Useful Excel function

Lookup and reference functions

- **INDEX** looks up the value in a specified row and column of a contiguous range (as a one- or two-dimensional matrix). The function also exists in a reference form, where it returns a reference to specified cells rather than to the value of a cell.
- **CHOOSE** uses one of a set of values according to an indexation number. It is especially useful (compared to other lookup functions) where the arguments are (or may need to be) in a non-contiguous range.
- **MATCH** finds the relative position of a specified value.
- **OFFSET** provides the value in a cell that is a specified number of rows and columns from a reference cell or range. It can also be used to return a range of cells (rather than an individual cell) that is a specified number of rows and columns from a reference cell or range.

- **INDIRECT** returns the range specified by a text string.
- **HLOOKUP** (**VLOOKUP**) searches the top row (left column) of a table for a specified value and finds the column in that row (row in that column) that contains that value. It then provides the value that is at a specified row (column) within the table.
- **LOOKUP** looks up values in a vector or array. In its vector form, it looks for a specified value within a one-dimensional range (of values that must be in ascending order) and returns the value from the corresponding position in another one-dimensional range.

Statistical functions

- MODE.SNGL calculates the most common (most frequent) value in a data set, as long as a unique value exists. MODE.MULT calculates a vertical array of the most frequently occurring in a range of data, including repetitive values. MODE is a legacy version of the MODE.SNGL function.
- GEOMEAN and HARMEAN calculate the geometric and harmonic means of a set of data, and TRIMMEAN calculates the mean of the interior of a data set.
- LARGE and SMALL calculate the specified largest or smallest values in a data set (e.g. first, second, third largest or smallest etc.)

- RANK.EQ (RANK in earlier versions of Excel) calculates the rank of a number in a list of numbers, with RANK.AVG giving the average rank in the case of tied values.
- PERCENTILE.EXC and PERCENTILE.INC (and its legacy PERCENTILE) calculate a specified percentile of the values in a range, exclusive and inclusive respectively. The QUARTILE.EXC and QUARTILE.INC functions (QUARTILE in earlier versions) calculate percentiles for specific 25th percentage multiples. MEDIAN calculates the median of the given numbers, i.e. the 50th percentile.
- PERCENTRANK.INC (PERCENTRANK in earlier versions) and PERCENTRANK.EXC calculate the percentage rank of a value in a data set, inclusive and exclusive respectively.

- VAR.P (VARP in earlier versions) calculates the population variance of a set of data, i.e. the average of the squares of the deviations of the points from the mean, assuming that the data representing the entire population. Similarly, VAR.S (VAR in earlier versions) estimates the population variance based on the assumption that the data set represents a sample from the population (so that a correction term for biases is required to be used within the formula).
- STDEV.P (STDEVP in earlier versions) and STDEV.S (STDEV in earlier versions) calculate or estimate the standard deviations associated with the population, based on population or sample data respectively. Such standard deviations are the square root of the corresponding variances.
- AVEDEV calculates the average of the absolute deviations of data points from their mean (the average deviation from the mean is of course zero).

- VARPA, STDEVPA, VARA and STDEVA calculate the population and sample-based statistics, including numbers, text and logical values in the calculations.
- DEVSQ calculates the sum of squares of deviations from the mean for a data set.
- STANDARDIZE calculates the number of deviations that the input value is from an assumed figure, and with an assumed standardised deviation factor.

Information functions

- ISTEXT returns TRUE if its argument is text; ISNONTEXT returns TRUE if its argument is not text.
- ISNUMBER returns TRUE if its argument is a number.
- ISBLANK returns TRUE if its argument is blank.
- ISFORMULA returns TRUE if it refers to a cell that contains a formula.
- ISLOGICAL returns TRUE if its argument is a logical value.
- ISREF returns TRUE if its argument is a reference.
- ISEVEN or ISODD return TRUE if the number referred to is even or odd respectively.

- ISERROR returns TRUE if the value is any error value. ISERR returns TRUE if the value is any error value except #N/A.
- ERROR.TYPE returns a number corresponding to an error type.
- NA returns the error value #N/A.
- ISNA returns TRUE if the value is the #N/A error value.
- N returns a value converted to a number.
- TYPE indicates the data type of a value.
- CELL provides information about the formatting, location or contents of a cell.
- INFO provides information about the current operating environment.
- SHEET returns the sheet number of the referenced sheet, and SHEETS returns the number of sheets in a reference.