

What's new in Invest for Excel version 3.8

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Version 3.8

Invest for Excel version 3.8 (compilation 3.8.001) introduces new features, consolidates features and fixes implemented after version 3.7 compilation 3.7.001 and includes a new digital signature.

DataPartner	in second	/est DR EXCEL	ENTERPRISE Program version 3.8		
Input values	Calculations	Result	Analysis		
Basic values	Investment	Profitability analysis	Discount factor		
Contact information	Income statement	Comparison table	Total investment		
	Working capital	Marginal effect	Income		
Folders and files	Cash flow	Consolidation	Variable costs		
	Balance	🗌 Impairment test	Fixed costs		
Program guide	Key financials	verification	Income variable		
<u>User manual (pdf)</u>	E Financing	Investment proposal	Charts		
Calculation file:	<not open=""></not>	Comparison file:	<not open=""></not>		
Proposal file:	<not open=""></not>	Financing file:	<not open=""></not>		
	www.inve	stforexcel.com			

Microsoft Excel versions supported

Invest for Excel 3.8 is supported for Microsoft Excel versions 2007, 2010, 2013 and 2016 (including Office 365 desktop) for Windows Vista, Windows 7, Windows 8, Windows 8.1 and Windows 10.

Optimizations for speed

Optimizations have been implemented to speed up program execution and calculation. This will be most clearly noticeable in Office 2013 and Office 2016 which use SHA-2 class, SHA512 algorithm for sheet protection.

The new sheet-protection algorithm is much slower than the SHA-1 class sheet protection used in Office 2010 and Office 2007.

Digital signature valid until 2018

Invest for Excel program code is currently signed with a digital signature which is valid until August 10, 2018.

Certificate
General Details Certification Path
Certificate Information
This certificate is intended for the following purpose(s):
Ensures software came from software publisher Protects software from alteration after publication
* Refer to the certification authority's statement for details.
Issued to: Datapartner Oy
Issued by: Thawte Code Signing CA - G2
Valid from 6/ 17/ 2016 to 8/ 10/ 2018
You have a private key that corresponds to this certificate.
Issuer Statement
ОК

Mid-year discounting

As an alternative to standard end-of-year discounting, mid-year discounting can be used. To turn on mid-year discounting, open the "Discount Rate" dialog box from the "Basic Values" table of the calculation file and check "Mid-year discounting" in the dialog box.

Droject des			BASIC	VALUES			
Project des	scription						
Calculation	n term, years		10 years]			
Interval ler	ngth, months		12				
Number of	fintervals		10				
Calculation	n term begins	Γ	(MM/YYYY) 01/2016	(in the beginnin	g of period)		
Calculation	point		01/2016	(in the beginnin	g of period)		
Calculation	term ends		12/2025	(in the end of th	e period)		
Currency	1000/1000000)	<	1	-			
Discount ra	ate (per annum)	Ō	10,00	% (required rat	e of return)		
			2016	2017	2018	2019	2020 ->
Income tax	κ %		25	25	25	25	25
© Fixed	d discount rate		WACC				
€ Fixer O Varia	d discount rate able discount rate year discounting	OK	WACC				
© Fixer O Varia	d discount rate able discount rate year discounting Discount factor (n	ок nid-year)	WACC			5)	
© Fixer O Varia	d discount rate able discount rate year discounting Discount factor (n Discount factor (e	ок nid-year) end-of-yea	WACC	1 1 + Discount 1 + Discount	rate) ^ (n - 0. rate) ^ n	5)	
Tixec O Varia	d discount rate able discount rate year discounting Discount factor (n Discount factor (e	ок nid-year) end-of-yea	WACC	1 1 + Discount 1 + Discount	rate) ^ (n - 0. rate) ^ n	5)	

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Zero-period and Residual value are unaffected and are calculated the same way in mid-year discounting and end-of-year discounting.

Extrapolated residual value is calculated as end-of-year cash flows in both mid-year discounting and end-of-year discounting.

Mid-year discounting should not be used when shorter periods are used in a calculation. When mid-year discounting is used, information of this is shown in the Basic Values and Profitability analysis.

	BASIC VALUES
Project description	
Calculation term, years	··· 10 years
Interval length, months Number of intervals	12 10
Calculation term begins Calculation point Calculation term ends	(MM/YYYY)01/2016(in the beginning of period)01/2016(in the beginning of period)12/2025(in the end of the period)
Figures (1/1000/1000000) Currency	
Discount rate (per annum)	10,00 % (required rate of return) Mid-year discounting
	2016 2017 2018 2019 2020 ->
Income tax %	25 25 25 25 25 25

	BBOFITABLUT			
	PROFILABILII	YANALYSI	5	
Project description				
Nominal value of all investments		1 668 426	Discounted investments	s 1 474 703
Required rate of return		10,00 %	Mid-year discounting	1
Calculation term		10,0	years	1/2016 - 12/2025
Calculation point		1/2016	(In the beginning of per	iod)
Present value of business cash flows	Nominal	<u>PV</u>	<u>Notes</u>	
± PV of operative cash flow		1 470 573		
+ PV of residual value		226 437		
Present value of business cash flows		1 697 010		
- Present value of reinvestments	-468 426	-284 010		
Total Present Value (PV)		1 413 000		
Investment proposal	Nominal	<u>PV</u>		
 Proposed investments in assets 	-1 200 000	-1 190 693		
+ Investment subventions	0	0		
Investment proposal	-1 200 000	-1 190 693		
Net Present Value (NPV)		222 307	>= 0 ->	profitable

Example of mid-year discounting vs. end-of-year discounting (discount rate is 10%):

Mid-year discounting:

CASH FLOW STATEMENT							
	1/2016	12/2016	12/2017	12/2018	12/2019	12/2020	Residual
Months per interval		12	12	12	12	12	(12/2020)
Income	0	-175 000	420 000	428 400	436 968	445 707	0
Income tax	0	0	-83 250	-84 845	-86 477	-88 147	0
Cash flow from operations	0	-175 000	336 750	343 555	350 491	357 561	0
Asset investments and realizations	-1 000 000	-200 000	-20 000	-20 200	-20 402	-20 606	836 007
Free cash flow (FCF)	-1 000 000	-375 000	316 750	323 355	330 089	336 955	836 007
Discounted free cash flow (DFCF)	-1 000 000	-357 548	274 554	254 799	236 459	219 434	519 095
Cumulative discounted free cash flow	-1 000 000	-1 357 548	-1 082 995	-828 195	-591 736	-372 302	146 793

NPV = 146 793

End-of-year discounting:

CASH FLOW STATEMENT							
	1/2016	12/2016	12/2017	12/2018	12/2019	12/2020	Residual
Months per interval		12	12	12	12	12	(12/2020)
Income	0	-175 000	420 000	428 400	436 968	445 707	0
Income tax	0	0	-83 250	-84 845	-86 477	-88 147	0
Cash flow from operations	0	-175 000	336 750	343 555	350 491	357 561	0
Asset investments and realizations	-1 000 000	-200 000	-20 000	-20 200	-20 402	-20 606	836 007
Free cash flow (FCF)	-1 000 000	-375 000	316 750	323 355	330 089	336 955	836 007
Discounted free cash flow (DFCF)	-1 000 000	-340 909	261 777	242 941	225 455	209 222	519 095
Cumulative discounted free cash flow	-1 000 000	-1 340 909	-1 079 132	-836 191	-610 736	-401 513	117 581

NPV = 117 581

Monte Carlo simulation

Monte Carlo simulation can be used to evaluate the risk of one or more variables of a project. Random numbers are entered in the variable cell(s) to calculate the distribution of result values. Variables are expected to have a normal distribution, i.e. any value in the specified range between minimum and maximum value is valid.

As an example, one big uncertainty of a wind power plant could be the selling price of electricity.

INVESTMENTS (-) / REALIZATIONS (+)							
🗉 Imputed depreciation 🛛 🚡 🕮 🖷		7/2017	12/2017	12/2018	12/2019	12/2020	12/2021
Months per interval	Depr%		6	12	12	12	12
1 Turbines		-600 000	-2 400 000				
Depreciation (straight line)	6,67%			-200 000	-200 000	-200 000	-200 000
Book value		600 000	3 000 000	2 800 000	2 600 000	2 400 000	2 200 000
2 Connection fee		-22 000	-88 000				
Depreciation (straight line)	6,67%			-7 333	-7 333	-7 333	-7 333
Book value		22 000	110 000	102 667	95 333	88 000	80 667
3 Costs of establishing		-100 000	-400 000				
Depreciation (straight line)	6,67%			-33 333	-33 333	-33 333	-33 333
Book value		100 000	500 000	466 667	433 333	400 000	366 667
Investments		-722 000	-2 888 000	0	0	0	0
Realizations		0	0	0	0	0	0
Depreciation		0	0	-240 667	-240 667	-240 667	-240 667
Realization profit (+) / loss (-)		0	0	0	0	0	0
Book value		722 000	3 610 000	3 369 333	3 128 667	2 888 000	2 647 333
🔁 E 🔀 🔛		7/2017	12/2017	12/2018	12/2019	12/2020	12/2021
Months per interval			6	12	12	12	12
Income specified:							
Electricity income			0	893 160	919 955	947 553	975 980
+ Turbines				6	6	6	6
 Capacity (MWh) turbine / year 				4 135	4 135	4 135	4 135
Utilization rate				90,0 %	90,0 %	90,0 %	90,0 %
Selling price, electricity (Euro) / MWh				40	41,20	42,44	43,71
Production, MWh				22 329	22 329	22 329	22 329
Income		0	0	893 160	919 955	947 553	975 980
Gross margin		0	0	893 160	919 955	947 553	975 980
Fixed costs		0	0	-90 000	-92 700	-95 481	-98 345
Operational costs				-90 000	-92 700	-95 481	-98 345
EBITDA; Operating income before depreciation		0	0	803 160	827 255	852 072	877 635
Depreciation		0	0	-240 667	-240 667	-240 667	-240 667
EBIT; Operating income		0	0	562 493	586 588	611 406	636 968

When we have the calculation made so that future selling price is dependent of first year's price, we can use Monte Carlo simulation to evaluate the risk. Press "Monte Carlo" in the "Analysis" section of the Invest for Excel ribbon menu to create a Monte Carlo simulation.

ĺ	6	File	Input	Result	Ana	lysis	Format	Other				
		ldn			$\mathbf{I}_{\mathbf{I}} \mathbf{I}^{\mathbf{I}}$	đar			1	Ē	9	٢
	Home screen	Discount Factor	Total Investment	Income \	/ariable Costs	Fixed Costs	Selectable Variable	Monte Carlo	Charts	Cell Break-even	Undo Break-even	Excel Menus
Į	Home			A	Analysis			_	Charts	Break	Even	Menus

12/2018	12/2019	12/2020	12/2021	12/2022	12/2023	12/2024	12/2025	12/2
12	12	12	12	12	12	12	12	
893 160 6 4 135	Monte Carlo Si	imulation	-		-			×
90.0 %	Sheet		Calculations				•	
40 22 329	Select vari	able cell	Calculations!\$	(\$447				
893 160 893 160	Expected	value	40	Stand	ard deviation			
-90 000	Minimum			_				
-90 000	Maximum							
-240 667								
562 493 0	+ - (1) Selli	ng price, electi	ricity (Euro) / MW	h (12/2018)				
562 493								
0								
-140 623								
421 870								
15,9%								
104 451								
91 785								
-63 814	Profitabilit	ty indicator —						
	Net Pres	sent Value (NP	V)				•	
12/2018 12 30	Iterations		1000	•		Run!	Cancel	

Select the first year's selling price cell from the "Calculations" sheet.

The cell value becomes the expected value. Enter minimum and maximum value for the selling price of electricity. We assume the price could go as down as 20 and as high as 60 in 2018.

Variables				
Sheet	Calculations			•
Select variable cell	Calculations!\$I\$447			_
Expected value	40	Standard deviation	Ι	
Minimum	20			
Maufanuar	60			

Let's assume that we don't know what the standard deviation of the selling price of electricity could be, but we have found statistical data of previous year's prices. We can easily calculate the standard deviation from this data. Press the "..." button by the standard deviation box.

onte Carlo Simulation	15		-	 X
Variables				
Sheet	Calculations			-
Select variable cell	Calculations!\$I\$447			_
Expected value	40	Standard deviation	Ι	
Minimum	20			
Maximum	60			

A dialog box for calculating standard deviation from a range of values is shown.

Calculate From Range			×
Target	Monte Carlo Simulation		
Workbook	WindPowerPlantMonte	Carlo.xlsm	•
Sheet	Calculations		<u> </u>
Range			
	Calculate!	🔲 Sum	
Expected value		🗌 Minimum value	
Standard deviation		Maximum value	
	-		
		Enter chosen	Cancel
×			

Choose the workbook and sheet with the price data.

Calculate From Range	LIE LIE LIE	x
Target	Monte Carlo Simulation	
Workbook	Electricity price statistics 2006-2015.xlsm	•
Sheet	Sheet1	· .

Month	Electricity	prices offere	ed €/mWh						
2014-01	71,00	53,50	55,30	52,90	46,60	49,90			
2014-02	53,90	Calculate Fr	om Range	10.00	-	-			x
2014-03	49,90		j-	-	-				
2014-04	44,90	Target		Mon	te Carlo Simu	lation			
2014-05	43,90								
2014-06	43,90	Workbool	¢	Elec	tricity price s	tatistics 200)6-2015.xlsm		-
2014-07	43,90	Sheet		She	et1				-
2014-08	43,90	Pance							
2014-09	43,90	Kange				_		_	_
2014-10	43,90				Calculate!		Sum		
2014-11	43,90		ted value				Minimum value		_
2014-12	43,90		land douistion				Maximum value		- 11
2015-01	43,90	J♥ Stariu	aru ueviauori				Maximum value		
2015-02	43,90								
2015-03	42,90						Enter chosen	Cancel	
2015-04	43,70	00,00	-2,00	10,50	02,00				

Put the cursor in the range field and select the range with the data from the sheet.

Month	Electricity	prices offe	ered €/mW	'h		
2014-01	71,00	53,50	55,30	52,90	46,60	49,90
2014-02	53,90	53,50	55,30	52,90	46,60	49,90
2014-03	49,90	49,90	51,90	51,70	46,60	49,90
2014-04	44,90	44,90	46,40	46,20	44,90	44,90
2014-05	43,90	43,90	47,00	46,80	43,90	43,90
2014-06	43,90				? X	43,90
2014-07	43,90	Sheet1!\$R	\$105:\$W\$12	8	.	43,90
2014-08	43,90		50,50	+5,10	+5,50	43,90
2014-09	43,90	43,90	50,30	49,10	43,90	43,90
2014-10	43,90	43,90	51,90	51,60	43,90	43,90
2014-11	43,90	43,90	51,90	51,60	43,90	43,90
2014-12	43,90	36,00	41,90	46,70	31,50	33,90
2015-01	43,90	36,00	41,90	46,70	31,50	33,90
2015-02	43,90	36,00	41,90	46,70	31,50	33,90
2015-03	42,90	36,00	41,90	46,70	31,50	33,90
2015-04	43,70	36,00	41,90	45,90	31,50	33,90
2015-05	40,50	36,00	40,50	40,50	31,50	33,90
2015-06	39,00	22,60	31,20	35,10	21,80	25,70
2015-07	30,60	22,60	30,60	30,60	21,80	25,70
2015-08	35,80	35,80	35,90	35,90	31,50	31,20
2015-09	34,20	34,20	34,20	34,20	31,50	31,20
2015-10	34,80	34,80	34,80	34,80	31,50	33,90
2015-11	26,50	26,50	26,50	26,50	26,50	26,50
2015-12	26,40	26,40	26,40	26,40	26,40	26,40

Press the "Calculate" button to calculate standard deviation.

alculate From Range	X				
Target	Monte Carlo Simulation				
Workbook	Electricity price statistics 2006-2015.xlsm				
Sheet	Sheet1				
Range	Sheet1!\$R\$105:\$W\$128				
	Calculate! Sum				
Expected value	Minimum value				
Standard deviation	Maximum value				
	Enter chosen Cancel				

Standard deviation is calculated along with other supporting info.

alculate From Range			×		
Target	Monte Carlo Simulation				
Workbook	Electricity price statistic	s 2006-2015.xlsm	~		
Sheet	Sheet1		•		
Range	Sheet1!\$R\$105:\$W\$128				
	Calculate!	Sum	5 785,7		
Expected value	40,18	🗌 Minimum value	21,8		
Standard deviation	8,8	🗌 Maximum value	71		
		Enter chosen	Cancel		

We could choose to use other calculated values as well simply by checking the boxes in front of the text, but since the values are in line with what we already have specified, we will only include the Standard deviation. Press the "Enter chosen" button to enter the Standard deviation in the Monte Carlo Simulation form.

Nonte Carlo Simulation	×
Variables	
Sheet	Calculations 🗸
Select variable cell	Calculations!\$I\$447
Expected value	40 Standard deviation 8,8
Minimum	20

We could add more variables to the same simulation by pressing then "+" button, but we will keep this simulation simple and simulate selling price of electricity only.

Variables			
Sheet	Calculations		•
Select variable cell	Calculations!\$I\$447	,	_
Expected value	40	Standard deviation	8,8
Minimum	20		
Maximum	60		
Profitability indicator			
Profitability indicator	NPV)		

We will keep the default Profitability indicator Net Present Value (NPV) and keep Iteration at 1000. This means that 1000 random numbers between 20 and 60 are entered in variable cell and the resulting NPV is used in the Monte Carlo simulation distribution. Press the "Run" button to run the simulation.

A progress bar is shown while the simulation is running. This could take several minutes.



When the simulation is ready, the result is shown in a new sheet.



At the upper left corner, general information is shown.

Monte Carlo Simulation Run				
Wind power plant 1 MW 37				
Datapartner Customer Support				
Number of iterations 1 000				
Time elapsed 00:52				
Date and time	28.7.2016 16:10			

Below that, variable information is shown.

Input variables				
Selling price, electricity (Euro) / MWh (12/2018)				
Expected value	40			
Minimum	20			
Maximum	60			
Standard deviation	8,8			

The first box above the distribution chart shows the Net Present Value scenarios.

Indicator	Net Present Value (NPV)	
Key values		
Minimum		-606 767
Maximum		5 418 904
Expected (mean	i)	2 340 425
Standard deviat	ion	1 235 731

We can see that the minimum NPV found is -606 767 and the maximum NPV is 5 418 904.

The expected NPV is 2 340 425. When we compare to the Profitability analysis, we can see that this quite close to the calculated NPV.

	PROFITABILITY	YANALYSI	S		
Project description	Wind power plant 1	MW 37			£
Nominal value of all investments		3 610 000	Discounted investm	ents	3 488 202
Required rate of return		9,00 %			
Calculation term		15,5	years	7	/2017 - 12/2032
Calculation point		7/2017	(In the beginning of	period)	
Present value of business cash flows	Nominal	<u>PV</u>	Notes		
± PV of operative cash flow		5 884 314			
+ PV of residual value	····	29 605			
Present value of business cash flows		5 913 918			
- Present value of reinvestments	0	0			
Total Present Value (PV)		5 913 918			
Investment proposal	Nominal	<u>PV</u>			
 Proposed investments in assets 	-3 610 000	-3 488 202			
+ Investment subventions	0	0			
Investment proposal	-3 610 000	-3 488 202			
Net Present Value (NPV)		2 425 716	>= 0	->	profitable
NPV as a monthly annuity		23 720			
Internal Rate of Return (IRR)		18,35 %	>= 9 %	->	profitable
Modified Internal Rate of Return (MIRR)		12,78 %	>= 9 %	->	profitable
Profitability Index (PI)		1,70	>=1	->	profitable
Payback time, years		7,8	Based on discounte	d FCF	

	Indio	ator
Probability	Min (≥)	Max (≤)
68 %	1 104 694	3 576 156
95 %	-131 036	4 811 886
99,7 %	-1 366 767	6 047 617
2,4 %	- 00	0

The standard deviation is 1 235 731 and tells about the variation of the NPV values.

- There is a 68 % probability that the NPV will be between 1 104 694 and 3 576 156. This is equal to Expected NPV -+ Standard deviation.
- There is a 95 % probability that the NPV will be between -131 036 and 4 811 886. This is equal to Expected NPV -+ 2 * Standard deviation.
- There is a 99,7 % probability that the NPV will be between -1 366 76 and 6 047 617. This is equal to Expected NPV -+ 3 * Standard deviation.
- There is a 2,4 % probability that NPV will be negative.

The following table shows probabilities of NPV values exceeded. For example, there is a 95 % probability that NPV will exceed 226 421.

x = Net Present V	alue (NPV)
Probability≥X	x
Close to 100%	-606 767
95 %	226 421
90 %	767 248
85 %	1 068 595
80 %	1 298 226
75 %	1 465 957
70 %	1 662 881
65 %	1 837 612
60 %	1 986 996
55 %	2 130 562
Median = 50%	2 263 071
45 %	2 398 622
40 %	2 596 430
35 %	2 814 862
30 %	2 975 983
25 %	3 174 726
20 %	3 411 666
15 %	3 661 417
10 %	4 050 870
5 %	4 495 309
Close to 0%	5 418 904



The chart shows distribution of the 1000 calculated NPV values.

The dropdown menu can be used to show different probabilities separately.



Chart values are also shown in table form.

Probability d	istribution
Indicator	Frequency
-456 125	2
-305 484	8
-154 842	5
-4 200	9
146 442	15
297 084	17
447 725	11
598 367	10
749 009	20
899 651	24
1 050 293	25
1 200 934	35
1 351 576	36
1 502 218	38
1 652 860	44
1 803 501	44
1 954 143	43
2 104 785	53
2 255 427	57
2 406 069	56
2 556 710	40
2 707 352	34
2 857 994	36
3 008 636	49
3 159 277	33
3 309 919	35
3 460 561	31
3 611 203	30
3 761 845	31
3 912 486	14
4 063 128	16
4 213 770	19
4 364 412	13
4 515 054	18
4 665 695	13
4 816 337	9
4 966 979	6
5 117 621	6
5 268 262	7
5 418 904	8

The buttons in the upper left corner can be used to change, print, copy and delete the simulation.

\mathbf{X}	! 🖶 🞯

!

Update the simulation. You can change, add and remove variable values if wanted. The Monte Carlo Simulation dialog box is shown.

- and bies				
Sheet	Calculations			-
Select variable cell	Calculations!\$I\$447			_
Expected value	40	Standard deviation	8,8	
Minimum	20			
Maximum	60			
Profitability indicator				
Profitability indicator	JD\/\			

Print the simulation sheet.

Copy a picture of the simulation. When only one cell is selected, the whole sheet is copied. When more than one cell is selected, the selection is copied. This way you can easily select and copy any part of the simulation result.



4

X

Delete the simulation.

Monte Carlo simulation is only available in English.

Drawdown period length in Financing file

The maximum drawdown period for a loan in Financing file is 60 months.

Financial closing	Month	1	Year 2016 1/2016
Drawdown period	Months	0	1/2016 - 1/2016 (0 years)
Repayment period	Years Starts at	49 / 50 51 52 53	+ months 0 awdown period 2/2016 - 1/2018 (2 years)
Financing type	A: Equal amortizat	54 55	Balloon payment Enter balloon ->
Amortization interval	Months	56 57	Enter principal payments ->
Interest based on	<	60	

Maximum loan term in Financing file

The maximum loan term for a loan in Financing file is 60 years.

Repayment period	Years	2	•	+ months 0 💌
	Starts at	50 51	*	rawdown period 💌 2/2017 - 1/2019 (2 years)
		52 53		Enter halloon ->
Financing type	A: Equal amortizat	54		Balloon payment
Amortization interval	Months	55 56		Enter principal payments ->
		57	_	
Interest based on		59 59	Ę	
Drawdown period interest	B: Paid from first d	raw according	, to	interest payment interval

Data validation

Data validation can be accessed from the Invest for Excel Format menu.



If you want to use Data validation to choose from lists, create the list on a new worksheet and name the list range. Example:

V	/ariableCo	ostList 🔻 💿 🦸 🌆 🗸 🗸 🗸 🗸 🗸	nd area						×
	А	В	С	D	E	F	G	Н	
1									
2		VariableCostList							
3		Maintenance of land area							
4		Maintenance of machines and equipment							
5		Maintenance of buildings							
6		Heat							
7		Electricity							
8		Water							
9		Steam	Į						
10			_						
I 4	► ►I Ba	asic Values 🖉 Calculations 🧹 Result 🖉 Analysis 🖉	Lists 🥂	ן א ו					≻ I

Select the cell or range where you want to use the list and press "Data validation" in the Invest for Excel Format menu.

File Input Result Analysis For	mat Other						0 -	. = x
Home screen Number Alignment Font Border Pattern Row Height	Column Mark, Width unloc	/Unmark ked cells	e Data validation	Insert Worksheet	Add/remove IFRS t reports sheet	Excel Menus		
Home Format Cells			Data		Sheets	Menus		
C493 • f *								*
								A
	1/2017	12/2017	12/2018	12/2019	12/2020	12/2021	12/2022	12/
Months per interval		12	12	12	12	12	12	
Variable costs	0	-406 644	-389 297	-372 093	-379 535	-387 125	-394 868	-402 =
Contervariable costs		-359 064	-340 765	-322 591	-329 042	-335 623	-342 336	-349
		-7 500	-7 650	-7 803	-7 959	-8 118	-8 281	-2
÷		-12 100	-12 342	-12 589	-12 841	-13 097	-13 359	-15
+		-216 200	-220 524	-224 934	-229 433	-234 022	-238 702	-248
+		-66 064	-67 385	-68 733	-70 108	-71 510	-72 940	-74
+		-1 700	-1 734	-1 769	-1 804	-1 840	-1 877	-1
+		-49 000	-24 500	0	0	0	0	
Gross margin	0	233 023	263 164	293 417	299 285	305 271	311 376	317 🖵
H + H Basic Values Calculations Result Ana	ysis / Lists 🤇	*J		150 220	152.245	455 444	150 540	•

Choose list in the Data validation dialog box.

Settings	Input Message Error Alert	
Validation	criteria	-
Allow:		
Any va	ue 🔽 🗸 Ignore blank	
Any val Whole r Decimal	ue umber	
List		
Date Time		
Text ler	ngth	

Enter created range.

Settings Input Me	sage Error Alert	
Validation criteria		
<u>Allow:</u>		
List	▼ Ignore blank	
Data:	✓ In-cell dropdo	wn
between	T	
between	•	

Your Data validation list is ready to be used.

0		Other variable costs
	+	Maintenance of buildings
	+	
	+	Maintenance of land area
	+	Maintenance of machines and equipment Maintenance of buildings
	+	Heat
	+	Electricity
	+	Water
	Gre	Steam

NOTE! Be careful when you use "Data validation" to restrict input cell entries, so that software functionality is not impaired.

Analysis chart can include 20 variables

An analysis chart (Spider or Tornado) can include up to 20 variables.

Create Analysis Chart	×
Calculation Income statement Rows Fuel costs Fuel costs empty plane Fuel cost per flight Number of flights Fuel costs from passenger weight Fuel costs from passengers Number of passengers Handling costs Handling costs Handling costs Staff costs Air crew Ground staff Maintenance costs Maintenance costs Maintenance cost % Rents Period 12/2017	 Chart title Spider chart Analyze rows (max. 20) Aircraft Restoration of airstrip Terminal building Number of passengers Average ticket price Fuel cost per passenger Handling cost per passenger Handling cost per passenger Air crew Ground staff Maintenance cost % Include line for each analyzed row Show line with all changes combined Analyse profitability indicator Net Present Value (NPV) Changes in analyzed rows values, % -30 ÷ -20 ÷ -10 ‡ 0 10 ÷ 20 ÷ 30 ÷
Spider	chart

Break even to NPV/NPVe

When profitability calculation based on Free cash flow to Equity is included in the calculation file in Invest for Excel program options you can choose to seek Break even for Net Present Value (NPV) or Net Present Value to equity (NPVe).

Options		
Financial Ratios	Other Options	
Include pro	fitability calculation based on Free cash flow to equity (FC	FE)
Indu	de Debt residual correction	

🚬 💷 🖦		12/2016	12/2017	12/2018	12/2019	12/2020				
		12	12	12	12	12				
		12 000	12 240	12 485	12 734	12 989				
	Break-Ev	ven								
	Seek Br	eak-Even by c	hanging active	cell value?						
	Break-Even: © Net Present Value (NPV)									
	•	Net Present V	alue to equity (N	NPVe)						
					ОК	Cance				
	_	_								

Long-term loans receivables

When you choose "Long-term loans receivables" from the "Balance Sheet Items" list in the "Depreciation method" dialog box, you can make capital changes to the asset without generating realisation profit or loss.

Depreciation method	×
Asset 1: Loan receivables	More options
Depreciation % Depreciation time, years Depreciation method	
Straight line Declining balance One-time depreciation Declining -> straight line Sum-of-years ' digits Enter manually	Begin depreciation 12/2016 (months: 12) First depreciation year includes No. of months 12 Use consecutively
Balance Sheet Items Other intangible assets Machinery and equipment Buildings and structures Land and water Prepayments and construction in progress Other tangible assets Investment in assets Deferred tax assets Long-term loans receivable	 Residual value Automatically calculate realization value at end of calculation term
	OK Cancel

INVESTMENTS (-) / REALIZATIONS (+)						
🗉 🔄 Imputed depreciation 🛛 🔀 🕮 🖦		12/2016	12/2017	12/2018	12/2019	12/2020
Months per interval	Depr%	12	12	12	12	12
1 Loan receivables		-250 000		100 000		150 000
Depreciation (straight line)						
Book value		250 000	250 000	150 000	150 000	0
Investments		-250 000	0	100 000	0	150 000
Realizations		0	0	0	0	0
Depreciation		0	0	0	0	0
Realization profit (+) / loss (-)		0	0	0	0	0
Book value		250 000	250 000	150 000	150 000	0

Copy/Distribute – change options

Distribution change percentage can be applied per year or per period.

When "Per year" is chosen, the change is applied when a new financial year starts.

Copy / Distribute	×
Copy / Distribute options 3/2016 6/2016 3 3 Copy Formula in active cell 1 12000 12 000 12 000 Adjust with number of months per interval Put annual change, % 2 ✓ Put annual change % in cell D443 Apply change Distribute as Other options ✓ Values ✓ Copy cell formatting to target cells Change indicators Annual change, % 2 ✓	Last period to include: 6/2016 9/2016 12/2017 12/2018 12/2019 12/2020 12/2021 12/2022 12/2023 12/2023
Distribute	Cancel

	🔥 💷 🖦	3/2016	6/2016	9/2016	12/2016	12/2017	12/2018
Months per interval		3	3	3	3	12	12
Income specified:							
Sales		12 000	12 000	12 000	12 000	48 960	49 939

When "Per period" is chosen, the change is applied every period.

Copy / Distribute options Iast period to include: 3 3 3 Copy Formula in active cell 1 12000 12000 12000 12060 12000 12060 12000 12060 12/2012 12/2013 12/2021 12/2021 12/2020 12/2021 12/2021 12/2021 12/2021 12/2021 12/2021 12/2021 12/2021 12/2021 12/2021 12/2021 12/2021 12/2021 12/2023 12/2021 12/2024 Image: % Put annual change, % 2 Per year Per period Other options Values Copy cell formatting to target cells Image: % Change indicators Annual change, % Induct (base year 100) Base year 2016	Copy / Distribute	X
Put annual change % in cell D443 Apply change Per year Per period Values Other options Copy cell formatting to target cells Change indicators Annual change, % Index (base year 100) Base year 2016	Copy / Distribute options 3/2016 6/2016 3 3 Copy Formula in active cell 1 12000 12 060 12 119 Annual change, % 2	Last period to include: 6/2016 9/2016 12/2016 12/2017 12/2018 12/2019 12/2020 12/2021 12/2021 12/2022 12/2023 12/2024
Change indicators Annual change, % Index (base year 100) Base year 2016	Put annual change % in cell D443 Apply change Per year Per period C Values Formulas Other options Copy cell formatting to target cells	
	Change indicators Annual change, % Index (base year 100) Base year 2016	

	<u>*</u>	3/2016	6/2016	9/2016	12/2016	12/2017	12/2018
Months per interval		3	3	3	3	12	12
Income specified:							
Sales		12 000	12 060	12 119	12 180	49 693	50 686

Base year can be selected for Index.

Corre (Distribute estimate		
12/2016 12/2017 12/2018 12 12 12 Copy Formula in active cell 12000 12000	<> <> 	Last period to include: 12/2017 12/2018 12/2019 12/2020
Distribute Value of active cell 12 000 12 240 12 485 Annual change, % 2	Adjust with number of months per interval	
Apply change I D443	stribute as Values ⓒ Formulas	
Other options Copy cell formatting to target cells		
Change indicators		
☑ Index (base year 100)	Base year 2017 ▼ 2016	

		🚬 💷	12/2016	12/2017	12/2018	12/2019	12/2020
M	onths per interval		12	12	12	12	12
Inc	come specified:						
	Sales		12 000	12 240	12 485	12 734	12 989
	Change, yearly %			2,0 %	2,0 %	2,0 %	2,0 %
_	Index (base year 100)			100	102	104	106

Use Offset formulas for specification rows

As an option you can use Offset formulas for specification rows.

ptions			
Financial Ratios Other Options			
\square Include profitability calculation based on Free cash flow to equity (FCF	E)		
Include Debt residual correction			
Include eliminations sheet			
Update analysis charts automatically			
✓ Picture copy: show "Picture added to clipboard" message			
Use Offset formulas for specification rows			
< Invfile3 >		ОК	Cancel

Offset formulas are safer and can handle cut and paste but are also much slower to calculate. Normal direct-reference formulas will break when cut and paste is used, but are much faster to calculate.

Open example file

Example files can easily be opened from the Invest for Excel menu.



You can choose from available files per language.

pen Example File	×
Choose example file to open	English (EN)
Acquisition.xltm Airline.xltm	
Machine.xltm	
Real Estate.xltm WindPowerPlant.xltm	
C New empty calculation	
	Open Cancel

Camera shot with Shift key

By default, no program buttons etc. are included when you copy a table to clipboard using the Camera shot button.

BASIC VALUES					
Project description	New flight route				
Calculation term, years	10 years]			
Interval length, months	12]			
Number of intervals	10				
	(MM/YYYY)				
Calculation term begins	01/2017 (in the beginning of period)				
Calculation point	01/2017	(in the beginnin	g of period)		
Calculation term ends	12/2026	(in the end of the	e period)		
Figures (1/1000/1000000)	1]			
Currency	EUR				
Discount rate (per annum)	10,16	% (required rate	e of return)		
	2017	2018	2019	2020	2021 ->
Income tax %	30	30	30	30	30

If you want to include program buttons, press Shift key when you click the Camera shot button.

	BASIC	VALUES			
Project description	New flight ro	ute			
Calculation term, years	😐 10 years]			
Interval length, months Number of intervals	12 10]			
Calculation term begins Calculation point Calculation term ends	(MM/YYYY) 01/2017 01/2017 12/2026	(in the beginnin (in the beginnin (in the end of th	g of period) g of period) e period)		
Figures (1/1000/1000000) Currency	1 <> EUR				
Discount rate (per annum)	10,16	% (required rate	e of return)		
	2017	2018	2019	2020	2021 ->
Income tax %	30	30	30	30	30

Scaling

Scaling issues have been addressed when Windows display scaling is used.

Contraction in the second		
😋 🔍 💌 🕨 Control Panel 🕨	Appearance and Personalization Display	
Control Panel Home	Make it easier to read what's on	
Adjust resolution	You can change the size of text and oth	
🛞 Calibrate color	temporany enarge just part of the screen,	
Change display settings	Smaller - 100% (default)	
Adjust ClearType text		
Set custom text size (DPI)	⊚ <u>M</u> edium - 125%	
	⊚ <u>L</u> arger - 150%	

On-sheet buttons and other objects keep their sizes and stay where they should be. This is especially important when a Windows 10 laptop with high-resolution (4k) screen is used combined with a large desktop monitor.

Note that when you copy pictures of tables or charts using the Camera shot button, the picture may still scale wrong when you paste it. This is caused by a bug in Office and needs to be fixed by Microsoft.