

Microsoft Excel - 201
INDIRECT, INDEX, MATCH



## **Table of Contents**

- 1. Indirect Function
- 2. Lookup + Indirect
- Index and Match Functions
- 4. Assignment

**Disclaimer:** This document is provided for information purposes only. The information is believed to be reliable, but TresVista does not warrant its completeness or accuracy. It should not be used, relied upon, or treated as a substitute for specific professional advice. Opinions, estimates, and assumptions constitute our judgment as of the date hereof and are subject to change without notice. This material is not intended as an offer or solicitation for the purchase or sale of any financial instrument. Additional information is available upon request. Images used in this document are for reference only and may not be reproduced, copied, transmitted or manipulated in any way.

# 1. INDIRECT Function

## **INDIRECT Function**

## **Explanation**

Explanation

- The INDIRECT command returns the reference specified by a text string. References are immediately evaluated to display their contents
- Use INDIRECT when you want to change the reference to a cell within a formula without changing the formula itself

Formula

The standard format for this formula is: "=INDIRECT(ref\_text, [a1])"

## **INDIRECT Function**

### **Examples**

- Use INDIRECT when you want to change the reference to a cell within a formula without changing the formula itself
- For Example, in the 1<sup>st</sup> example you can reference other cell contents using INDIRECT
- INDIRECT command will not change if rows or columns are added, and are thus useful when performing operations on an array of values
- For Example, in the 2<sup>nd</sup> example even if you add rows or columns, the answer still will stay unaffected

Example 1								Example 2						
	Α	В	С	D	E	F	G	H	I	J	K	L	M	
1														
2	2 Reference other cell contents using INDIRECT							12.0 Add the array B15:B24						
3		C3	1.3				13.0		114	=SUM(INE	DIRECT(D22	&E22&":"	&D23&E23))	
4		C4	45.0				10.0							
5		James	10.0	Nash			8.0							
6		3	62.0				7.0							
7							5.0							
8			=INDIRECT	(B3)			4.0							
9			45.0	-			15.0	G		2				
10			1.3				22.0	G		11				
11							18.0							

# 2. LOOKUP with INDIRECT Function

### LOOKUP With INDIRECT Function

### Explanation, Formula & Example

**Explanation** 

- VLOOKUP and HLOOKUP can be used with the INDIRECT function to source data across sheets. It is especially useful when you have a number of sheets (for e.g.: for different segments of a company) and you wish to pull specific numbers for each of the segments
- Use the INDIRECT function to source the array field in the VLOOKUP and HLOOKUP syntax

Formula

- The formula should be followed exactly as given & "" is so that the formula still recognizes the values in the cell even if they have a space in the sheet names
- = =VLOOKUP(lookup\_value, indirect("""&sheet name&""!array"), col\_index\_num, [range\_lookup])
- = =HLOOKUP(lookup\_value, indirect(sheet name&"!array"), row\_index\_num, [range\_lookup])

Example

	A B	C	D
1			
2		Sheet 2	Sheet 3
3	Revenue	=VLOOKUP(\$B3,INDIRECT("""&C\$2&""!B01:G100"),2,FALSE)	=vLOOKUP(\$B3,INDIRECT("""&D\$2&""!B01:G100"),2,FALSE)
4	EBITDA	=VLOOKUP(\$B4,INDIRECT("""&C\$2&""!B01:G100"),2,FALSE)	=VLOOKUP(\$B4,INDIRECT("""&D\$2&""!B01:G100"),2,FALSE)
5	Net Income	=VLOOKUP(\$B5,INDIRECT("""&C\$2&""!B01:G100"),2,FALSE)	=VLOOKUP(\$B5,INDIRECT("""&D\$2&""!B01:G100"),2,FALSE)
6			
7			

# 3. INDEX and MATCH Functions

### **INDEX & MATCH Functions**

### Explanation, Formula & Example

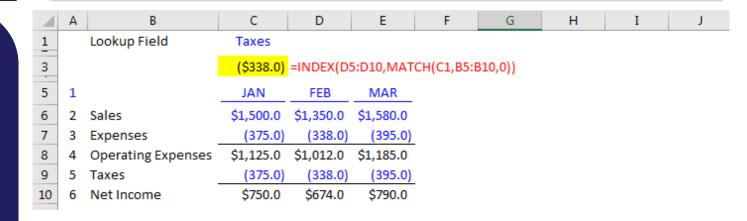
Explanation

- INDEX and MATCH performs lookups that VLOOKUP can't, and runs much faster on large spreadsheets. INDEX MATCH works very well if your lookup data is not in the first column, or you want to look to the left of the lookup data, rather than to the right.
- These functions can be made more flexible by using them with other functions such as VLOOKUP and INDIRECT.

**Formula** 

- The standard formula is:
  - "=INDEX(result\_array,row\_number)"
  - "=INDEX(result\_array,MATCH(lookup\_value,lookup\_array,0))"

Example



# 4. Excel - Assignment