal is 100%.

Period data

Period data (average salary) specifies the value of average salary of an employee of division in each period.

Table 5. Plant&Equipment

Table «**Plant&Equipment**» contains description of investments, term of depreciation, VAT and also values of equipment payments in each period data.

In the result of calculations these totals will be obtained in the table:

- investments in progress;
- plant and equipment;
- VAT on plant and equipment;
- depreciation.

User's step-by-step actions:

1. Specify number of equipment payments using «Add entry» / «Delete entry» buttons.
2. Specify descriptions of each type of equipment payments.
3. Specify term of depreciation of fixed assets (intangible assets).
4. Enter the amount of equipment payments in each period data.
5. Enter value added tax (VAT) if necessary (see «[Specify for each item](#)»).

See also:

[Description](#)

[Depreciation period](#)

[Value added tax](#)

[Period data](#)

Description

Column «**Description**» serves to specify descriptions of investment.

Depreciation

Depreciation is used to accrue depreciation of fixed assets that are put in operation. Depreciation period is entered in years.

Depreciation period of fixed assets (intangible assets) is the period in which this fixed asset is planned to use.



Depreciation of fixed assets starts from the month next to the month of the last investment or the month of occurrence of the first income (later event is selected automatically)

[Example of accounting of equipment depreciation](#)

Value added tax

VAT (%) [see](#) table «Sales plan».

Period data

Period data is used to enter equipment payments in each period data.

Table 6. Loans

Table «**Loans**» contains description, payment period, percentage rate, grace period on payment (grace period) and loan amount.

In the result of calculations these totals will be obtained in the table:

- amount of proceeds from loan disbursement in each period data;
- residue of principal debt;
- interest payable;
- principal payments.

User's step-by-step actions:

1. Specify number of loans of the project using «Add entry» / «Delete entry» buttons.
2. Specify descriptions of loans in the field «Description» (for example, "Loan from bank A", etc.).
3. Specify loan conditions: payment period, percentage rate and also grace of payment (grace period) on interest payments and principal debt.
4. Enter the value of proceeds from loan disbursement in accordance with supposed (concluded) loan agreement.

See also:

[Description](#)
[Loan payment period](#)
[Interest rate](#)
[Grace period](#)
[Period data](#)

Description

Column «**Description**» serves to specify descriptions of loans.

Loan payment period

Loan payment period determines the period of loan repayment (interests and principal amount) and is entered in months. Repayment of principal debt occurs by equal parts since the moment of the last receipt of loan proceeds.

interest rate (%)

Interest rate (%) is payment for the use of credit resources. Value of accrued interests is determined by means of multiplication of outstanding principal debt at the end of previous month by interest rate on the credit in a month (annual rate divided by 12).



In the case of grace period, interests accrued for the period of using the credit, are paid together with the first payment of principal debt

Grace period

Grace period is the period of time since the moment of termination of use until beginning of loan repayment. Thereat interest payments are accumulated for nonrecurring disbursement in the first month after termination of grace, and principal payments are distributed uniformly on the rest quantity of months.



Quantity of months of grace period cannot be more than credit term

[Example of grace period accounting](#)

Period data

Period data is used to enter proceeds from loan disbursement.

Table 7. Other Source of Finance

Table «**Other Source of Finance**» enables to take into account:

- owners' equity and payment of dividends to owners of company;
- others and short term liabilities;
- lease payments.

User's step-by-step actions:

1. Enter owners' equities and payments of dividends to the owners of company in respective periods of calculations in the strings «Owners' equity» and «Dividends (amount)».
2. Enter proceeds from borrowing in the sections «Other loans received» and «Short-term loans received» and also payments of principal debt and interests in each data period.
3. To take into account lease payments in lines:
 - Advance payments for leasing (incl. VAT) - enter paid advances on leasing including VAT.
 - VAT on leasing - VAT is allocated, that is paid in the sum of advance and lease payments.
 - Leasing payments (incl. VAT) - paid lease payments including VAT.

[Example of accounting of leasing operations](#)

[Example of nonstandard loan accounting](#)

Table 8. Financial Parameters

Table 8 «**Financial Parameters**» considerably expands capabilities of the software, enabling to account for specific features of calculated business. With its help user can select one of two variants (automatic or manual) to calculate depreciation, taxes, inventories, etc.

See also:

[Description](#)

[Inventories](#)

[Taxes](#)

[Other incomes and expenses](#)

[Balance influences](#)

Depreciation

Section "**Depreciation**" enables to take into account nonstandard accrual of depreciation.

Automatic - in automatic mode calculation of depreciation is fulfilled in accordance with the terms, [specified](#) in the table «Plant&Equipment».

Manual - in manual mode calculation of depreciation is fulfilled in accordance with the values entered by the user.

[Example \(of nonstandard accrual of depreciation\)](#)

Inventories

Section "**Inventories**" enables to take into account in calculations raw materials and components, finished inventories and unfinished inventories.

Automatic - in automatic mode calculation of inventories is fulfilled in separate module "Calculation and analysis of product cost".

Manual - in manual mode value of inventories is entered by user in each period data.



This version of the software includes only manual input of inventories. Additional block «Calculation and analysis of product cost» will enable to calculate value of inventories in automatic mode. Watch over new versions of the software on our [Web site](#)

User's step-by-step actions:

1. Enter datum on planned remaining inventory of enterprise in value terms in the strings «Inventories of raw materials and components», «Unfinished inventories» and «Finished inventories».
2. Enter payment for raw materials and components in the string «Payments on inventories» in accordance with schedules determined by suppliers.



To calculate raw materials and components it is necessary:

1. To specify number of working days of manufacture, for which raw materials and components are created (shelf life of inventories)
 2. To multiply expenses for raw materials and components, calculated in selected period in the table «Variable expenses» by shelf life of inventories and divide by 30 (number of days in a month)
-



1. Values in the strings: «Inventories of raw materials and components», «Unfinished inventories» and «Finished inventories» - set forth planned remaining inventory of enterprise (but **NOT** their change) in value terms for the end of respective period.

2. Pay attention to the fact that the product cost is not calculated in this version of software, i.e. fixed expenses are expenses of period and are not spread on production unit. In this connection it is necessary to account for finished products and work-in-progress only by variable expenses.

In the case of decrease of inventories, change in inventory become negative in cash flow statement that automatically leads to cash reduction concerning operating activities and means that the inventories were spent on sold products of enterprise

[Example 1 \(of estimation of raw materials and components\)](#)

[Example 2 \(of estimation of raw materials and components\)](#)

[Example 3 \(of estimation of raw materials and components\)](#)

[Example 4 \(of estimation of raw materials and components\)](#)

Taxes

Section "**Taxes**" enables to account in calculations any accruals and payments of taxes.



If it is necessary to take into account several specific taxes in calculations, each of them is possible to calculate separately in the [work space](#), and then to sum up in the strings «Other taxes (accrued)», «Other taxes (paid)»



This table contains string "VAT to indemnify" that enables user to record manually VAT repayment. To take into account VAT repayment, check box in front of respective option of window "[Settings](#)", and then [maximize position](#) "Value added tax"

[Example 1 \(nonstandard accrual of taxes\)](#)

[Example 2 \(accrual of other taxes\)](#)

Other incomes and expenses

Section "**Other incomes and expenses**" enables to account in calculations other income and expenses, and also advances given and received.

Other investment (financial) incomes - value of investment (financial) incomes is specified in each period data.

Other investment (financial) expenses - value of investment (financial) expenses is specified in each period data.

Other advances received (provided) - value of advances received (advance payments to suppliers) is specified in each period data. Other advances are advances received (advance payments to suppliers) that cannot be accounted in the tables of variable and fixed expenses or sales plan (for example, leasing deposit).

Balance influences

Section "**Balance influences**" enables to take into account in calculations influence of the activity occurred before beginning of calculations on enterprise's balance. In this item of the table "**Financial parameters**" values of balance items are specified in each period data. Initial values (values of zero period) are moved from the item [starting balance](#).

[Example \(balance influences\)](#)

Table 9. Profit and Loss

Profit and Loss sets forth results of enterprise's activity during period data and how these results were obtained, i.e. by the method of comparison of income and expenses.



Analysis of profit and loss statement will help to understand under the influence of what reasons volumes of obtained income changed during the considered period

Revenues - value of the products shipped to customers. As a result of sale of products cash or enterprise's accounts receivable increase.

Variable expenses - expenses which value changes (increases or decreases) together with the change of sales volumes of products. For example, cost of raw materials and components, expenses for electric energy, etc.

Fixed expenses - expenses that do not depend on the volume of sold products, which can be neither increased nor decreased during growth or reduction of manufacturing of products in a short period of time. For example, costs of maintaining buildings, leasing of premises, etc.



Revenues and expenses are taken into account in the profit and loss statement excluding VAT and excise taxes

Salary - expenses for salaries payments (with payroll taxes).

Depreciation - calculation of ratio of fixed assets (intangible assets) primary value to their depreciation period.

Operating profit - income obtained from operating activity. It is calculation of the difference between revenues and sales expenses (including depreciation).

Taxes - all accrued payments to budget and non-budgetary funds, are included into calculation, besides VAT, social and income tax.

Lease payments - accrued leasing payments (it is calculation of ratio of total amount of leasing agreement excluding VAT to the quantity of leasing payments).

Other incomes (expenses) - incomes (expenses) from other (non-operating) activity of enterprise (for example, income from the sales of fixed assets or income connected with the payments for the services provided by credit institutions).

Interest expenses - all accrued interests on credits and loans.

Income before tax - value, obtained by addition of operating income to other income minus other expenses, lease payments, interest expenses and accrued taxes.

Income tax - tax payable from the income of organization, i.e. from obtained income, decreased by the value of all expenses made. It is calculated as multiplication of income by tax rate.



In case of negative taxable income, the income tax is not paid and accrued value (negative in the case of losses) decreases future payments to budget

Net Profit - the profit that remains at the disposal of enterprise after payment of income tax.

Dividends - part of enterprise's net profit that is distributed among owners.

Retained Profit - profit balance of income in period data after payment of dividends to the owners.



- 1. In terms of sustainability, it is desirable that the main part of income formed for the account of operating activity, and not at the expense of other operations that are random in most cases. If the results of activity of the organization are determined by the values of other incomes and expenses, then they detailed analysis and further control is necessary.*
- 2. When making profit and loss statement, compare income and expenses during the period data. However, income is not always equivalent to cash inflow and expenses to cash outflow. Everything depends on payment conditions to suppliers or customers. Thus, income of the profit and loss statement is not always equivalent to cash*

Table 10. Cash Flow Statement

Cash flow statement sets forth all cash inflows and payments of enterprise. The basis of calculation is the difference between cash at the beginning and at the end of period accordingly based on which the value of cash flow is estimated.

Cash flows in the cash flow statement are grouped in three key areas of enterprise's activity:

- cash flows provided by operating activity;
- cash flows provided by investment activity;
- cash flows provided by financial activity.



When calculating it necessary to [control](#) the presence of non-negative total cash balance in each period. Otherwise the project becomes financially unrealizable



Analysis of cash flow statement will help to answer the following questions:

- 1. Are there enough inflows from operating activity to finance working capital?*
 - 2. Is there enough cash on the account of enterprise to finance chosen investment program?*
 - 3. Is there a need (and to what extent) to attract additional sources of financing?*
-

See also:

[Cash flow from operations](#)
[Cash flow from investments](#)
[Cash flow from financing activities](#)

Cash flow from operations

Operating activity sets forth operating activity of company (usually connected with manufacturing and sale of products and services).



Properly functioning organization must generate cash flow during operating activity. Without it stable, long-term work, targeted at business expansion and development, is impossible. Negative or insignificant cash flow from operating activity is a signal of coming financial problems. In many cases, it is possible to compensate the lack of cash from operating activities selling part of assets or obtaining credit, but it is not worth to abuse this. Such measures cannot be firm basis of operating activity of the organization in the long-term perspective

Cash inflow from operating activity includes:

- actual payment for shipped products and services;
- repayment of accounts receivable;
- customers' advance payments for future deliveries of products and services.

Cash outflow from operating activity includes:

- payments under items of variable expenses including VAT;
- payments under items of fixed expenses including VAT;
- personnel cost (salaries payments);
- payments to budget and non-budgetary funds;
- investments in inventories.



1. Increase of inventories (positive growth of inventories) will lead to reduction of cash inflow during respective period (i.e. investment of cash in inventories occurs)

2. Decrease of inventories (negative growth of inventories) will lead to increase of cash inflow during the period, because decrease of accrued expenses occurs for the account of the use of the inventories created in previous periods

3. As far as operating activity in successful enterprise is the main source of income, then it should be the main source of cash

Cash flow from investments

Investment activity this is the result of purchase or sale of fixed assets and also securities.



First of all investment activity relates to cash outflow necessary for expansion, modernization, upgrade, and is possible if there is free cash in the organization, that is "waiting for" more profitable investment. Sale of fixed assets and other operations associated with cash inflow, are practiced by organizations in financial difficulties or for the increase of profitability of business in general

Cash inflow from investment activity includes:

- inflows from the sale of fixed and intangible assets;
- income from sale of securities, etc.

Cash outflow from investment activity includes:

- expenses for the purchase of fixed assets (fixed and intangible assets);
- purchase of securities, etc.



As far as during successful business the company usually seek to expand or upgrade production facilities, investment activity in general leads to cash outflow

Cash flow from financing activities

Financial activity sets forth results of enterprise's work with raising capital during defined period of time.



Financial activity reflects company's ability to obtain financing from capital markets and to fulfil its obligations. Financial operations are intended to provide additional inflow during shortage of cash

Cash inflow includes:

- cash inflows from the owners (including sales of additional shares);
- obtaining new credits, etc.

Cash outflow includes:

- repayment of principal debt on credits and loans;
- repayment of interest expenses;
- payment of dividends to shareholders;
- lease payments, etc.

Table 11. Balance

Balance sheet report sets forth financial status of enterprise as of a certain date (for example, at the end of report period). The balance sheet demonstrates a company as the holder of resources, namely assets that are equal to the sources of financing, i.e. equity and liabilities. Managerial, but not accounting balance is constructed in the program. Extended items of assets and liabilities are formed on the base of profit and loss statement data, cash flows data and established initial values of balance.

Previous balance enables to set forth enterprise's activity before beginning of calculations. Further change of flows as of current activity is conducted in the section "[Balance influences](#)".



Initial values of the section "Inventories" – set forth in corresponding section of the table "Financial parameters". Values of initial operations on leasing are in the section of leasing operations of the table "Other Source of Finance"

What is the balance necessary for:

1. With the help of managerial balance it is possible to estimate business value.

For instance, there are two enterprises: bakery and dairy plant. The first one earns profit and the second yields losses. Which of them will be more attractive from the viewpoint of potential customers? Undoubtedly, the second one. As it possesses much larger production assets.

2. With the help of managerial balance it is possible to control assets and liabilities of an enterprise. The managerial balance provides the head of enterprise with information about composition and value of available property. At that it is extremely important to execute complete control over the assets of the enterprise in order to prevent their loss or theft.

3. The managerial balance enables to observe dynamics of business development. The managerial balance, formed during several months, indicates dynamics of fluctuation of business value and allows estimating its growth, setting forth change of property value, residues of cash and non-cash, products and components in enterprise's stock, etc.

See also:

[Assets of balance](#)
[Equity and liabilities of balance](#)

Assets of balance

Asset of balance part of balance that sets forth in value terms material and intangible assets, owned by the enterprise, and also their composition and location.

Fixed Assets are the assets that have term of use more than one year: intangible assets and fixed assets. Fixed assets include buildings, constructions, equipment, automobile transport etc.



Fixed assets are booked on the balance according to complete expenses for their purchase or their acquisition or market value (excluding VAT) and are depreciated during useful life

Intangible assets are organization expenses, patents, licenses, trademarks, etc. Intangible assets are booked on the balance according to market value or purchase value (excluding VAT) and are depreciated during useful life.



On balance fixed assets and intangible assets are booked according to residual value, which is equal to the difference between the original (purchase) price without VAT and accumulated depreciation at the time of accounting

In the item «**Unfinished investments**» expenses are accumulated for unfinished operations of purchase of fixed assets and intangible assets. Upon completion of the investments accumulated expenses are moved to the item "Fixed assets". Since the following month upon completion of the investments depreciation of fixed or intangible asset starts.

Current assets are the assets which, temporarily being in stock inventory, accounts receivable or cash, can be converted into cash within one production cycle (or one year). Production and sales cycle begins at the moment of payment to suppliers of raw materials and components and finishes with money receipt for shipped products.

Inventories are tangible assets, designated for sale or use in manufacturing. Inventories include the following articles: «stocks of raw materials and components», «unfinished goods» and «finished goods».

Stocks of raw materials and components are taken into account by the value of their purchase or by market value (minimal is chosen).

Unfinished goods is specified in this version of software as sum of variable expenses for manufacturing.

Finished goods in this version of the software is estimated as sum of fixed expenses for manufacturing.

Accounts receivable rights of claim that belong to the seller (supplier), as to the creditor, as per unfulfilled monetary obligations of customers (beneficiaries) concerning payment of actually delivered products, works or services rendered under the contract. Accounts receivable include: accounts receivable from customers & buyers, advances to suppliers and advance on leasing and other accounts receivable (e.g., overpayment of taxes).

Accounts receivable from customers & buyers this is cash that customers must pay to the firm, those who purchased some products or services on credit.

Advances to suppliers payment preceding transfer of property, work performance or providing of services. Advance is not a mean of guarantee to fulfill obligation, so in the case of no execution of the contract under which the advance was introduced, it is subject to return.

Other accounts receivable payments that form budget's tax debt (taxes receivable).

Advance on leasing amount that is paid by the firm as advance payment for leasing.

Cash comprises cash balance available in enterprise's cash office and on its current accounts.

Equity and liabilities of balance

Equity and liabilities part of accounting balance that sets forth in money terms amount of own and borrowed equities of assets of enterprise.

Total Equity represents **owners' equity** and **retained earnings**, accumulated for all the time of enterprise's activity.

Long term liabilities balance of debt as per long-term credits (more than one year) including accrued interests,

Short term liabilities balance of debt as per short-term credits (less than one year) including accrued interests,

Accounts payable liability to pay for products or services that were received or delivered.

Salary payable salary accrued but not paid.

Accounts payable to budget not paid accrued taxes, non-contributed insurance premiums.

Advances received from customers & buyers buyers' prepayment on the account of future deliveries of products.

Debt on lease payments balance of debt as per accrued lease payments.

Table 12. Analysis

Table «**Analysis**» is used for the analysis of calculations made and includes the following items:

[Setting user's parameters](#) applied for tracking of values of selected parameters when making calculations.

[Financial Indicators](#) allows for estimation of the company in terms of efficiency of investment and to choose the most profitable variant of cash investment.

[Break even](#) enables to identify dependence of financial results from sales volumes of products (services).

[Financial analysis](#) enables to estimate liquidity, financial sustainability and economic efficiency of enterprise to determine its credit capacity.

Setting user's parameters

When calculating user often faces necessity to track the values of certain indexes. For example, payback period should not be more than 5 years or profitability index is not less than 1,2 etc. In this case, after each change in the source data one has to use the table "**Analysis**" to verify fulfillment of set restrictions.

Table «**Setting user's parameters**» enables to adjust from one to three significant indexes (with this their names and links (as formula) to the respective cells of the software are entered). After this window appears allowing to track changes in selected indexes during each adjustment of initial data.

Table 12. Analysis
Plan 1, currency: 'th. rub.'

Setting user's parameters

Display

Description	Function
Net Present Value (NPV)	1 494

User parameters

Net Present Value (NPV)

1 494

Financial Indicators

It is the table that represents the values of key indexes of project efficiency.

In the strings of the table cash flows of the project are set forth, which add up to **free cash flow (FCF)**. The Free Cash Flow is the cash remained at the project investors' (creditors and shareholders) disposal, that can be paid to them (as dividends or loan interest) without any damage to the company's business. Summarized amount of the FCF is normally used to assess investment appeal of a project, as far as it is considered that any asset (including a firm) values the sum equal to the net cash it may generate for its owners in the future. It is assumed that in the last year the enterprise stops its business and all its assets to be sold out (i.e. the free cash flow will be added with the residual value).



When calculating the investment project, it is usually assumed that the costs incurred by the investor prior to the start of the calculation should not be considered in the analysis of efficiency indexes i. e., the column "0 period" is shown in the table of Financial Indicators "for reference" and does not influence on the totals of the project (NPV, IRR)

In the result of calculations these totals will be obtained in the table:

Net value (NV) accumulated effect of project realization for the period data. Net value is calculated as total value of free cash flows during all the period of project realization:

$$NV = \sum_{i=1}^n FCF_i,$$

where

FCF - free cash flow in interval i ;

n - number of calculation periods.

Discounting it is determination of current value of cash flows related to future periods. Discount rate it is rate of return on invested capital required by investor. In other words, using the discount rate one can determine the amount that the investor will have to pay today for the right to receive expected income in the future. Therefore, the value of the discount rate depends on key decisions, including choice of investment project.

[Example of calculation of NPV for two projects](#)



One of the ways of discount rate calculation is the use of weighted average cost of capital (WACC):

$$WACC = \frac{E}{E + D} r_e + \frac{D}{E + D} r_d (1 - T),$$

where

E - value of company's total equity;

D - value of company's loan capital (usually value of long-term loans);

r_e - cost of total equity (equity claims)*;

r_d - credit interest;

T - income tax rate

* For simplicity some managers calculate the cost of equity capital as the sum of base credit rate

and the risk premium. For example, if company receives loan capital at the rate = 15% per annum and estimated value of the risk premium = 5%, the cost of equity = 15 + 5 = 20%. In most countries such the premium is equal to 4-5%, although it can be diversified depending on markets and types of enterprises

Net Present Value (NPV) accumulated discount effect for the period data, calculated by formula:

$$NPV = -I + \sum_{i=1}^n \frac{FCF_i}{(1+r)^i},$$

where

FCF_i - free cash flow in interval i ;

I - initial investments (investments on zero stage of calculation) in the project;

r - discount rate as per the project;

n - number of calculation periods.

NPV is among the most frequently used indicators of efficiency. In the general case the method of calculating NPV consists of summation of free cash flows values, reduced to the current moment, in all ranges of planning.

Free cash flow cash remained at the project investors' (creditors and shareholders) disposal, that can be paid to them (as dividends or loan interest) without any damage to the company's business.



Interpretation of the net present value (NPV) may be different, depending on the purpose of investment analysis:

- *determination of the efficiency of independent investment projects (so-called absolute efficiency), when decision to accept or reject the project is made,*
- *determination of the efficiency of mutually exclusive projects (comparative efficiency), when it is concluded what project of several alternatives to accept.*

In the simplest case NPV characterizes the absolute value of total effect achieved with realization of the project and recalculated at the time of accepting of decision, provided that the discount rate sets forth the cost of capital

In the case of positive NPV value, examined project is recognized as investment attractive, zero corresponds to the equilibrium state, and negative value of NPV indicates inadvisable realization of the project for potential investors.



The negative value of NPV is not obligatory indicative of direct losses of investors (received less than spent), but merely sets forth more preferred variants of investing

Internal Rate of Return (IRR) it is the value of discount indicator, at which zero value of NPV is guaranteed. The formula corresponds to this condition:

$$NPV = -I + \sum_{i=1}^n \frac{FCF_i}{(1 + IRR)^i} = 0.$$

The purpose of internal rate of return is to determine maximum cost of capital, which can be used to finance the project, in which the owner (holder) of the project does not sustain losses.



Calculated value of IRR is usually compared with the rate of return on invested capital required by investor. If it is equal to or greater than those required by the investor, investing is economically justified, if it is less, then, investments in the considered project are inexpedient



1. If comparison of alternative investments for the IRR and NPV leads to opposite results, preference is given to the project that has greater NPV

2. IRR may not exist if net cash flows of the project change its sign more than 1 time

Payback period duration of period since launch of the project until payback moment (i.e., the period after which NV is not negative). Assessing the efficiency of the project, payback period is usually in the form of restriction.

Discounted payback period duration of period since launch of the project until payback period taking into account the temporary value of cash (i.e., the period after which the NPV is not negative).

Profitability Index (PI) enables to determine relative characteristics of efficiency of investments.

$$PI = 1 + \frac{NV}{TIC},$$

where

NV- net value of the project;

TIC - total investment costs of the project.

Profitability index of investments answers to the question: what is the level of income, generated by the project and obtained per unit of capital investments?



Indicator PI is advisable to use for ranking available variants of investment in the conditions of limited amount of investment resources

Evidently that if:

$PI > 1$, then the project is accepted (when $NPV > 0$);

$PI < 1$, then the project is rejected;

$PI = 1$, then the project is neither profitable, nor unprofitable from the point of view of absolute income obtained by the owners.

Operational Profit Margin sets forth the value of operational profit per ruble of sold products. It is calculated as ratio of operating profit to revenues:

$$ROS_0 = OP/Re,$$

where

OP - operational profit of the project;

Re - revenues.

Net Profit Margin sets forth the value of net profit per ruble of sold products. It is calculated as ratio of net profit to revenues:

$$Ros_N = Cp / Re ,$$

where

Cp - net profit of the project;

Re - revenues.

Break even

Break even is efficient tool for making managerial decisions on sales volumes and prices of products, level of variable and fixed expenses, purchase and usage of resources. Break even allows answering the following questions:

- a) what influence the lowering of sales price of products will have on profit;
- b) what sales volume is necessary to cover additional fixed expenses incurred in connection with possible expansion of manufacturing;
- etc.

If there is no reliable forecast of the level of profit and expenses, then made decisions will be extremely risky and could result in losses of the company. Thus, the purpose of break-even analysis is to determine what will happen with financial results, if sales volume changes.



This version of the software includes only general break-even analysis. Additional block "Break-even analysis of production" will enable to make more deep analysis on the acceptance of economically grounded decisions in the matters of:

- optimization of product mix, ensuring the highest possible profitability;
- adjusting of prices of products;
- planning of production output in those volumes, which will achieve the required payback.

Watch for new versions of the software on our [Web site](#)

Conditions of conducting break even analysis

The main principle being the basis for the break-even analysis is the nature of expenses behavior. Part of the expenses varies with fluctuations of sales volume, and another part remains unchanged. The expenses of the first category relate to variable ones, and those of the second belong to fixed expenses.



Fixed expenses do not depend on the volume of production unless further development of business would require increase of production capacity and managerial staff. Unlike variable expenses, in case of sales volume decline, fixed costs do not change. The company is still obliged to pay salary, lease payments and credit interests. Therefore it is profitable for the unit of production to fall on the smallest amount of fixed costs, which is possible at maximum volume of sold production

Behavior of variable and fixed expenses under fluctuation of sales volume

Sales volume	Variable expenses		Fixed expenses	
	Total	Per unit of product	Total	Per unit of product
Grows	Increase	Constant	Constant	Decrease
Falls	Decrease	Constant	Constant	Increase

When applying model of break even, the following assumptions are introduced:

- expenses are reasonably divided into variable and fixed;
- variable expenses change proportionally to sales volume;
- fixed expenses remain unchanged;

- unit price is stable in the range included in the analysis;
- product mix of salable products remains unchanged;
- prices of the factors influencing the level of expenses, remain unchanged (i.e., price of raw materials, lease value, etc. remain constant);
- the sole indicator influencing the expenses is sales volume.

Marginal income is the result of sales of products after reimbursement of variable expenses, i.e. difference between revenues and variable expenses:

$$\text{Marginal income} = \text{Revenues} - \text{Variable expenses}$$

[Example of calculation of marginal income](#)



Any kind of increase of marginal income is profitable for an enterprise

Cover deposit ratio (CDR) percentage of marginal income in sales volume:

$$\text{CDR} = \text{Marginal income} / \text{Revenues}$$

[Example of calculation of the cover deposit ratio](#)



CDR demonstrates what percentage of the sales revenues of products can be used to cover fixed expenses and to form income. The higher this indicator, the more attractive business from financial point of view

Break even level this is the value of sales revenue at which company has neither loss, nor profit, i.e. revenues after repayment of variable costs are exactly enough to cover fixed expenses.

$$\text{Break even level} = \text{Fixed expenses} / \text{CDR}$$

Break even may be conducted by graphic and analytic methods. Graphic method demonstrates dependence of revenues, expenses and income from alteration of sales volumes. Intersection point of lines of total expenses and income determines the level of break-even, i.e. of that sales volume, in value terms, from which company ceases to suffer losses and begins to increase profit.

[Example of break even calculation](#)



In order to determine how close the company came to the border, beyond which activity becomes unprofitable, the deviation of actual volume of income from estimated value of break-even level is defined

Margin of financial safety demonstrates the percentage for how much may sales volume decrease before company will sustain losses:

$$\text{Margin of financial safety} = (\text{Revenues} - \text{Break even level}) * 100\% / \text{Revenues}$$

[Example of calculation of margin of financial safety](#)

Operating leverage demonstrates percentage change of operating profit when revenue changes by 1%. Operating leverage is connected with level of entrepreneurial risk. The higher value of operating leverage, the greater profit (loss) from increase (decrease) of sales of products enterprise obtains. This indicator is used to determine the sensitivity of operating income to

changes of sales volume.

$$\text{Operating leverage} = \text{Marginal income} / \text{Profit from operating activities}$$

[Example of calculation of operating leverage](#)

tries: engineering and shipbuilding. Low level of leverage corresponds to food and light industry or trade

Financial Analysis

Financial analysis is obligatory component of the financial management of any company. The purpose of such analysis is to determine the current state of business and acceptable parameters of company, which of them should be maintained at current levels, and which are unsatisfactory and require operative invasion.

The following groups deal with analysis of financial state:

- Managers for the purpose of running enterprise;
- Credit analysts to estimate credit conditions and determine company's ability to repay its debts;
- Owners with the goal to study efficiency of resources usage.

For the analysis of financial state will be required complex evaluation system of indicators that characterize:

[profitability](#);

[efficiency](#);

[liquidity](#);

[stability](#);



To make clear managerial decision there is a need to calculate and compare values of indicators during several periods. Besides, it is useful to compare results with the standard. As a standard we can use the coefficients for any and the most successful, in terms of management, period of an enterprise or average industrial indicators. Remember that the influence of inflation or seasonal factors may have a significant impact on the value of the coefficients

Profitability Ratios

Profitability ratios characterize basic results of company's activity, as its survival potential completely depends on availability of sufficient level of profit. Besides that, investors want to be sure, that the income they are going to receive will be more than in case of any other investment with equal degree of risk.

Net profit margin demonstrates value of income obtained per ruble of sold products. It is calculated as the ratio of net profit to revenues for respective period.

Operational profit margin demonstrates the value of operating profit obtained per ruble of sold products. It is calculated as the ratio of operating profit to revenues during respective period.



Difference of net profit margin from operational profit margin is in the fact that the latter sets forth effectiveness of the basic business operations i.e. credit interests and other incomes and expenses are not taken into account in calculations

Return on assets displays value of income obtained per unit of assets. It is calculated as the ratio of net profit during respective period to the value of assets at the end of period.



When applying this coefficient remember that one can make wrong conclusions about decrease of return on assets if high-priced equipment appears on the balance of enterprise, which is not still used to manufactured products. Or return on assets may significantly exceed trade indicator if assets on the balance of enterprise are taken into account at the price much lower than market one

Return on equity displays how much income was obtained per unit of capital invested by the owners. It is calculated as the ratio of net profit for the period to the value of equity at the end of the period.



Low value of the coefficient may be the result of surplus equity relatively to borrowed cash and indicate insufficient involvement of credits. High value of the coefficient can be also undesirable because, if the leverage ratio is large, it can lead to high financial risk (remember about complex estimation of indicators!)



1. In the "beginning phase" enterprise may work not at full capacity, and, therefore, conclusions made on profitability indicators may be wrong

2. In the "growth phase" one should constantly monitor profitability indicators: the higher they are, the better things are going at company

3. In the "phase of slowdown of growth" the most important indicator is net profit margin

In the previous stages the profitability can be not too high, as activity of the company was just starting, but if the company reaches "phase of slowdown of growth", then, to all appearance, all major obstacles have been already overcome. At this one of indicators of success is stabilization of net profit margin indicator.

Upon achievement of "maturity" in the conducting analysis one should include one more group of indicators, requiring special attention. These are return on assets indicators, as in the

phase of "maturity" it is important to track investment activity of enterprise.

4. In the "phase of decline" occurs destabilization of all indicators of economic and business activity of the company. It is necessary to monitor all indicators of business. However, remember that not all of them can equally signalize about company's problems. The most significant are the indicators of liquidity and profitability. On the base of analysis of profitability indicators one can make conclusion about possibility or impossibility of continuing company's activity in accepted direction

Analysis of operating efficiency of enterprise

Turnover coefficients assigned to determine efficiency of company manages its assets and if the value of each type of asset is acceptable for the current sales volume.

Total assets turnover displays the value of revenues corresponding to each ruble invested in assets. In other words, how many times assets will turnover in the revenue for chosen period. Ratio is calculated as ratio of revenues for the period to the value of assets at the end of the period



Reduction of turnover indicator means that investment in assets was not sufficiently effective. In order to increase the indicator, revenue should be increased, and some assets are reduced (sold). Remember that decision about selling of assets can be made only after complex analysis of the turnover of each type of asset and liquidity of the company

Average collection period displays number of turnovers of cash invested in accounts receivable during a year (month). It is calculated as the ratio of revenues to the accumulated amount of customers' debt at the end of period.



If there is a tendency to decrease the turnover of accounts receivable and credit policy of the company of work with customers is not changing, then this may show delays in payment of accounts receivable and be argument to improve work with clients and to estimate their ability to pay

Inventory turnover ratio displays number of inventories turnover to ensure current sales volume. It is calculated as the ratio of operating expenses for a period to the value of inventories at the end of period.



The decrease of turnover indicator can mean the following:

- 1. The company invested in inventories too much cash, and surplus assets are unproductive and represent investments with low or zero profitability*
 - 2. The company stores outdated nonliquid inventories*
-

Accounts payable collection period characterizes the speed of the company to pay bills. It is calculated as the ratio of operating expenses for the period to the value of debt to suppliers and contractors at the end of period.



- 1. Increase of turnover indicator may mean that suppliers refuse to provide grace period.*
- 2. Reduction of coefficient may set forth the fact that suppliers increase given grace, but may also indicate problems with the cash that lead to untimely payment of bills*

Liquidity ratios

In financial practice "liquidity" means ability to turn asset into cash rapidly and without losses of market value. For the company to be highly liquid, it is necessary to maintain certain ratio between the period of transformation of current assets into cash and maturities of short-term obligations. According to degree of liquidity there are: the least liquid assets (stocks of raw materials and components, unfinished goods and finished goods); rapidly liquid (accounts receivable), the most liquid (cash in cash office and in bank accounts).



Many credit analysts consider these coefficients sufficient to determine liquidity of the company, as they show excess of current assets over short-term liabilities in case of complete liquidation of the enterprise

Current liquidity coefficient displays percentage of total short-term liabilities, which is possible to repay, having sold all circulating assets. It is calculated as the ratio of current assets to current liabilities. Required value is more than 1, optimal value is 2.



Optimal value is based on the rule whereby as per a quick sale of the asset price will be approximately half of its market value

Coefficient of intermediate liquidity displays the percentage of total current liabilities that one can repay for the account of cash and proceeds from debtors. It is calculated as the ratio of amount of accounts receivable and cash to current liabilities. Recommended value is 0,7.

Coefficient of absolute liquidity displays percentage of total current liabilities that can be immediately repaid for the account of company's cash. It is calculated as the ratio of cash to current liabilities. Value of this indicator should not decrease below 0,2.



1. Values of liquidity ratios are higher than recommended values

For the creditor this value is profitable because his requirements are fully guaranteed by borrower's assets.

Owner or head of the enterprise can conclude that significant part of cash is withdrawn in nonproduction low-yield assets and require to sell them if management is unable to prove that this reserve is necessary for company to avoid problems in future.

2. Liquidity ratios are lower than recommended values

For creditor as well as for owner this means that there is a risk that the company fails to cope with its short-term obligations.

Analysis of this factor allows making the following conclusions:

- a) Due to the lack of sufficient inventory or shipment of products on credit the company is losing potential customers;*
- b) If the company provides its products to all potential customers and has no problems with creditors, it has a competitive advantage resulting from the progress achieved in the skillful management of inventory and accounts receivable.*

Possible reasons of low values of indicators:

- a) schedule of debt repayment does not comply with terms of cash formation;*
- b) the company spends more money than receives;*

c) short-term liabilities are growing faster than the ability to obtain cash

Stability Ratios

Stability of enterprise's financial state depends on the structure of sources of capital (ratio of own and borrowed cash). Low financial stability threatens by potential problems in repayment of obligations in future, i.e. by dependence of the company on creditors and by loss of independence.

Equity ratio displays percentage of total equity in the total amount of equity and liabilities. It is calculated as the ratio of equity to the total amount of equity and liabilities. Recommended value is 50%.



Need for total equity is conditioned by requirements of self-financing of enterprises, that is the basis of their autonomy and independence. Particularity of total equity is that it is invested on long-term basis, and is subject to the greatest risk. The higher its percentage in equity and liabilities, the greater the buffer that protects creditors against losses and, consequently, the less risk of business loss

Coefficient of financial dependence characterizes company's dependence from external loans and is determined by the ratio of the sum of long-term and current liabilities to total amount of balance. Recommended value is 50%.



One should take into account that financing of enterprises' activity only at their own expense is not always advantageous, especially when production is seasonal by nature. Then, in certain periods, cash will be accumulated in the accounts, but in the others cash will not be enough

Coefficient of financial risk ratio of the sum of long-term and current liabilities to equity. Recommended value is 100%.



If the prices of financial resources (interests on credit) are less than income on invested financial capital, then, attracting borrowed cash, you can increase return on equity

Net working capital (equity) part of working capital that is financed for the account of equity or that what remains in enterprise's turnover after repayment of all the current liabilities. It is calculated as difference between the sum of current assets and current liability.



Favorable for organization are terms of payment under which current cash received from customers (accounts receivable and advances of customers) fully cover payments to suppliers (accounts payable and advance payments to suppliers), so there is no need of investing their own cash to maintain the uninterrupted payments to suppliers



Creditors prefer that the coefficients of financial dependence and financial risk were as low as possible, equity ratio and own circulating assets were as high as possible. In this case creditors' losses in bankruptcy or liquidation of company are reduced



Owners are interested in reverse, because return on their investments (equity) increases in case of reducing equity ratio and increasing coefficients of financial dependence and financial risk

Final managerial decisions and conclusions



Competent manager must precisely estimate existing situation and choose possible and the most effective combinations of solutions. At this the following steps should precede final conclusions about financial condition of the company:

1. Assessment of current state of company and its changes in comparison with the previous period

Reduction of coefficients may signalize that the situation of the enterprise is weakened; growth - that the situation becomes more stable. Task of the first phase is not only analysis of indicators' dynamics, but also to determine the acceptable level of reducing calculating coefficients. Although in some cases it is consciously allowed to temporary decrease the indicators. For example, executing serious investment program: aiming at building and equipping of manufacturing during record time, the company can carry out investments exceeding its current financial capacity. i. e. to finance capital expenditure besides earned income and attracted long-term loans one can use short-term loans and accounts payable. This may lead to lowering of liquidity and financial stability indicators. Such actions would be justified if the short period of construction will allow "not to miss existing market situation". Manager's task is to find out the edge below which the situation will become critical.

2. Determining the reasons that led to change of financial situation of enterprise

One should determine not only reasons of problems, but the grounds for company's success. At this it is important to determine in what area these achievements or failures exist: as a result of effective operation or proper use of the results achieved, as a result of management actions of the company or changes in the external environment (skilful planning of production volumes and work in the warehouse; price increase for customers etc.).

3. Development of action program for the future

Combinations of solutions could be very diverse and vary from period to period. In times of recession of profitability (for example, a seasonal drop in demand) particularly significant becomes control over working capital (the volume of purchased stocks, timely deliveries of components, the accuracy of the planned production volumes and the absence of stocking warehouse) and the determination of acceptable value of investments. Reduction of current assets may create additional cash reserve to finance capital investments, for example, by purchase of less volume of inventories (subject to the amount needed for uninterrupted manufacturing) or receipt of cash from debtors-customers with shorter grace period.

Limitations of demonstrative version

Unregistered copy of the "**Enterprise Financial model**" software runs in the mode of demonstrative version. Limitations of demonstrative version

1. Blocked possibility to add or delete entries of tables 1-6.

2. Blocked possibility to change period data of the software.

To get full version of the software, please, complete registration card on the [web site](#).

Module "Print reports"

"**Print reports**" module assigned for printing detailed reports of the project. Activation of this module is effected via menu "**Start>Programs>Simple economics>Enterprise Financial Model>Additional tools>Print reports**", or "**Mark table for printing...**" in [toolbar](#).

Module "Calculation check"

Add-on to the "**Enterprise Financial model**" software, allowing for verifying of the calculations for compliance with basic rules of evaluation of the effectiveness of investment projects. To run the application log in menu: "**Start>Programs>Simple economics>Enterprise Financial Model>Additional tools>Calculation check**" or "**Run application 'Calculation checking'**" in [toolbar](#).

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Technical support

Technical support is effected by our technical consultants at the addresses:

www.simplecs.ru/eng
litvinj@simplecs.ru

Versions' history

Version 4.3

First English version :)

FAQ


Help file shows significantly more total line and data than the software does. Why?

Answer:

"Enterprise Financial Model" software offers the possibility of unfolding and folding of results for both tables in whole and individual types of products, expenses, investments or loans. Table entry underlining, for example 1, or ▲▼ symbols feature that data can be represented in generalized / detailed view. In details see [here](#).

Is it possible to delete several items of products / expenses at once?

Answer:

There is such option in version 3.1. For this purpose select items which you want to delete and press  - "Delete entry" button on the software [toolbar](#).

Office 2007 blocks macros of the application. How to run the software?

Answer:

1. Enter the main menu (menu with commands: "Create", "Open" etc.), then click "Excel Parameters" button. In opened window on the right panel select "Trust Center" and then select "Trust Center Parameters" at the right of the window. In newly opened window select "Macros Parameters" at the left, then at the right of the window select "Enable all macros" check box. Save changes.
2. Save the file in the format "Book Excel 97-2003".

How to consider price changes in time for each type of product?

Answer:

In version 3.1 it can be done using trends:

1. Click "Settings" button on the software [toolbar](#).
2. On "Other" property page select items "Additional trends: Sales plan".
3. Press "OK" button to save changes.
4. In table 1 "[Sales plan](#)" table double-click on any product number.
5. Lines under selected type of products will be unfolded. Price change in time is set in line "Unit sales price trend (%)".

Why project calculation results by years do not coincide with calculation results by months?

Answer:

The following concept is applied in this software: when selecting option of background data entry by years in "Period data" section all data entered by user are uniformly distributed by months in hidden columns of the software.

For example:

1. If user performs project calculation by months and adds a new position of investment expenditures (for example "Equipment") in the amount of 1200 rub. in January, then depreciation of equipment will begin from March (in the month following the first month of equipment

commissioning).

2. If user performs calculation by years and enters investment expenditures equal to 1 200 rub. in the first year, then depreciation of equipment will begin from February of the following year only. This is due to the fact that the software will distribute investment expenditures automatically by 1200 rub./12 months = 100 rub. per month during the first year. Thus, the last investment in equipment will be performed in December of the first year and depreciation of equipment will begin from February of the following year only.

Calculations under Contract for Services Rendered will be executed according to the following scheme: 5% will be paid 30 days prior to execution of works (prepayment); 95% will be paid 30 days after execution of works (delay). How to specify such payments in the software?

Answer:

For this purpose enter two types of products in "Sales PPlan" table: the first type - "Advance Purchase Contract", the second type - "Contract for Purchases on credit". Set price in both types of products equal to 1. Enter the amount of services rendered and set terms of payment (Advance purchases / Purchases on credit, % and number of days) in the respective periods.

How to consider inflation in the course of calculations?

Answer:

Sales trends should be used for consideration of changes in product prices and expenses. In details see [here](#).

Is it possible to add new name of products / expenses not at the end of the table but between selected cells?

Answer:

There is no such option in this software version.

How to account non-typical accrual of depreciation in the software calculations?

Answer:

For this purpose open "Financial parameters" table and select manual mode of calculation "Depreciation". Then enter accumulated depreciation within the respective periods.

How to account non-typical assessment and repayment of taxes in the software calculations?

Answer:

1. Accounting of Income Tax, Uniform Social Tax, Property Tax

Open "Financial parameters" table and select manual mode of calculation against respective tax. Then using keyboard enter assessed amount of taxes in respective period (or calculate it using formulas). In this case payments by each type of taxes will be made with regularity selected in "[Taxes](#)" table.

2. Accounting of other taxes

The software allows accounting any specific taxes in calculations (for example: Land Tax, Transport Tax etc.). For this purpose open "Financial parameters" table, enter assessed amount of taxes in line "Other taxes (accrued)", and enter amount of paid taxes in line "Other taxes

(paid)".

Note

In cases when more than one "other" tax is present in calculations it is necessary to calculate each assessment and payment (for example using [User's work space](#)) and then summarize obtained results in lines "Other taxes (accrued)" and "Other taxes (paid)".

How to account variable personnel cost in calculations?

Answer:

See example of variable personnel cost calculation [here](#).

How to transfer entered data quickly to the next period?

Answer:

Select cell with data which should be transfer to the next periods. Then click the right mouse button and in appeared menu select "EFM: Copy to future periods (ALT+S)". As a result the background data of selected cell will be automatically transferred to the next periods of calculations . Refer [here](#) for details.

Colors of "Print reports" module cells differ from those in help file. Why?

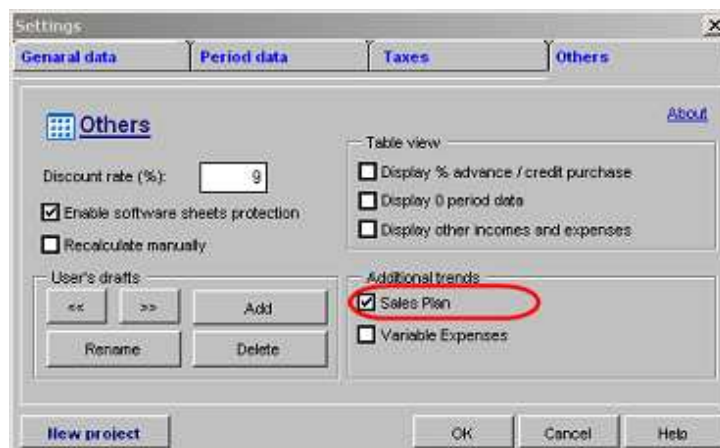
Answer:

Such situation may occur in some computers and is connected with MS Windows settings. To represent "Print reports" module in "standard form" download it through: Start > Programs > Simple economics > Print reports.

Example of use of additional trends in Table "Sales plan"

Step 1.

Select position "Sales Plan" in the section "Additional trends".



Step 2.

In Table "Sales Plan" double click the number of product.

Result:

Screen displays additional string "Unit sales price trend (%)" that enables to take into account price change with time according to each type of products.

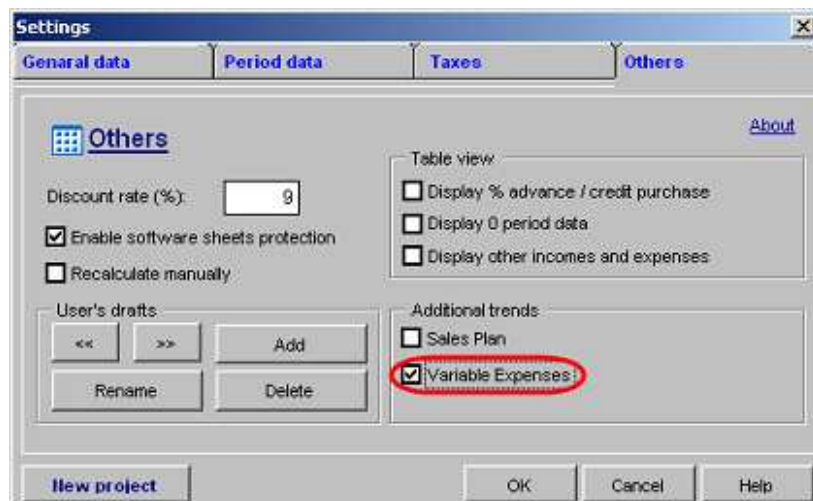
Table 1. Sales Plan (th. rub.)		Adv. purch. (0-180 days)	Purch. on credit (0-180 days)	Sales price (th. rub.)	Min. balance 0,00	0 period 0,00	jan 2010 0,00	feb 2010 100,00	mar 2010 172,80	apr 2010 248,98
Table 1. Sales Plan <i>Plan 1, currency: th. rub.</i>										
No	Description	Adv. purch. (0-180 days)	Purch. on credit (0-180 days)	Sales price (th. rub.)	TOTAL <=>	0 period (units)	jan 2010 (units)	feb 2010 (units)	mar 2010 (units)	apr 2010 (units)
1	Product 1			1,00	300,00			100,00	100,00	100,00
	Unit sales price trend (%)				-			0%	5%	10%
	Revenues (incl. VAT)				315,00		0,00	100,00	105,00	110,00
	VAT on revenues				48,05		0,00	0,00	0,00	16,78
	Advance sales				0,00	0,00	0,00	0,00	0,00	0,00
	Advances received from customers & buyers (balance)				-	0,00	0,00	0,00	0,00	0,00
	Credit sales				0,00		0,00	0,00	0,00	0,00
	Accounts receivable from customers & buyers (balance)				-		0,00	0,00	0,00	0,00
2	Product 2				0,00					
= TOTAL: Volume of sales (th. tons):					300,00		0,00	100,00	100,00	100,00
= TOTAL: Revenues (incl. VAT):					315,00		0,00	100,00	105,00	110,00

Example of use of additional trends in Table "Variable expenses"

Project of sales organization of household appliances is being considered. We know that purchase value of products type "Vacuum cleaners" increases in January by 1%, and in February by 5%. Purchase price of products type "Refrigerators" increases in January by 2%, and in February by 3%. It is necessary to take into account specified modification of prices in calculations.

Step 1.

Select position table "Variable Expenses" in the section "Additional trends".



Step 2.

Successively double click each number of variable expenses.

Table 2. Variable Expenses (th. rub.)		Min. balance	0 period	jan 2010	feb 2010
		0,00	0,00	9 500,00	7 330,68
Table 2. Variable Expenses Plan 1, currency: th. rub.					
No	Description	TOTAL	0 period (rate)	jan 2010 (rate)	feb 2010 (rate)
1	Vacuum cleaners	-		1,00	1,00
	└ Unit sales price trend (%)	-		1%	5%
	└ Variable expenses (incl. VAT)	13 150,00		10 100,00	1 050,00
	└ VAT on variable expenses	2 005,93		1 540,68	160,17
	└ Advance purchases	0,00	0,00	0,00	0,00
	└ Advance payments to suppliers (balance)	-	0,00	0,00	0,00
	└ Purchases on credit	0,00		0,00	0,00
	└ Accounts payable to suppliers (balance)	-		0,00	0,00
2	Refrigerators	-		1,00	1,00
TOTAL: Variable expenses (incl. VAT):		39 610,00		30 500,00	3 110,00

Result:

Additional string "Unit sales price trend (%)", enabling to display specified modifications of prices

in calculations, will appear under each item of variable expenses.

Table 2. Variable Expenses (th. rub.)		Min. balance	0 period	jan 2010	feb 2010
		0,00	0,00	9 500,00	7 330,68
Table 2. Variable Expenses <i>Plan 1, currency: 'th. rub.'</i>					
№ ▲ ▼	Description	TOTAL «»	0 period (rate)	jan 2010 (rate)	feb 2010 (rate)
1	Vacuum cleaners	-		1,00	1,00
	└ Unit sales price trend (%)	-		1%	5%
	└ Variable expenses (incl. VAT)	13 150,00		10 100,00	1 050,00
	└ VAT on variable expenses	2 005,93		1 540,68	160,17
	└ Advance purchases	0,00	0,00	0,00	0,00
	└ Advance payments to suppliers (balance)	-	0,00	0,00	0,00
	└ Purchases on credit	0,00		0,00	0,00
	└ Accounts payable to suppliers (balance)	-		0,00	0,00
2	Refrigerators	-		1,00	1,00
	└ Unit sales price trend (%)	-		2%	3%
	└ Variable expenses (incl. VAT)	26 460,00		20 400,00	2 060,00
	└ VAT on variable expenses	4 036,27		3 111,86	314,24
	└ Advance purchases	0,00	0,00	0,00	0,00
	└ Advance payments to suppliers (balance)	-	0,00	0,00	0,00
	└ Purchases on credit	0,00		0,00	0,00
	└ Accounts payable to suppliers (balance)	-		0,00	0,00
▲ ▼	= TOTAL: Variable expenses (incl. VAT):	39 610,00		30 500,00	3 110,00

Example of financially realizable / unrealizable project

The cash flow statements of the same company are given. The given tables demonstrate that the project on the top is unrealizable (net of cash of the project is negative) and cannot be accepted. In the project on the bottom side company takes credit, thereafter the project can be realized.

Table 10. Cash Flow Statement (th. rub.)		Min. balance	0 period	jan 2010	feb 2010
		-5,00	0,00	0,00	-5,00
Table 10. Cash Flow Statement <i>Plan 1, currency: th. rub.</i>					
No	Description	TOTAL «»	0 period	jan 2010	feb 2010
CASH FLOW FROM OPERATIONS					
1	Cash in	100,00	0,00	0,00	100,00
2	Receivable Payments	100,00	0,00	0,00	100,00
3	Cash out	105,00	0,00	0,00	105,00
4	Variable payments	105,00	0,00	0,00	105,00
5	Financ. payments	0,00	0,00	0,00	0,00
18	Cash out	0,00	0,00	0,00	0,00
	Cash flow provided/used by financing activities	0,00	0,00	0,00	0,00
24	Change in cash and cash equivalents	-5,00	0,00	0,00	-5,00
25	Net Cash at the end of the period (accumulated)	-	0,00	0,00	-5,00

Project financially **unrealizable**

Table 10. Cash Flow Statement (th. rub.)		Min. balance	0 period	jan 2010	feb 2010
		0,00	0,00	0,00	0,00
Table 10. Cash Flow Statement <i>Plan 1, currency: th. rub.</i>					
No	Description	TOTAL «»	0 period	jan 2010	feb 2010
CASH FLOW FROM OPERATIONS					
1	Cash in	100,00	0,00	0,00	100,00
2	Receivable Payments	100,00	0,00	0,00	100,00
3	Cash out	105,00	0,00	0,00	105,00
4	Variable payments	105,00	0,00	0,00	105,00
5	Financ. payments	0,00	0,00	0,00	0,00
14	Cash in	5,00	0,00	0,00	5,00
18	Cash out	0,00	0,00	0,00	0,00
	Cash flow provided/used by financing activities	5,00	0,00	0,00	5,00
24	Change in cash and cash equivalents	0,00	0,00	0,00	0,00
25	Net Cash at the end of the period (accumulated)	-	0,00	0,00	0,00

Project financially **realizable**

Example of sales on terms of advance payment

Shipping of products for the amount of 100 rubles (at the price 1 ruble per unit) is fulfilled on terms of 100% advance payment during 60 days until actual shipping. With that advance payment for the products (advances received from customers) forms enterprise's accounts payable.

Table 1. Sales Plan (th. rub.)		Adv. purch. (0-180 days)	Purch. on credit (0-180 days)	Sales price (th. rub.)	Min. balance	0 period	jan 2010	feb 2010	mar 2010
					0,00	0,00	100,00	105,00	105,00

Table 1. Sales Plan <i>Plan 1, currency: th. rub.</i>		Adv. purch. (0-180 days)	Purch. on credit (0-180 days)	Sales price (th. rub.)	TOTAL «»	0 period (units)	jan 2010 (units)	feb 2010 (units)	mar 2010 (units)
1	Product 1	60		1,00	100,00				100,00
	└ Revenues (incl. VAT)				100,00		0,00	0,00	100,00
	└ VAT on revenues				0,00		0,00	0,00	0,00
	└ Advance sales				100,00	0,00	100,00	0,00	0,00
	└ Advances received from customers & buyers (balance)				-	0,00	100,00	100,00	0,00
	└ Credit sales				0,00		0,00	0,00	0,00
	└ Accounts receivable from customers & buyers (balance)				-		0,00	0,00	0,00
2	Product 2				0,00				
- TOTAL: Volume of sales (th. tons):					100,00		0,00	0,00	100,00
- TOTAL: Revenues (incl. VAT):					100,00		0,00	0,00	100,00



The picture below represents table "Sales Plan" in detailed variant. See [here](#) for detailed and generalized variant of data representation



Advance payment for salable products is permanent "interest free" source of enterprise financing. This may help you to earn additional income and to have more cash available

Example of sales on postponed payment terms (credit purchase)

Shipping of products for the amount of 100 rubles (at the price 1 ruble per unit) is fulfilled. 50% of the value is paid by the customer on actual basis of shipping, for 50% 15 days credit purchase is given. With that customers and buyers receivables form enterprise's accounts receivable.

Table 1. Sales Plan (th. rub.)		Adv. purch. (0-150 days)	Purch. on credit (0-150 days)	% adv. / credit purchase	Sales price (th. rub.)	Min. balance 0,00	9 period 0,00	jan 2010 75,00	feb 2010 105,00
Table 1. Sales Plan <i>Plan 1, currency: th. rub.</i>									
Ns	Description	Adv. purch. (0-150 days)	Purch. on credit (0-150 days)	% adv. / credit purchase	Sales price (th. rub.)	TOTAL ←→	9 period (units)	jan 2010 (units)	feb 2010 (units)
1	Product 1		15	50%	1,00	100,00		100,00	
	L Revenues (incl. VAT)					100,00		100,00	0,00
	L VAT on revenues					0,00		0,00	0,00
	L Advance sales					0,00	0,00	0,00	0,00
	L Advances received from customers & buyers (balance)					-	0,00	0,00	0,00
	L Credit sales					25,00		0,00	25,00
	L Accounts receivable from customers & buyers (balance)					-		0,00	0,00
2	Product 2					0,00			15 days 50%
= TOTAL: Volume of sales (th. tons):						100,00		100,00	0,00
= TOTAL: Revenues (incl. VAT):						100,00		100,00	0,00



The picture below represents table "Sales Plan" in detailed variant. See [here](#) for detailed and generalized variant of data representation



Provision of credit purchase promotes increase of sales, but each unpaid invoice is direct loss which decreases income of enterprise. In most cases it appears that it is impossible to consider these losses before their occurrence. To decrease risks of loss of income, please, determine what sales volume on credit is optimal for your enterprise. Pay special attention to customers' paying capacity

Example of work with suppliers on terms of advance purchase (rounding of advance)

Monthly rent payment is 100 rubles. In accordance with agreement this payment occurs for 45 days (nonrecurrent 100% payment) before rendering the service. In this case to calculate leasing cash outflows correctly it is necessary to round up the advance purchase to the integer number of months, i.e. to enter in column «Advance purchase» 60 days.

Table 3. Fixed Expenses (th. rub.)		Adv. purch. (0-180 days)	Purch. on credit (0-180 days)	Min. balance	0 period	jan 2010	feb 2010
				0,00	200,00	1 600,00	3 005,00
Table 3. Fixed Expenses <i>Plan 1, currency: th. rub./</i>							
No	Description	Adv. purch. (0-180 days)	Purch. on credit (0-180 days)	TOTAL	0 period	jan 2010	feb 2010
1	Rent	60		300,00			100,00
	↳ Fixed expenses (incl. VAT)			300,00		0,00	100,00
	↳ VAT on fixed expenses			0,00		0,00	0,00
	↳ Advance purchases:			300,00	100,00	100,00	100,00
	↳ Advance payments to suppliers (balance)			-	100,00	200,00	200,00
	↳ Purchases on credit			0,00		0,00	0,00
	↳ Accounts payable to suppliers (balance)			-		0,00	0,00
= TOTAL: Period data selected by user:					1,00	1,00	1,00
= TOTAL: Fixed Expenses (incl. VAT):				300,00		0,00	100,00

Example of work with suppliers on terms of advance purchase

Monthly rent payment is 100 rubles. In accordance with agreement this payment occurs for 60 days before rendering the service.

Table 3. Fixed Expenses (th. rub.)		Adv. purch. (0-180 days)	Purch. on credit (0-180 days)	Min. balance 0,00	0 period -200,00	jan 2010 1 600,00	feb 2010 3 005,00	mar 2010 3 005,00	apr 2010 3 005,00
Table 3. Fixed Expenses <i>Plan 3, currency: th. rub.</i>									
No №	Description	Adv. purch. (0-180 days)	Purch. on credit (0-180 days)	TOTAL «»	0 period	jan 2010	feb 2010	mar 2010	apr 2010
1	Rent	60		300,00			100,00	100,00	100,00
	└ Fixed expenses (incl. VAT)			300,00		0,00	100,00	100,00	100,00
	└ VAT on fixed expenses			0,00		0,00	0,00	0,00	0,00
	└ Advance purchases			300,00	100,00	100,00	100,00	0,00	0,00
	└ Advance payments to suppliers (balance)			-	100,00	200,00	200,00	100,00	0,00
	└ Purchases on credit			0,00		0,00	0,00	0,00	0,00
	└ Accounts payable to suppliers (balance)			-		0,00	0,00	0,00	0,00
= TOTAL: Period data selected by user:					1,00	1,00	1,00	1,00	1,00
= TOTAL: Fixed Expenses (incl. VAT):				300,00		0,00	100,00	100,00	100,00



Remember that giving advances you credit your supplier free of charge and decrease volume of enterprise's spare money

Example of work with suppliers on terms of credit purchase

Monthly lease payment is 100 rubles. In conformity with agreement this payment occurs in 30 days after rendering the service.

Table 3. Fixed Expenses (th. rub.)		Adv. purch. (0-180 days)	Purch. on credit (0-180 days)	Min. balance 0,00	\$ period 300,00	jan 2010 1 900,00	feb 2010 3 205,00	mar 2010 3 105,00
Table 3. Fixed Expenses <i>Plan 1, currency, th. rub.</i>								
Nº	Description	Adv. purch. (0-180 days)	Purch. on credit (0-180 days)	TOTAL «»	\$ period	jan 2010	feb 2010	mar 2010
1.	Rent		30	300,00		100,00	100,00	100,00
	↳ Fixed expenses (incl. VAT)			300,00		100,00	100,00	100,00
	↳ VAT on fixed expenses			0,00		0,00	0,00	0,00
	↳ Advance purchases			0,00	0,00	0,00	0,00	0,00
	↳ Advance payments to suppliers (balance)			-	0,00	0,00	0,00	0,00
	↳ Purchases on credit			300,00		0,00	100,00	100,00
	↳ Accounts payable to suppliers (Balance)			-		100,00	100,00	100,00
= TOTAL: Period data selected by user:					1,00	1,00	1,00	1,00
= TOTAL: Fixed Expenses (incl. VAT):				300,00		100,00	100,00	100,00



Credits on purchase are constant source of non-interest financing for enterprise. Postpone of payment may facilitate to earn greater income and to have more cash in disposal. You should estimate recipient of payment and to determine how long you can reasonably delay payment period, of course without additional financial expenses and decrease of credibility

Example of accounting of variable personnel cost in calculations

Enterprise fulfills project concerning sales of household products. At marketing division of the company (number of employees 1) average salary amounts 20 thousand rub. + 3% of income in the current period. It is necessary to take into account salary in calculations.

Variant 1 . Accounting of variable personnel cost in total amount of personnel cost expenses

This variant can be used if it is important to allocate total amount of personnel cost expenses in order to fulfill analysis and to accept managerial decisions.

Step-by-step actions:

1. In the table "Personnel cost" in the first period of accruing enter in cell $=20+'01\text{-Sales Plan!}L156*3\%$, where '01-Sales Plan'!L156 is reference to the cell containing total income of the first period.
2. Distribute this formula to the rest periods of calculation.

Table 4. Personnel Cost		Min. balance	0 period	jan 2010	feb 2010	mar 2010	apr 2010
		0,00	0,00	50,00	55,00	155,00	255,00
No.	Description	TOTAL	0 period (aver. sal.)	jan 2010 (aver. sal.)	feb 2010 (aver. sal.)	mar 2010 (aver. sal.)	apr 2010 (aver. sal.)
1	Subdivision 1			60,00	60,00	60,00	60,00
= TOTAL: Period data selected by user:			1,00	1,00	1,00	1,00	1,00
= TOTAL: Salary (incl. Social):		0,00		0,00	0,00	0,00	0,00

Variant 2 . Accounting of variable personnel cost included in variable expenses

Choice of the second variant of personnel cost accounting is recommended in case when you use break even in order to accept managerial decisions, because during the calculations more precise accounting will be obtained in comparison with the first variant, where variable expenses are understated and fixed expenses are overstated by the value of variable personnel cost.

Step-by-step actions:

1. In the "General data" ([Settings](#) window) enter in "Taxes" > "Value added tax (VAT)" and select position "Specify for each item". After this operation set VAT for all types of products and variable expenses.
2. In the Table «Variable expenses» create new type of expenses: «Variable salary of marketing division», and in the column «Type of products» select «Total volume of sales», equate «Sales price» to 1.
3. In the first period of salary accrual write in the cell "jan. 2009 (norm)" value 3% and distribute specified value to all the rest periods of calculations.

Table 2. Variable Expenses (th. rub.)		Type of products	Sales price (th. rub.)	VAT (%)	Min. balance	0 period	jan 2010	feb 2010	mar 2010	apr 2010
					0,00	0,00	0,00	1 624,75	2 596,55	4 163,75
No.	Description	Type of products	Sales price (th. rub.)	VAT (%)	TOTAL	0 period (rate)	jan 2010 (rate)	feb 2010 (rate)	mar 2010 (rate)	apr 2010 (rate)
1	Variable expenses 1	Product 1	15,25	18,00%	-		0,57	0,57	0,57	0,57
2	Variable salary of marketing division	Total volume of sales	1,00	0,00%	-		0,03	0,03	0,03	0,03
= TOTAL: Variable expenses (incl. VAT):					9 634,35		0,00	875,85	875,85	875,85

4. To take into account social on salary accrued, it is necessary create extra item «Social» of variable expenses in the table «Variable expenses», a and in the column «Type of products» also select «Total volume of sales», equate «Sales price» to 1.

Example of accounting of equipment depreciation (since the moment of receipt of the first income)

Computer at the amount of 100 rubles was purchased and put in operation in January 2010. Depreciation accrued since August 2010 (month next to the month of the first income receipt). The computer was planned to use during 3 years.

Table 5. Plant&Equipment (th. rub.)									
		Depreciation (years)	Min. balance	0 period	jan 2010	feb 2010	jul 2010	aug 2010	sep 2010
			-100,00	0,00	-100,00	-100,00	100,00	50,85	50,85
Table 5. Plant&Equipment Plan 1, currency: th. rub.									
No	Description	Depreciation (years)	TOTAL	0 period	jan 2010	...	jul 2010	aug 2010	sep 2010
1	Computer	3	100,00		100,00				
	Investments (incl. VAT)		100,00		100,00	0,00	0,00	0,00	0,00
	VAT on investments		15,25		0,00			0,00	0,00
	Investments (excl. VAT, accumulated)		-		84,7			84,75	84,75
	Investments in process (incl. VAT)	7	-		100,0			0,00	0,00
	Initial value		-		0,00			84,75	84,75
	Depreciation		11,77		0,00	0,00	0,00	2,35	2,35
	Depreciation (accumulated)		-		0,00	0,00	0,00	2,35	4,71
Table 9. Profit and Loss (th. rub.)									
		Min. balance	0 period	jan 2010	feb 2010	jul 2010	aug 2010		
		0,00	100,00	0,00	0,00	200,00	150,85	0,00	0,00
Table 9. Profit and Loss Plan 1, currency: th. rub.									
No	Description	TOTAL	0 period	jan 2010	...	jul 2010	aug 2010		
1	Revenues	169,49	0,00	0,00	0,00	169,49	0,00	0,00	0,00
2	Operating expenses	11,77	0,00	0,00		0,00	0,00	2,35	
3	Variable expenses	0,00	0,00	0,00		0,00	0,00	0,00	
4	Fixed expenses	0,00	0,00	0,00		0,00	0,00	0,00	
5	Salary	0,00	0,00	0,00		0,00	0,00	0,00	
6	Depreciation	11,77	0,00	0,00		0,00	0,00	2,35	
7	Operating profit	157,72	0,00	0,00	0,00	169,49	-2,35		

Example of grace period accounting

In January 2010 company received credit at the amount of 100 rubles for a period of 3 months at interest 10% annually. Grace period of 1 month is given to pay principal debt and interests.

Table 6. Loans (th. rub.)		Loan payment period (month)	Interest rate % (year)	Grace period (month)	Min. balance	# period	jan 2010	feb 2010	mar 2010	apr 2010
					0,00	0,00	100,00	200,00	116,13	65,71
Table 6. Loans										
File 1, currency: th. rub.										
#	Description	Loan payment period (month)	Interest rate % (year)	Grace period (month)	TOTAL	# period	jan 2010	feb 2010	mar 2010	apr 2010
1	Loan 1	3	10,00%	1	100,00		100,00			
	L Proceeds from loan	3			100,00		100,00	0,00	0,00	0,00
	L Outstanding debt (accumulated)				-		100,00	100,00	100,00	100,00
	L Outstanding debt at the beginning of the period				-		100,00	100,00	100,00	50,00
	L Outstanding debt at the end of the period				-		100,00	100,00	50,00	0,00
	L Interest accrued				2,06		0,00	0,53	0,53	0,42
	L Interest paid				2,06		0,00	0,00	1,87	0,42
	L Principal payments				100,00		0,00	0,00	50,00	50,00
TOTAL: Proceeds from loans:					100,00		100,00	0,00	0,00	0,00

Example of accounting of leasing operations

Lessee purchased equipment, with that total amount of leasing deal of 100 rubles including VAT. The lessee paid 20% of advance in the first month, and repaid the rest amount during 2 next months. It is necessary to display these payments in the software.

Step-by-step actions:

1. Enter advance in the amount of 20 rubles.
2. Take into account two leasing payments, 40 rubles each.
3. 18% VAT is allocated from advance and lease payments.

Table 6. Other Source of Finance (th. rub.)		Min. balance	0 period	jan 2010	feb 2010	mar 2010	apr 2010
		0,00	0,00	80,00	147,60	175,59	219,49

Table 7. Other Source of Finance							
Plan 1, currency: th. rub.							
№	Description	TOTAL	0 period	jan 2010	feb 2010	mar 2010	apr 2010
8	Interest payments	0,00					
9	Advance payments for leasing (incl. VAT)	20,00		20,00			
10	VAT on leasing	15,25			3,05	6,10	6,10
11	Leasing payments (incl. VAT)	80,00				40,00	40,00

Result:

1. In the profit and loss statement lease payments are accrued in equal percentages (excluding VAT).

Table 9. Profit and Loss (th. rub.)		Min. balance	0 period	jan 2010	feb 2010	mar 2010	apr 2010
		0,00	0,00	80,00	147,60	175,59	219,49

Table 9. Profit and Loss							
Plan 1, currency: th. rub.							
№	Description	TOTAL	0 period	jan 2010	feb 2010	mar 2010	apr 2010
1	Revenues	1 016,95	0,00	84,75	84,75	84,75	84,75
2	Taxes	0,00	0,00	0,00	0,00	0,00	0,00
5	Lease payments	84,75	0,00	0,00	0,00	42,38	42,38
10	Other incomes	0,00	0,00	0,00	0,00	0,00	0,00
11	Other expenses	0,00	0,00	0,00	0,00	0,00	0,00
12	Interest expenses	0,00	0,00	0,00	0,00	0,00	0,00
13	Earnings before income tax	932,20	0,00	84,75	84,75	42,37	42,37

2. In the cash flow statement the outflow increases in connection with lease payments.

Table 10. Cash Flow Statement (th. rub.)		Min. balance	0 period	jan 2010	feb 2010	mar 2010	apr 2010
		0,00	0,00	80,00	147,80	175,59	219,49
Table 10. Cash Flow Statement							
Plan 1, currency: 'th. rub.'							
Nº	Description	TOTAL	0 period	jan 2010	feb 2010	mar 2010	apr 2010
CASH FLOW FROM OPERATIONS		«»					
22	Order payments	0,00	0,00	0,00	0,00	0,00	0,00
23	Lease payments	100,00	0,00	20,00	0,00	40,00	40,00
	Cash flow provided/used by financing activities	-100,00	0,00	-20,00	0,00	-40,00	-40,00
24	Change in cash and cash equivalents	777,96	0,00	80,00	67,80	27,80	43,90
25	Net Cash at the end of the period (accumulated)	-	0,00	80,00	147,80	175,59	219,49

3.Assets of balance contain value of given advance that decreases while accruing lease payments in the profit and loss statement.

Table 11. Balance (th. rub.)		Min. balance	0 period	jan 2010	feb 2010	mar 2010	apr 2010
		0,00	0,00	80,00	147,80	175,59	219,49
Table 11. Balance							
Plan 1, currency: 'th. rub.'							
Nº	Description	Previous balance	0 period	jan 2010	feb 2010	mar 2010	apr 2010
ASSETS							
10	- advances to suppliers		0,00	0,00	0,00	0,00	0,00
11	- other accounts receivable		0,00	0,00	0,00	0,00	0,00
12	- advance on leasing		0,00	20,00	20,00	10,00	0,00

Example of nonstandard loan accounting

In January 2010 enterprise received loan in the amount of 100 rubles for a period of 3 months at interest 10% annually. Grace period of 1 month is given to pay interests, and principal debt is repaid in entire amount at the end of loan period.



If it is necessary to account for several specific loans, each of them can be calculated in the work space separately, and then to sum up obtained values in corresponding strings of the table «Other Source of Finance»

Table 6. Other Source of Finance (th. rub.)		Min. balance	0 period	jan 2010	feb 2010	mar 2010	apr 2010
		0,00	0,00	100,00	200,00	166,13	85,36
Table 7. Other Source of Finance							
Plan 1, currency: 'th. rub.'							
Nº	Description	TOTAL	0 period	jan 2010	feb 2010	mar 2010	apr 2010
		«»					
1	Owners' equity	0,00					
2	Dividends (amount)	0,00					
3	Other loans received	100,00		100,00			
4	Principal payments	100,00					100,00
5	Interest payments	2,50				1,67	0,83
6	Short-term loans received	0,00					

Example (of nonstandard accrual of depreciation)

Automobile at the amount of 6 000 thousand rub. is purchased, which is planned to be used during 3 months and then sold for 5 000 thousand rub. Payment for the automobile is made by equal payments in January and February 2000. Supposed lifetime is 5 years.

Step-by-step actions:

1. Enter equipment payments in the table 5 in accordance with schedule of payments for the automobile.

Table 5. Plant&Equipment (th. rub.)		Depreciation (years)	VAT (%)	Min. balance	0 period	jan 2010	feb 2010	mar 2010
				0,00	0,00	9 000,00	2 236,00	2 204,32
Table 5. Plant&Equipment Plan 1, currency: th. rub.								
No	Description	Depreciation (years)	VAT (%)	TOTAL	0 period	jan 2010	feb 2010	mar 2010
1	Automobile	5	18,00%	6 000,00		3 000,00	3 000,00	
	↳ Investments (incl. VAT)			6 000,00		3 000,00	3 000,00	0,00
	↳ VAT on investments			915,25		0,00	0,00	915,25
	↳ Investments (excl. VAT, accumulated)			-		2 542,37	5 084,75	5 084,75
	↳ Investments in process (incl. VAT)	3		-		3 000,00	6 000,00	0,00
	↳ Initial value			-		0,00	0,00	5 084,75

2. Switch on manual mode of calculating «Depreciation» in the Table «Financial parameters».
3. In the table «Financial parameters» enter monthly depreciation at 84,75 thousand rub. during two months.
4. Enter in the month of June net book value of sold automobile to write off fixed asset from balance.

Table 8. Financial Parameters (th. rub.)		Type of calculation	Min. balance	0 period	jan 2010	feb 2010	mar 2010	apr 2010	may 2010	jun 2010
			0,00	0,00	9 000,00	2 236,00	2 204,32	2 197,33	2 197,33	2 197,33
Table 8. Financial Parameters Plan 1, currency: th. rub.										
No	Description	Type of calculation	TOTAL	0 period	jan 2010	feb 2010	mar 2010	apr 2010	may 2010	jun 2010
DEPRECIATION										
1	Depreciation	Manual	762,71		0,00	0,00	0,00	84,75	84,75	84,75
			5 084,75		0,00	0,00	0,00	84,75	84,75	4 915,25
INVENTORIES										
2	Inventories of raw materials and supplies				0,00	0,00	0,00	0,00	0,00	0,00

5. Enter income from sale of the automobile in the string «Other investment incomes».

Table 8. Financial Parameters (th. rub.)		Type of calculation	Min. balance	0 period	jan 2010	feb 2010	mar 2010	apr 2010	may 2010	jun 2010
			0,00	0,00	9 000,00	2 236,00	2 204,32	2 197,33	2 197,33	2 197,33
OTHER INCOMES AND EXPENSES										
11	Other investment incomes		5 000,00							5 000,00
12	Other investment expenses		0,00							
13	Other financial incomes		0,00							

Result of calculations:

Results of calculations are set forth in profit and loss statement below.

Table 9. Profit and Loss (th. rub.)			Min. balance	0 period	jan 2010	feb 2010	mar 2010	apr 2010	may 2010	jun 2010
			0,00	0,00	9 000,00	2 236,06	2 204,32	2 197,33	2 197,33	7 197,33
Table 9. Profit and Loss Plan 1, currency: th. rub.										
#	Description	TOTAL	0 period	jan 2010	feb 2010	mar 2010	apr 2010	may 2010	jun 2010	
1	Revenues	10 254,24	0,00	10 169,49	84,75	0,00	0,00	0,00	0,00	
2	Operating expenses	5 084,75	0,00	0,00	0,00	0,00	84,75	84,75	4 915,25	
3	Variable expenses	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	
4	Fixed expenses	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	
5	Salary	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	
6	Depreciation	5 084,75	0,00	0,00	0,00	0,00	84,75	84,75	4 915,25	
7	Operating profit	5 169,49	0,00	10 169,49	84,75	0,00	-84,75	-84,75	-4 915,25	
8	Taxes	33,37	0,00	2,33	2,33	2,33	3,93	3,93	3,93	
9	Lease payments	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	
10	Other incomes	5 000,00	0,00	0,00	0,00	0,00	0,00	0,00	5 000,00	
11	Other expenses	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	
12	Interest expenses	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	
13	Earnings before income tax	10 136,11	0,00	10 167,16	82,42	2,33	-82,68	-88,68	-88,68	

Example 1 (of estimation of raw materials and components)

Storage time of inventories is accepted to be equal 10 days. Expenses for raw materials for manufacturing of products totaled 100 rub a month.

$$\text{Value of inventories} = (10\text{days} * 100\text{rub.}) / 30\text{days} = 33 \text{ rubles.}$$

Inventories of finished products and work-in-progress are estimated similarly.

Example 2 (of estimation of raw materials and components)

Enterprise plans to lay in a stock inventories for the amount of 100 rub. (payment to supplier will be effected upon receipt of products). In a month after beginning of work inventories will be increased up to 200 rub. for the second delivery of raw materials and components grace period of 30 days is given.

Step-by-step actions:

1. Record planned inventories in each period data in the string «Inventories of raw materials and components».
2. Record payment to supplier for delivery of raw materials and components in the string «Payments on inventories».

Table 8. Financial Parameters (th. rub.)				Type of calculation	Min. balance	0 period	jan 2010	feb 2010	mar 2010	apr 2010	may 2010
					0,00	0,00	0 500,00	2 136,00	2 104,32	1 997,33	2 104,32

Table 8. Financial Parameters.											
Plan 1, currency: th. rub.											
No	Description	Type of calculation	TOTAL	0 period	jan 2010	feb 2010	mar 2010	apr 2010	may 2010	jun 2010	July 2010
A	T		←→								
DEPRECIATION											
1	Depreciation	Auto	752,71			0,00	0,00	0,00	0,00	0,00	0,00
INVENTORIES											
2	Inventories of raw materials and components	Manual	-		0,00	0,00	0,00	0,00	0,00	0,00	0,00
3	Unfinished inventories	Manual	-		100,00	100,00	200,00	200,00	200,00	200,00	200,00
4	Finished inventories	Manual	-		0,00	0,00	0,00	0,00	0,00	0,00	0,00
5	Payments on inventories	Manual	0,00		0,00	0,00	0,00	0,00	0,00	0,00	0,00
TAXES											

Result of calculations:

1. Made inventories and accounts payable on given grace for the payment of delivery of raw materials and components are registered in balance (100 rub.).

Table 11. Balance (th. rub.)		0 period	jan 2010	feb 2010	mar 2010	apr 2010	may 2010
		0,00	11 900,00	8 135,59	8 103,39	8 003,39	8 203,39

Table 11. Balance							
Plan 1, currency: th. rub.							
No	Description	0 period	jan 2010	feb 2010	mar 2010	apr 2010	may 2010
ASSETS							
1	Fixed & intangible assets	0,00	0,00	0,00	0,00	0,00	0,00
2	Unfinished investments	0,00	0,00	0,00	0,00	0,00	0,00
3	= TOTAL: Fixed Assets:	0,00	0,00	0,00	0,00	0,00	0,00
4	Inventories	0,00	100,00	100,00	200,00	200,00	0,00
5	- stocks of raw materials and components	0,00	100,00	100,00	200,00	200,00	0,00
6	Unfinished goods	0,00	0,00	0,00	0,00	0,00	0,00
21	Short term liabilities	0,00	0,00	0,00	0,00	0,00	0,00
22	Accounts payable	0,00	0,00	0,00	100,00	0,00	0,00
23	Salary payable	0,00	0,00	0,00	0,00	0,00	0,00

2. In cash flow statement outflow increases (string «Change in Inventory») by the amount payable for the first and the second delivery.

Table 10. Cash Flow Statement (th. rub.)		Min. balance	0 period	jan 2010	feb 2010	mar 2010	apr 2010
		0,00	0,00	11 900,00	8 135,59	8 103,39	8 003,39
Table 10. Cash Flow Statement							
Plan 1, currency: th. rub.							
Nº	Description	TOTAL	0 period	jan 2010	feb 2010	mar 2010	apr 2010
▲ ▼ CASH FLOW FROM OPERATIONS		◀▶					
1	Cash in	12 100,00	0,00	12 000,00	100,00	0,00	0,00
2	Receivable Payments	12 100,00	0,00	12 000,00	100,00	0,00	0,00
3	Cash out	4 896,61	0,00	100,00	3 864,41	32,20	100,00
4	Variable payments	0,00	0,00	0,00	0,00	0,00	0,00
5	Fixed payments	0,00	0,00	0,00	0,00	0,00	0,00
6	Salaries payments	0,00	0,00	0,00	0,00	0,00	0,00
7	Tax payments	4 896,61	0,00	0,00	3 864,41	32,20	0,00
8	Change in inventory	0,00	0,00	100,00	0,00	0,00	100,00
Cash flow provided/used by operating activities		7 203,39	0,00	11 900,00	-3 764,41	-32,20	-100,00

Example 3 (of estimation of raw materials and components)

Enterprise plans to lay in a stock inventories at the amount of 100 rub. in the second period (month) data. Payment to supplier will be effected on terms of 100% advance one month before delivery.

Step-by-step actions:

1. Enter volume of inventories in the string «Inventories of raw materials and components».
2. Enter payment to supplier for delivered inventories in the string «Payments on inventories».

Table 8. Financial Parameters (th. rub.)		Type of calculation	Min. balance	0 period	jan 2010	feb 2010	mar 2010
			0,00	0,00	0,00	67,80	235,59
Table 8. Financial Parameters Plan 1, currency: th. rub.							
No	Description	Type of calculation	TOTAL	0 period	jan 2010	feb 2010	mar 2010
DEPRECIATION							
1	Depreciation	Auto	0,00		0,00	0,00	0,00
INVENTORIES							
2	Inventories of raw materials and components	Manual			0,00	0,00	0,00
						100,00	
3	Unfinished inventories	Manual			0,00	0,00	0,00
4	Finished inventories	Manual			0,00	0,00	0,00
5	Payments on inventories	Manual	0,00		0,00	0,00	0,00
			100,00		100,00		
TAXES							

Result of calculations:

1. Made inventories and paid advances are registered in balance.

Table 11. Balance (th. rub.)		Min. balance	0 period	jan 2010	feb 2010	mar 2010	apr 2010
		0,00	0,00	0,00	67,80	235,59	303,39
Table 11. Balance Plan 1, currency: th. rub.							
No	Description	Previous balance	0 period	jan 2010	feb 2010	mar 2010	apr 2010
ASSETS							
1	Fixed & intangible assets		0,00	0,00	0,00	0,00	0,00
2	Unfinished investments	=	0,00	0,00	0,00	0,00	0,00
3	= TOTAL: Fixed Assets:	0,00	0,00	0,00	0,00	0,00	0,00
4	Inventories	0,00	0,00	0,00	100,00	0,00	0,00
5	- stocks of raw materials and components		0,00	0,00	100,00	0,00	0,00
6	- unfinished goods		0,00	0,00	0,00	0,00	0,00
7	- finished goods		0,00	0,00	0,00	0,00	0,00
8	Accounts receivable	0,00	0,00	100,00	0,00	0,00	0,00
9	- from customers & buyers		0,00	0,00	0,00	0,00	0,00
10	- advances to suppliers		0,00	100,00	0,00	0,00	0,00
11	other accounts receivable		0,00	0,00	0,00	0,00	0,00

2. In cash flow statement outflow increases by amount of payment for delivery (string «Change in Inventory»).

Table 10. Cash Flow Statement (th. rub.)		Min. balance	0 period	jan 2010	feb 2010
		0,00	0,00	0,00	67,80
Table 10. Cash Flow Statement					
Plan 1, currency: 'th. rub.'					
No	Description	TOTAL «»	0 period	jan 2010	feb 2010
▲ ▼	CASH FLOW FROM OPERATIONS				
1	Cash in	1 200,00	0,00	100,00	100,00
2	Receivable Payments	1 200,00	0,00	100,00	100,00
3	Cash out	354,24	0,00	100,00	32,20
4	Variable payments	0,00	0,00	0,00	0,00
5	Fixed payments	0,00	0,00	0,00	0,00
6	Salaries payments	0,00	0,00	0,00	0,00
7	Tax payments	354,24	0,00	0,00	32,20
8	Change in inventory	0,00	0,00	100,00	0,00
	Cash flow provided/used by operating activities	845,76	0,00	0,00	67,80

Example 4 (of estimation of raw materials and components)

Enterprise plans to lay in a stock inventories at the amount of 100 rub. in the first period data. Payment to supplier will be effected upon receipt of products. In the second period half of the inventories will be handed over manufacturing and remaining raw materials decreases twofold.

Step-by-step actions:

1. Enter respective value of inventories in each period data in the string «Inventories of raw materials and components»:

- in the first period 100 rub.
- in the second period 50 rub.

2. Enter payment for supplier in the string «Payments on inventories».

Table 8. Financial Parameters (th. rub.)				Type of calculation	Min. balance 0,00	0 period 0,00	jan 2010 100,00	feb 2010 67,80	mar 2010 185,59	apr 2010 303,39
Table 8. Financial Parameters Plan 1, currency: th. rub.										
Nz ↓ ↑	Description	Type of calculation	TOTAL «»	0 period	jan 2010	feb 2010	mar 2010	apr 2010		
DEPRECIATION										
1	Depreciation	Auto	0,00 0,00		0,00	0,00	0,00	0,00		
INVENTORIES										
2	Inventories of raw materials and component	Manual	- -		0,00	0,00	0,00	0,00		
3	Unfinished inventories	Manual	- -		0,00	0,00	0,00	0,00		
4	Finished inventories	Manual	- -		0,00	0,00	0,00	0,00		
5	Payments on inventories	Manual	0,00 100,00		0,00	0,00	0,00	0,00		
TAXES										

Result of calculations:

1. In balance the string «stocks of raw materials and components» contains value of inventories in each period data.

Table 11. Balance (th. rub.)			Min. balance	0 period	jan 2010	feb 2010	mar 2010	apr 2010
			0,00	0,00	100,00	67,80	185,59	303,39

Table 11. Balance								
Plan 1, currency: th. rub.								
Nz	Description	Previous balance	0 period	jan 2010	feb 2010	mar 2010	apr 2010	
ASSETS								
1	Fixed & intangible assets		0,00	0,00	0,00	0,00	0,00	0,00
2	Unfinished investments	=	0,00	0,00	0,00	0,00	0,00	0,00
3	= TOTAL: Fixed Assets:	0,00	0,00	0,00	0,00	0,00	0,00	0,00
4	Inventories	0,00	0,00	0,00	100,00	50,00	0,00	
5	- stocks of raw materials and components		0,00	0,00	100,00	50,00	0,00	
6	- unfinished goods		0,00	0,00	0,00	0,00	0,00	

2. In cash flow statement outflow increases (string «Change in Inventory») by the amount of payment for delivery in the first period data and decreases by 50 rub. in the second period. This is due to the fact that expenses for raw materials and components that taken into account in variable costs in the second period, are reimbursed by 50 rub. via decrease of inventories' volume

Table 10. Cash Flow Statement (th. rub.)		Min. balance	0 period	jan 2010	feb 2010	mar 2010	apr 2010
		0,00	0,00	100,00	67,80	185,59	303,39
Table 10. Cash Flow Statement							
<i>Plan 1, currency: th. rub.</i>							
Nº	Description	TOTAL «»	0 period	jan 2010	feb 2010	mar 2010	apr 2010
CASH FLOW FROM OPERATIONS							
1	Cash in	1 200,00	0,00	100,00	100,00	100,00	100,00
2	Receivable Payments	1 200,00	0,00	100,00	100,00	100,00	100,00
3	Cash out	354,24	0,00	0,00	132,20	-17,80	-17,80
4	Variable payments	0,00	0,00	0,00	0,00	0,00	0,00
5	Fixed payments	0,00	0,00	0,00	0,00	0,00	0,00
6	Salaries payments	0,00	0,00	0,00	0,00	0,00	0,00
7	Tax payments	354,24	0,00	0,00	32,20	32,20	32,20
8	Change in inventory	0,00	0,00	0,00	100,00	-50,00	-50,00
	Cash flow provided/used by operating activities	845,76	0,00	100,00	-32,20	117,80	117,80

Example (nonstandard accrual of taxes)

Enterprise's income before tax, that is formed in Profit and Loss, amounts 1 000 thousand rub. a month. Fixed income tax, 100 thousand rub., is paid during the first two periods, after that income tax is accrued as 20% of income before tax and amounts 200 thousand rub. a month.

Step-by-step actions:

1. Switch on manual mode of calculation of income tax in the table «Financial parameters».
2. In the first two months enter fixed income tax 100 thousand rub., and then make reference to automatic mode of calculation (it is supposed that automatic mode takes into account 20% income tax).

Table 8. Financial Parameters (th. rub.)			Type of calculation	Min. balance 0,00	0 period 0,00	jan 2010 100,00	feb 2010 169,49	mar 2010 338,98	apr 2010 306,47
Table 8. Financial Parameters Plan 1, currency: th. rub.									
No	Description	Type of calculation	TOTAL ←→	0 period	jan 2010	feb 2010	mar 2010	apr 2010	
DEPRECIATION									
TAXES									
E	Income tax accrued	Manual	406,78 2 200,00		33,90 100,00	33,90 100,00	33,90 200,00	33,90 200,00	
Z	Property tax accrued	Auto	0,00 0,00		0,00	0,00	0,00	0,00	

Result of calculations:

As a result of the calculations nonstandard accrual of income tax is formed in the table «Financial parameters». In the table «Profit and Loss» automatically calculated income tax in the first two periods is changed into manually formed one.

Table 9. Profit and Loss (th. rub.)		Min. balance	0 period	jan 2010	feb 2010	mar 2010	apr 2010
		0,00	0,00	100,00	169,49	338,98	306,47

Table 9. Profit and Loss							
Plan 1, currency: th. rub.							
No	Description	TOTAL	0 period	jan 2010	feb 2010	mar 2010	apr 2010
1	Revenues	2 033,90	0,00	169,49	169,49	169,49	169,49
12	Interest expenses	0,00	0,00	0,00	0,00	0,00	0,00
13	Earnings before income tax	2 033,90	0,00	169,49	169,49	169,49	169,49
14	Income tax	2 200,00	0,00	100,00	100,00	200,00	200,00

Example 2 (accrual of other taxes)

Enterprise applies simplified taxation system. Object of taxation are revenues that decreased by the value of expenses. Tax rate is 15%. The tax is paid quarterly.

Step-by-step actions:

1. Copy income and expenses data from the table «Profit and Loss» to user's work space (to recalculate the taxes automatically you are recommended to insert data with the help of formulae).

2	Value added tax (VAT) paid	Auto	335,59		0,00	30,51	30,51	30,51	30,51	30,51	30,51	30,51
10	Other taxes (accrued)	Manual	0,00									
	Other taxes (paid)		0,00									

User's work space

Display / Hide

Revenues (Profit and Loss)	1000	1000	1000	1000	1000	1000	1000	1000
Operating expenses (Profit and Loss)	550	500	490	480	470	460	450	450

2. Record the formula for tax calculation in the string «Other taxes (accrued)» (Revenues (P&L) – Operating expenses (P&L)) *15%. To ensure correspondence between revenues and expenses all the taxed should be accrued monthly.

Table 6. Financial Parameters (th. rub.)	Type of calculation	Min. balance	# period	Jan 2010	Feb 2010	Mar 2010	Apr 2010	May 2010	Jun 2010	Jul 2010
1	Income tax	0,00	0,00	100,00	269,49	530,98	792,47	1053,97	1315,46	1576,95
2	Value added tax (VAT) paid	Auto		0,00	30,51	30,51	30,51	30,51	30,51	30,51
10	Other taxes (accrued)	Manual	619,80	67,50	75,50	76,50	78,00	79,50	81,00	81,00
	Other taxes (paid)		0,00							

User's work space

Display / Hide

Revenues (Profit and Loss)	1000	1000	1000	1000	1000	1000	1000	1000
Operating expenses (Profit and Loss)	550	500	490	480	470	460	450	450

(Revenues - Operating expenses) * 15%

3. Enter the amount of quarterly payment of this tax in the string «Other taxes (paid)», which is equal to the amount of taxes accrued during the last three months of enterprise's work.

Table 8. Financial Parameters (th. rub.)			Type of calculation	Min. balance 0,00	feb 2010 269,49	mar 2010 319,99	apr 2010 485,47	may 2010 659,37	jun 2010 589,36
TAXES									
5	Income tax accrued	Manual	282,82 0,00	18,90 0,00	18,60 0,00	18,30 0,00	18,00 0,00	17,70 0,00	
7	Property tax accrued	Auto	0,00 0,00	0,00 0,00	0,00 0,00	0,00 0,00	0,00 0,00	0,00 0,00	
8	Social accrued	Auto	0,00 0,00	0,00 0,00	0,00 0,00	0,00 0,00	0,00 0,00	0,00 0,00	
9	Value added tax (VAT) paid	Auto	335,59 0,00	30,51 0,00	30,51 0,00	30,51 0,00	30,51 0,00	30,51 0,00	
10	Other taxes (accrued)	Manual	619,80	75,00	76,50	78,00	79,50	81,00	
	Other taxes (paid)		619,80		219,00			238,50	

Example (balance influences)

Two months before beginning of calculations 100 thousand rub. were invested by the owners in the purchase of fixed assets which depreciation starts since February. Depreciation period of the purchased fixed assets is 4 months.

Step-by-step actions:

1. Enter information about owners equity in the table «Balance» in the column «Previous balance» ("Equity and Liabilities", "Owners Equity") and about purchased fixed assets ("Assets", "Fixed & intangible assets").

Table 11. Balance (th. rub.)		Min. balance	0 period
		0,00	0,00
Table 11. Balance <i>Plan 1, currency: th. rub.</i>			
№	Description	Previous balance	0 period
ASSETS			
1	Fixed & intangible assets	100,00	0,00
2	Unfinished investments	-	0,00
3	= TOTAL: Fixed Assets:	100,00	0,00
4	Inventories	0,00	0,00
5	Cash	-	0,00
14	= TOTAL: Current Assets:	0,00	0,00
15	= TOTAL: ASSETS:	100,00	0,00
EQUITY AND LIABILITIES			
16	Owners Equity	100,00	0,00
17	Retained earnings	-	0,00
18	= TOTAL: Total Equity:	100,00	0,00

2. Net book value of fixed assets in each period data, calculated by the user, is entered in the table "Financial parameters".

Table 8. Financial Parameters (th. rub.)		Type of calculation	Min. balance	0 period	jan 2010	feb 2010	mar 2010	apr 2010
			0,00	0,00	100,00	269,49	538,98	708,17
BALANCE INFLUENCES								
17	Fixed & intangible assets	-	100,00	100,00	75,00	60,00	25,00	
18	Accounts receivable: from customers & buyers	-						
19	Accounts receivable: advances to suppliers	-						
20	Accounts receivable: other accounts receivable	-	0,00					

Result of calculations:

As a result of calculations depreciation accrued on asset will appear in profit and loss report, and in the balance will appear net book value of fixed assets.

	Table 9. Profit and Loss (th. rub.)	Min. balance	0 period	jan 2010	feb 2010	mar 2010	apr 2010	may 2010
		0,00	0,00	100,00	269,49	538,98	708,17	877,66
Table 9. Profit and Loss								
Plan 1, currency: th. rub.								
#	Description	TOTAL	0 period	jan 2010	feb 2010	mar 2010	apr 2010	may 2010
▲ ▼		↔						
1	Revenues	2 033,90	0,00	169,49	169,49	169,49	169,49	169,49
2	Operating expenses	100,00	0,00	0,00	25,00	25,00	25,00	25,00
3	Variable expenses	0,00	0,00	0,00	0,00	0,00	0,00	0,00
4	Fixed expenses	0,00	0,00	0,00	0,00	0,00	0,00	0,00
5	Salary	0,00	0,00	0,00	0,00	0,00	0,00	0,00
6	Depreciation	100,00	0,00	0,00	25,00	25,00	25,00	25,00
7	Operating profit	1 933,90	0,00	169,49	144,49	144,49	144,49	144,49

Table 11. Balance (th. rub.)			Min. balance 0,00	0 period 0,00	jan 2010 100,00	feb 2010 269,49	mar 2010 538,98	apr 2010 708,17
Table 11. Balance								
Plan 1, currency: th. rub.								
No	Description	Previous balance	0 period	jan 2010	feb 2010	mar 2010	apr 2010	
ASSETS								
1	Fixed & intangible assets	100,00	100,00	100,00	75,00	50,00	25,00	
2	Unfinished investments	=	0,00	0,00	0,00	0,00	0,00	
3	= TOTAL: Fixed Assets:	100,00	100,00	100,00	75,00	50,00	25,00	
4	Inventories	0,00	0,00	0,00	100,00	0,00	0,00	
5	- stocks of raw materials and							

Example of calculation of NPV for two projects

Let's examine two projects. Both require initial investment at the amount of 500 rub., there are no other expenses. Projects are financed only for the account of investors' equity. When realizing project "A" during three years owner obtains income at the amount of 500 rubles at the end of each year. When realizing project "B" owner's income is 300 rubles at the end of the first and second year, and at the end of the third year it is 1100 rub. Which of the two projects is more profitable?

Solution:

Let's suppose that investor specified discount rate at annual level of $r=25\%$. Net Present Value (NPV) of the projects «A» and «B» is calculated as follows:

$$NPV_A = -500 + \left[\frac{500}{(1 + 0,25)} + \frac{500}{(1 + 0,25)^2} + \frac{500}{(1 + 0,25)^3} \right] = 476 \text{ rub.};$$

$$NPV_B = -500 + \left[\frac{300}{(1 + 0,25)} + \frac{300}{(1 + 0,25)^2} + \frac{1100}{(1 + 0,25)^3} \right] = 495 \text{ rub.}$$

Thus, the investor will choose the project "B".

However, if investor indicates discount rate equal to $r = 35\%$ per annum, then the NPV of the projects "A" and "B" will be equal to 348 and 334 rub. respectively. In this case the project "A" is more preferable. Consequently, the investor's decision depends not only on the values of net cash flows and value of investments, but also on the discount rate: if it is more than 30.28% (with this value NPV of the projects "A" and "B" match), then, project A is more preferable, if it is less, then, the project "B" will be more profitable

Example of calculation of marginal income

Representation of source data in the table

Description	Value (rub.)
Revenues	100 000
Variable expenses	40 000
Fixed expenses	30 000
Operating profit	30 000

Marginal income = 100 000 rub. – 40 000 rub. = 60 000 rub.

Example of calculation of the rate of deposit for coverage

Representation of source data in the table

Description	Value (rub.)
Revenues	100 000
Variable expenses	40 000
Marginal income	60 000
Fixed expenses	30 000
Operating profit	30 000

$$RDC = 60\,000 \text{ rub.} / 100\,000 \text{ rub.} = 60\%$$

Example of break even calculation of the project

Representation of source data in the table

Description	Value (rub.)
Revenues	100 000
Variable expenses	40 000
Marginal income	60 000
Fixed expenses	30 000
Operating profit	30 000

$$RDC = 60\,000 \text{ rub.} / 100\,000 \text{ rub.} = 60\%$$

$$\text{Break even level} = 30\,000 / 60\% = 50\,000 \text{ rub.}$$

I.e., revenues in the amount of 50 000 rub. allows compensation of all operating expenses, but would not earn profit for the enterprise.

Example of calculation of margin of financial safety

Representation of source data in the table

Description	Value (rub.)
Revenues	100 000
Variable expenses	40 000
Marginal income	60 000
Fixed expenses	30 000
Operating profit	30 000

$$RDC = 60000 \text{ rub.} / 100\,000 \text{ rub.} = 60\%$$

$$\text{Break even level} = 30\,000 / 60\% = 50\,000 \text{ rub.}$$

$$MFS = (100\,000 \text{ rub.} - 50\,000 \text{ rub.}) / 100\,000 \text{ py6.} = 50\%$$

Margin of financial safety has sufficiently high value. Reducing the revenues by 50% activity of enterprise becomes unprofitable.

Example of calculation of operating leverage

Company has the following structure of expenses: fixed expenses 30 000 rub., percentage of variable expenses 40% of revenue. Let's consider the effect of operating leverage. The table below illustrates profit (losses) in growing (falling) level of sales. The table also compares relative changes of revenue and profit.

According to the specified data, starting from break-even level, at 20% increase of sales volumes significant increase in profit occurs (because it's initial value is zero). With increase of sales volume by 20% more, profit increases by 40% in comparison with the previous value. Further growth of sales increases revenue only by 34%. Thus effect of leverage decreases as volume of sales increases compared to break even.

Profit fluctuations depending on sales volume (rub.)

Revenues	Variable expenses	Fixed expenses	Profit (loss)	Increase compared to the previous step (%)		Operating leverage
				Sales	Profit	
20 000	8 000	30 000	-18 000			
40 000	16 000	30 000	- 6 000			
50 000	20 000	30 000	0			
100 000	40 000	30 000	30 000			2
120 000	48 000	30 000	42 000	20%	40%	1,7
144 000	57 600	30 000	56 000	20%	34%	1,5

However operating leverage works in both directions. Note that as a result of sales volume decrease from 40 000 rub. to 20 000 rub., i.e. by 50%, company sustains losses threefold.

Marginal income (MI) = 100 000 rub. – 40 000 rub. = 60 000 rub.

Operating leverage = 60 000 rub. / 30 000 rub. = 2

Conclusions:

1. The smaller the percentage of total variable expenses or the greater the proportion of fixed expenses in total expenses; ("wide" or "narrow" angle - see fig. regarding break even analysis), the greater operating leverage.
2. The closer the sales volume to breakeven point , the higher operating leverage.
3. With the high value of operating leverage, position below break even point is connected with losses, and achieving of break even level brings profit increasing with sales increase. With low operating leverage risk is lower, but also less award in the form of profit.



Making operative decisions

Source data for calculations: Revenues are 47 000 rub. (1 880 units of product, 25 rub. each), RDC is 60%, fixed expenses are 15 000 rub.

1. What net profit is to be expected when sales volume is equal to 47 000 rub.?

$MI = 47\,000 \cdot 60\% = 28\,200 \text{ rub.}$

Minus: Fixed expenses = 15 000 rub.

Net profit = 13 200 rub.

2. Consider the matter of increase of expenses for advertising by 5 000 rub, that should lead to

increase of sales by 8 000 rub. Should one increase the expenses for advertising?

Growth of MI = $8\,000 \cdot 60\% = 4\,800$ rub.

Increase of expenses for advertising = 5 000 rub.

Net profit decreases by 200 rub. ($4\,800 - 5\,000 = -200$ rub.)

Conclusion: It is not worthwhile to increase advertising expenses, because growth of marginal income is less than the increase of expenses.

3. For the purposes of sales increase management decides to decrease unit price by 5 rub. And to increase advertising expenses by 1 000 rub. For the account of these arrangements growth of sales by 60 % is expected. Is it worth taking such actions?

Decrease of sales price by 5 rub. per unit will lead to decrease of marginal income per unit from 15 to 10 rub.

Supposed sales volume = $1\,880 \text{ pcs.} \cdot 160\% = 3\,008 \text{ pcs.}$

Supposed MI = $3\,008 \text{ pcs.} \cdot 10 \text{ rub.} = 30\,080 \text{ rub.}$

Current MI = $1\,880 \text{ pcs.} \cdot 15 \text{ pyб.} = 28\,200 \text{ rub.}$

Growth of MI = $30\,080 - 28\,200 = 1\,880 \text{ rub.}$

Increase of expenses for advertising = 1 000 rub.;

Net profit increase = $1\,880 - 1\,000 = 880 \text{ rub.}$

Conclusion: Decrease of price by 5 rub. and increase of expenses for advertising by 1 000 rub. is profitable for the enterprise in the case of sales increase by 60%.

Accepting investment decisions:

1. If sales volume is considerably higher than break even level, it is possible to use technologies that require high fixed expenses, such as realization of investment projects to install high-production lines.

2. If company works at the limit of profitability, i. e., sales volume is near break even level, it is advisable to implement projects having minimum percentage of fixed costs.