Applix TM1 Web

TM1 9.0 SP2

List of Supported Excel Features

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Introduction

The purpose of this document is to provide Applix customers with a way to identify differences between TM1 Web and Excel when importing Excel spreadsheets to TM1 Web and exporting TM1 Websheets and Cube Viewer charts to Excel.

We have outlined the differences in the following three sections of this document:

TM1 Web Features in General

Importing an Excel Spreadsheet into TM1 Web

Exporting a TM1 Websheet to Excel

Important Note: This list is not exhaustive. If you have questions about supported features, contact Applix Customer Support.

TM1 Web Features in General

TM1 Web uses the Dundas charts package for rendering both cube viewer charts and charts in a Websheet. You can modify the type of chart and change many of the visual characteristics of the chart from within TM1 Web.

We organized the features described below into four general categories:

Framework – High level components as well as the architectural framework

Websheet – Display of TM1/Excel worksheets in a browser.

Cubeviewer – Displays TM1 Cube views

Administration – Meta-data management associated with TM1 objects and security.

A "Y" in the Supported in TM1 9.0 column indicates support for the feature. Comments may provide exceptions or clarification. A blank field in the Supported in TM1 9.0 column indicates that the feature is not supported at this time.

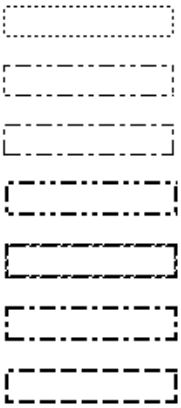
Framework Features

The following table lists high-level features of the TM1 Web product:

Function	**Supported in TM1 9.0**	**Description/Comments**
Navigation pane	Y	
Support for Application Organizer objects	Y	
Server View of TM1 Cubes & Views	Y	
Administration of TM1 Objects	Y*	
Administration of TM1 Users & Privileges		

Function	Supported in TM1 9.0	Description/Comments
Pure .NET object-oriented TM1 API	Y*	Not available in TM1 9.0, will be published in a future release of TM1 Web
Installation routine	Y	
Minimization of Excel in run-time environment	Y	
Option to Hide Server View	Y	
TM1-based authentication	Y	
Integrated Login	Y	
LDAP authentication	Y	
HTTPS	Y	
Customizable styles/themes		
Production quality	Y	
Scalability testing	Y*	
Portal support		
Web services support		
Languages supported		English only for TM1 9.0
.Net Objects callable		

TM1 Websheet Features

Function	Supported In TM1 9.0	Description/Comments
Worksheets to web templates	Y	
Support for Workbooks	Y	
Classic slices	Y	
Dynamic slices	*	Last-saved state will be displayed as classic slice
Number formatting	Y	
Alignment	Y	
Fonts	Y	
Style (regular, bold, italic)	Y	Font sizes less than 8 point cannot be rendered in bold in a browser.
Cell border styles	Y	All cell border styles supported except the following:  Changes to cell border colors, supported for cell border styles
Cell patterns		
Protection		Only works if there is no password protection on the sheet.
Symbols	Y	
Hyperlinks within workbook	Y	

Function	Supported In TM1 9.0	Description/Comments
Hyperlink to another workbook	Y	The target workbook must reside in the same directory as the workbook/sheet containing the hyperlink. Note that you cannot link to a *specific* sheet in another workbook.
Hyperlink to external files	Y	The target file must reside in the same directory as the workbook/sheet containing the hyperlink.
Hyperlink to URLs	Y	
Non http: URL		Using a URL such as /internet/example.htm; the browser displays an exception
Hyperlink to BLOB	Y	Links to BLOBS must use the syntax TM1://*servername*/blob/PUBLIC/.\}Externals\ *report_true_name*
Pictures in worksheets	Y	
Picture Links		
Conditional formatting	Y	
Groups/outlines		
Excel Pivot tables		
Validation	Y	
In-place title pull down	Y	
Write back	Y	
Single update		
Batch update	Y	
Accept/reject individual	Y	

Function	Supported In TM1 9.0	Description/Comments
edits		
Make worksheet read-only	Y	
Spreading	Y	
Holds	Y	
Annotations		
Subset editing	Y	
Drill down/up (Dynamic Slices)		Dynamic slices not supported in TM1 9.0
Drill through to detail (cube/rdbms)	Y	
Pivot		Not yet implemented in Perspectives
Charting	Y	
Drill down/up on charts		Dynamic slices not supported in TM1 9.0
Freeze frames	Y	If a chart straddles the freeze frames divider, the chart will not display correctly in TM1 Web. To work around this issue, reposition the chart so that it does not intersect the freeze frames divider.
Export slice to Excel	Y	
Export snapshot to Excel	Y	
Export to PDF	Y	
Support for Briefing books		
Support for Planning Manager	Y	

Function	Supported In TM1 9.0	Description/Comments
Support for Financial Reporting		
Customize Toolbars (add/remove buttons)		
VBA/custom code		
Run TI Process	Y	Can be done from the Processes admin page
Cell Protection	Y	
Other (describe)		

Cubeviewer Features

Function	Supported In TM1 9.0	Description/Comments
Open existing views	Y	
Create new view	Y	A view wizard has been added to TM1 9.0 to help users build views in TM1 Web
Save views	Y	
Print cube views	Y	Export to PDF
Drag & drop pivoting	Y	
Stacked dimensions	Y	
Drill up/down	Y	
Write back	Y	

Function	Supported In TM1 9.0	Description/Comments
Single update		
Batch update	Y	
Accept/reject edits	Y	
Spreading	Y	
Holds	Y	
Subset editing	Y	
Charting	Y	
Drill down on charts	Y	
Freeze frames	Y	
Suppress zeros	Y	
Drill through to detail	Y	
Filters	Y	
Trace calculations		
Trace feeders		
Slice to Excel	Y	
Snapshot to Excel	Y	
User Defined Consolidations		
Customize Toolbars (add/remove buttons)		
Format fonts		
Format colors		
Conditional formatting		
Other (describe)		

Administration

Function	Supported in TM1 9.0	Description/Comments
Create/edit dimension		
View/edit dimension properties	Y	
Create/edit cube		
View/edit cube properties	Y	
Create/edit rules		
Create/edit TI Process		
View/edit TI process	Y	
Run TI process	Y	
Create chore		
View/edit chore properties	Y	
Schedule chore	Y	
Transaction log		
Drill assignments		
Create application folders		
Security Privileges		
Edit Attributes		
Change user password	Y	Users are allowed to change their own password
Other (describe)		

Importing an Excel Spreadsheet into TM1 Web

Excel's XML Export Feature

When you publish a spreadsheet to TM1 Web, many of the characteristics and features of your Excel spreadsheet appear in the TM1 Web client just as they appeared in Excel. However, TM1 Web relies on Microsoft Excel's XML export feature for conversion to the web, and this feature does not always faithfully render the appearance and characteristics of the original spreadsheet. As a result, the TM1 Web sheet may look different from your original Excel spreadsheet.

Detailed List of Excel Features

A "Y" in the Implemented in TM1 9.0 column indicates support for the Excel feature. The Description column may provide exceptions or clarification. A blank field in the Implemented in TM1 9.0 column indicates that the feature is not supported when importing an Excel spreadsheet into TM1 Web.

Data Types

Data Type	Implemented in TM1 9.0	Description
Number	Y	
String	Y	
Boolean	Y	
Date/Time	Y	
Array	Y	
Error	Y	

Operators

Arithmetic Operators

Operator	Implemented in TM1 9.0	Description
+	Y	Add
-	Y	Subtract
*	Y	Multiply
/	Y	Divide
^	Y	Power
%	Y	Percent
- (unary)	Y	Unary minus

String Operators

Operator	Implemented in TM1 9.0	Description
&	Y	Concatenate

Logical Operators

Operator	Implemented in TM1 9.0	Description
AND	Y	Logical AND
OR	Y	Logical OR
NOT	Y	Logical NOT
=	Y	Equal
>	Y	Greater than
>=	Y	Greater than or equal
<	Y	Less than
<=	Y	Less than or equal
<>	Y	Not equal

Cell/Range References and Range Operators

Operator	Implemented in TM1 9.0	Description
R1C1 style cell reference	Y	Includes relative (RC1, R[-1]C[1], etc.) and absolute (R1C1) references
A1 style cell reference	Y	Includes relative (A1) and absolute (A1, $A1, A$1)
: (colon)	Y	Range
Sheet cell reference	Y	For example, Sheet1!A1, ‘Sheet 1’!R1C1
Sheet range reference	Y	For example, Sheet1!A1:E9, ‘Sheet 1’!R1C1:R9C5
External cell reference		For example, [Book1.xls]Sheet1!A1, '[Book 1.xls]Sheet1'!A1
External range reference		For example,

Operator	Implemented in TM1 9.0	Description
		[Book1.xls]Sheet1!A1:E9
Named reference	Y	Named cell or range
, (comma)	Y	Range Union operator
(space)		Range Intersection operator

Formatting

Number

Property	Implemented in TM1 9.0	Description
General	Y	
Number	Y	
Decimal places	Y	
Use 1000 Separator	Y	
Negative numbers	Y	
Currency	Y	
Decimal places	Y	
Symbol	Y	
Negative numbers	Y	
Accounting	Y	
Decimal places	Y	
Symbol	Y	
Date		
Type	Y	
Locale (location)	Y	

Property	Implemented in TM1 9.0	Description
Time		
Type		
Locale (location)		
Percentage	Y	
Decimal places	Y	
Fraction		
Type		
Scientific	Y	
Decimal places	Y	
Text	Y	
Special		
Type		
Locale (location)		
Custom	Y	
Type		

Alignment

Property	Implemented in TM1 9.0	Description
Horizontal:		
General		
Left	Y	
Indent		
Center	Y	
Right	Y	
Indent		

Property	Implemented in TM1 9.0	Description
Fill		
Justify		
Center Across Selection		
Distributed		
Indent		
Vertical:		
Top	Y	
Center	Y	
Bottom	Y	
Justify		
Distributed		
Justify Distributed		
Indent		
Orientation Degrees		
Wrap Text		
Shrink to Fit		
Merge Cells	Y	If your Excel spreadsheet has a hidden column within a set of merged cells, then these cells and columns will not display correctly when viewing as a Websheet in TM1 Web.
Text Direction:		
Context		
Left-to-Right		
Right-to-Left		

Font

Property	Implemented in TM1 9.0	Description
Font	Y	
Font style:		
Regular	Y	
Italic	Y	
Bold	Y	
Bold Italic	Y	
Size	Y	
Underline:		
None	Y	
Single	Y	
Double		
Single Accounting		Displays across entire field not just the number
Double Accounting		
Color	Y	
Strikethrough		
Superscript		
Subscript		

Border

Property	Implemented in TM1 9.0	Description
Border		
Left	Y	
Right	Y	
Top	Y	
Bottom	Y	
Diagonal Down		
Diagonal Up		
Line Style:		

Property	Implemented in TM1 9.0	Description
None		
Continuous	Y	
Dash		
Dot		
Dash Dot		
Dash Dot Dot		
Double		
Gray 25		
Gray 50		
Gray 75		
Line Weight:		
Hairline	Y	
Thin	Y	
Thick	Y	
Line Color		

Patterns

Property	Implemented in TM1 9.0	Description
Cell shading:		
Color	Y	
Pattern Style		
Pattern Color		

Protection

Property	Implemented in TM1 9.0	Description
Locked	Y	Only works if there is no password protection on the sheet. Password protected sheets cannot be viewed in TM1 Web, due to limitations of Excel's XML export feature.
Hidden	Y	

Conditional Formatting

Format Type	Implemented in TM1 9.0	Description
"Cell Value Is"	Y	
"Formula Is"	Y	

Row

Property	Implemented in TM1 9.0	Description
Height	Y	
Hidden	Y	

Column

Property	Implemented in TM1 9.0	Description
Width	Y	
Hidden	Y	

Sheet

Property	Implemented in TM1 9.0	Description
Name	Y	
Hidden	Y	
Background		
Tab Color		

Style

Style Properties are not supported in TM1 9.0.

Charts

Chart Types

Chart Type	Implemented in TM1 9.0	Description
Clustered Column	Y	Horizontal bar, compares values across categories
Stacked Column	Y	Horizontal bar, Compares the contribution of each value to a total across categories
100% Stacked Column	Y	Horizontal bar, Compares the percentage of each value across categories
3-D Clustered Column	Y	Horizontal bar, Clustered Column with 3-D visual effect
3-D Stacked Column	Y	Horizontal bar, Stacked column with 3-D visual effect
3-D 100% Stacked Column	Y	Horizontal bar, 100% stacked column with 3-D visual effect
3-D Column	Y	Horizontal bar, Compares values across categories and

Chart Type	Implemented in TM1 9.0	Description
		across series
Clustered Bar	Y	Vertical bar, Compares values across categories
Stacked Bar	Y	Vertical bar, Compares the contribution of each value to a total across categories
100% Stacked Bar	Y	Vertical bar, Compares percentage of each value to total across categories
3-D Clustered Bar		Vertical bar, Clustered bar with 2-D visual effect
3-D Stacked Bar	Y	Vertical bar, Stacked bar with 3-D visual effect
3-D 100% Stacked Bar	Y	Vertical bar, 100% stacked bar with 3-D visual effect
Line	Y	No marker, Displays trend over time or categories
Stacked Line		Displays the trend of the contribution of each value over time or categories
100% Stacked Line		Displays the trend of the percentage of each value contributes over time or categories
Line with Data Markers	Y	Line with markers displayed at each data value
Stacked Line with Data Markers		Stacked line with markers displayed at each data value
100% Stacked Line with Data Markers		100% stacked line with markers displayed at each data value
3-D Line	Y	Line with 3-D visual effect

Chart Type	Implemented in TM1 9.0	Description
Pie	Y	Displays the contribution of each value to a total
3-D Pie	Y	Pie with 3-D visual effect
Pie of Pie		Pie with user defined value extracted and combined into a second pie
Exploded Pie	Y	Displayed the contribution of each value to a total while emphasizing individual values
3-D Exploded Pie	Y	Exploded pie with 3-D visual effect
Bar of Pie		Pie with user defined value extracted and combined into a stacked bar
XY Scatter	Y	Compares pairs with values
XY Scatter with Smoothed Lines and No Data Markers	Y	Scatter with data points connected by smoothed Lines without marker
XY Scatter with Smoothed Lines	Y	Scatter with data points connected by smoothed Lines
XY Scatter with Lines	Y	Scatter with data points connected by lines
XY Scatter with Lines and No Data Markers	Y	Scatter with data points connected by lines without markers
Area	Y	Display the trend values over time or categories
Stacked Area	Y	Display the trend contribution of each value over time or categories
100% Stacked Area	Y	Display the trend contribution of percentage each value

Chart Type	Implemented in TM1 9.0	Description
		contributes over time or categories
3-D Area	Y	Area with 3-D visual effect
3D Stacked Area	Y	Stacked Area with 3-D visual effect
3D 100% Stacked Area	Y	100% stacked area with 3-D visual effect
Doughnut	Y	Like a pie chart, but can contain multiple series. Not supported with other chart features. Dundas only supports one series
Exploded Doughnut		Like a exploded pie chart, but can contain multiple series
Radar	Y	Display changes in values relative to a center point
Filled Radar	Y	Rader with the area covered by a data series filled with color
Radar with Data Markers	Y	Rader with markers at each data point
3-D Surface		Shows trends in values across two dimensions in a continuous curve
Contour Surface (Top View)		Surface chart vied from above, Colors represent range of values
Wireframe 3-D Surface		3-D surface without color
Wireframe Contour Surface		Contour surface without color

Chart Type	Implemented in TM1 9.0	Description
Bubble		Compares 3 set of values, like a scatter chart with the third value displayed as the size of the bubble marker
Bubble with 3D effects		Bubble chart with 3-D visual effect
High-Low-Close(stock)		Require three series of values in order
Open-High-Low-Close(stock)		Require four series of values in order
Volume-High-Low-Close(stock)		Require four series of values in this order
Volume-Open-High-Low-Close(stock)		Require five series of values in this order
Clustered Cylinder Column	Y	Horizontal Bar with cylindrical shape
Stacked Cylinder Column	Y	Stacked Horizontal Bar with cylindrical shape
100% Stacked Cylinder Column	Y	100% Stacked Horizontal Bar with cylindrical shape
Clustered Cylinder Bar	Y	Vertical Bar with cylindrical shape
Stacked Cylinder Bar	Y	Stacked Vertical Bar with cylindrical shape
100% Stacked Cylinder Bar	Y	100% Stacked Vertical Bar with cylindrical shape
3D Cylinder Column	Y	3-D Column with cylindrical shape
Clustered Cone Column		Column with conical shape
Stacked Cone Column		Stacked Column conical shape

Chart Type	Implemented in TM1 9.0	Description
100% Stacked Cone Column		100% Stacked Column with conical shape
Clustered Cone Bar		Bar with conical shape
Stacked Cone Bar		Stacked Bar with conical shape
100% Stacked Cone Bar		100% Stacked Bar with conical shape
3-D Cone		3-D Column with conical shape
Clustered Pyramid Column		Column with pyramid shape
Stacked Pyramid Column		Stacked Column with pyramid shape
100% Stacked Pyramid Column		100% Stacked Column with pyramid
Clustered Pyramid bar		Bar with pyramid shape
Stacked Pyramid bar		Stacked Bar with pyramid shape
100% Stacked Pyramid bar		100% Stacked Bar with pyramid shape
3-D Pyramid Column		3-D Column with pyramid shape

Forms

You can add forms to an Excel Spreadsheet. Forms do appear in TM1 Web. Width, height, linked cell and similar properties are supported. Macros are not supported.

Property	Implemented Y, N or N/A	Description
Label	Y	
Group Box		
Button		
Check Box	Y	
Option Button	Y	
List Box	Y	
Combo Box	Y	Text alignment within the ComboBox is not supported Custom Back Colors not supported in ComboBox
Scroll Bar		
Spinner		

Controls

Width, height, linked cell and similar properties are supported. Macros are not supported.

Property	Implemented in TM1 9.0	Description
Check Box	Y	
Text Box	Y	
Command Button		
Option Button	Y	
List Box	Y	
Combo Box	Y	Text alignment within the ComboBox is not supported
Toggle Button	Y	
Spin Button		
Scroll Bar		When publishing a List Box to TM1 Web, the horizontal scroll bar, visible on the Excel spreadsheet, is not visible on TM1 Web
Label	Y	
Image		
Custom		

Other Objects

Object Type	Implemented in TM1 9.0	Description
Picture	Y	
Picture Link (Camera)		Sheet objects not supported in TM1 9.0
Hyperlink	Y	
Comment	Y	
WordArt		Sheet objects not supported in TM1 9.0

Object Type	Implemented in TM1 9.0	Description
AutoShapes		Sheet objects not supported in TM1 9.0
Organization Chart		Sheet objects not supported in TM1 9.0
Diagram		Sheet objects not supported in TM1 9.0
Object		Sheet objects not supported in TM1 9.0

Data Validation

Type	Implemented in TM1 9.0	Description
Any Value	Y	Accept any value(default)
Whole number	Y	
Decimal	Y	
List	Y	
Date	Y	
Time	Y	
Text Length	Y	
Custom	N	

Core Functions

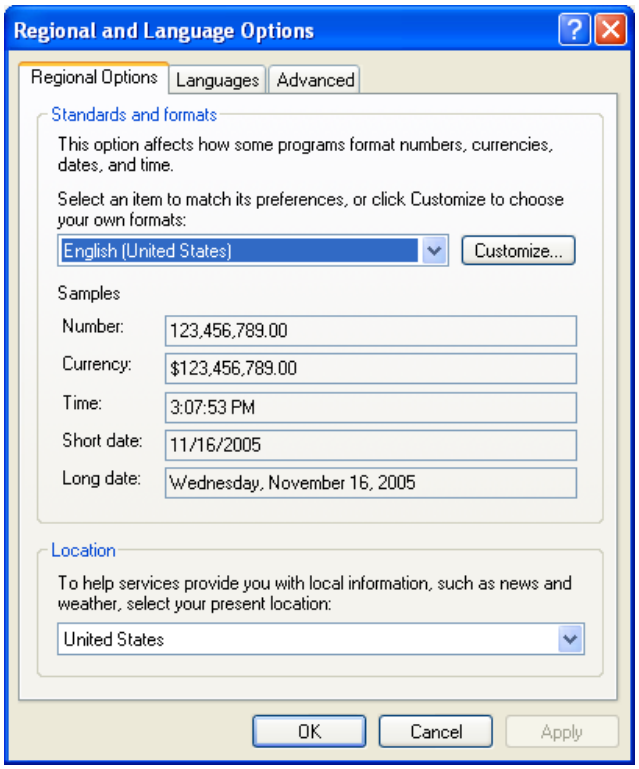
Financial Functions

Function	Implemented in TM1 9.0	Description
DB	Y	Returns the depreciation of an asset for a specified period using the fixed-declining balance method
DDB	Y	Returns the depreciation of an asset for a specified period using the double-declining balance method or some other method you specify
FV	Y	Returns the future value of an investment

Function	Implemented in TM1 9.0	Description
IPMT	Y	Returns the interest payment for an investment for a given period
IRR	Y	Returns the internal rate of return for a series of cash flows
ISPMT	Y	Calculates the interest paid during a specific period of an investment
MIRR	Y	Returns the internal rate of return where positive and negative cash flows are financed at different rates
NPER	Y	Returns the number of periods for an investment
NPV	Y	Returns the net present value of an investment based on a series of periodic cash flows and a discount rate
PMT	Y	Returns the periodic payment for an annuity
PPMT	Y*	Returns the payment on the principal for an investment for a given period
PV	Y	Returns the present value of an investment
RATE	Y	Returns the interest rate per period of an annuity
SLN	Y	Returns the straight-line depreciation of an asset for one period
SYD	Y	Returns the sum-of-years' digits depreciation of an asset for a specified period
VDB		Returns the depreciation of an asset for a specified or partial period using a declining balance method

Date & Time Functions

Date and Time functions are affected by the Regional Settings in the Windows control panel. The following figure shows this control panel:



These settings are set for every user. If your settings and the setting of the user running your TM1 Excel Service do not match, your dates may appear in a different format in TM1 Web. The following date and time functions are valid in TM1 Web:

Function	Implemented in TM1 9.0	Description
DATE	Y	Returns the serial number of a particular date
DATEVALUE	Y	Converts a date in the form of text to a serial number
DAY	Y	Converts a serial number to a day of the month
DAYS360	Y	Calculates the number of days between two dates based on a 360-day year
HOUR	Y	Converts a serial number to an hour
MINUTE	Y	Converts a serial number to a minute

Function	Implemented in TM1 9.0	Description
MONTH	Y	Converts a serial number to a month
NOW	Y	Returns the serial number of the current date and time
SECOND	Y	Converts a serial number to a second
TIME	Y	Returns the serial number of a particular time
TIMEVALUE	Y	Converts a time in the form of text to a serial number
TODAY	Y	Returns the serial number of today's date
WEEKDAY	Y	Converts a serial number to a day of the week
YEAR	Y	Converts a serial number to a year

Math & Trigonometric Functions

Function	Implemented in TM1 9.0	Description
ABS	Y	Returns the absolute value of a number
ACOS	Y	Returns the arccosine of a number
ACOSH	Y	Returns the inverse hyperbolic cosine of a number
ASIN	Y	Returns the arcsine of a number
ASINH	Y	Returns the inverse hyperbolic sine of a number
ATAN	Y	Returns the arctangent of a number
ATAN2	Y	Returns the arctangent from x- and y-coordinates
ATANH	Y	Returns the inverse hyperbolic tangent of a number
CEILING	Y	Rounds a number to the nearest integer or to the nearest multiple of significance
COMBIN	Y	Returns the number of combinations for a given number of objects
COS	Y	Returns the cosine of a number
COSH	Y	Returns the hyperbolic cosine of number
DEGREES	Y	Converts radians to degrees
EVEN	Y	Rounds number up to nearest even integer
EXP	Y	Sets e raised to power of given number
FACT	Y	Returns the factorial of a number
FLOOR	Y	Rounds a number down, toward zero
INT	Y	Rounds a number down to the nearest integer
LN	Y	Returns natural logarithm of a number

Function	Implemented in TM1 9.0	Description
LOG	Y	Returns logarithm of a number to a specified base
LOG10	Y	Returns base-10 logarithm of a number
MDETERM		Returns matrix determinant of an array
MINVERSE		Returns the matrix inverse of an array
MMULT		Returns matrix product of two arrays
MOD	Y	Returns the remainder from division
ODD	Y	Rounds a number up to the nearest odd integer
PI	Y	Returns the value of pi
POWER	Y	Returns result of number raised to a power
PRODUCT	Y	Multiplies its arguments
RADIANS	Y	Converts degrees to radians
RAND	Y	Returns random number between 0 and 1
ROMAN	Y	Converts Arabic numeral to roman text
ROUND	Y	Rounds a number to a specified number of digits
ROUNDDOWN	Y	Rounds a number down, toward zero
ROUNDUP	Y	Rounds a number up, away from zero
SIGN	Y	Returns the sign of a number
SIN	Y	Returns the sine of the given angle
SINH	Y	Returns the hyperbolic sine of a number
SQRT	Y	Returns a positive square root
SUBTOTAL		Returns a subtotal in a list or database
SUM	Y	Adds its arguments
SUMIF		Adds the cells specified by a given

Function	Implemented in TM1 9.0	Description
		criteria
SUMPRODUCT		Returns the sum of the products of corresponding array components
SUMSQ		Returns the sum of the squares of the arguments
SUMX2MY2		Returns the sum of the difference of squares of corresponding values in two arrays
SUMX2PY2		Returns the sum of the sum of squares of corresponding values in two arrays
SUMXMY2		Returns the sum of squares of differences of corresponding values in two arrays
TAN	Y	Returns the tangent of a number
TANH	Y	Returns the hyperbolic tangent of a number
TRUNC		Truncates a number to an integer

Statistical Functions

Function	Implemented in TM1 9.0	Description
AVEDEV	Y	Returns the average of the absolute deviations of data points from their mean
AVERAGE	Y	Returns the average of its arguments
AVERAGEA	Y	Returns the average of its arguments, including numbers, text, and logical values
BETADIST		Returns the beta cumulative distribution function

Function	Implemented in TM1 9.0	Description
BETAINV		Returns the inverse of the cumulative distribution function for a specified beta distribution
BINOMDIST	Y	Returns the individual term binomial distribution probability
CHIDIST		Returns the one-tailed probability of the chi-squared distribution
CHIINV		Returns the inverse of the one-tailed probability of the chi-squared distribution
CHITEST		Returns the test for independence
CONFIDENCE	Y	Returns the confidence interval for a population mean
CORREL	Y	Returns the correlation coefficient between two data sets
COUNT	Y	Counts how many numbers are in the list of arguments
COUNTA	Y	Counts how many values are in the list of arguments
COUNTBLANK		Counts the number of blank cells within a range
COUNTIF		Counts the number of nonblank cells within a range that meet the given criteria
COVAR	Y	Returns covariance, the average of the products of paired deviations
CRITBINOM		Returns the smallest value for which the cumulative binomial distribution is less than or equal to a criterion value
DEVSQ	Y	Returns the sum of squares of deviations

Function	Implemented in TM1 9.0	Description
EXPONDIST	Y	Returns the exponential distribution
FDIST		Returns the F probability distribution
FINV		Returns the inverse of the F probability distribution
FISHER	Y	Returns the Fisher transformation
FISHERINV	Y	Returns the inverse of the Fisher transformation
FORECAST	Y	Returns a value along a linear trend
FREQUENCY		Returns a frequency distribution as a vertical array
FTEST		Returns the result of an F-test
GAMMADIST		Returns the gamma distribution
GAMMAINV		Returns the inverse of the gamma cumulative distribution
GAMMALN		Returns the natural logarithm of the gamma function, G(x)
GEOMEAN	Y	Returns the geometric mean
GROWTH	Y	Returns values along an exponential trend
HARMEAN	Y	Returns the harmonic mean
HYPGEOMDIST		Returns the hyper geometric distribution
INTERCEPT	Y	Returns the intercept of the linear regression line
KURT	Y	Returns the kurtosis of a data set
LARGE	Y	Returns the k-th largest value in a data set

Function	Implemented in TM1 9.0	Description
LINEST	Y	Returns the parameters of a linear trend
LOGEST	Y	Returns the parameters of an exponential trend
LOGINV		Returns the inverse of the lognormal distribution
LOGNORMDIST		Returns the cumulative lognormal distribution
MAX	Y	Returns the maximum value in a list of arguments
MAXA	Y*	Returns the maximum value in a list of arguments, including numbers, text, and logical values
MEDIAN	Y	Returns the median of the given numbers
MIN	Y	Returns the minimum value in a list of arguments
MINA	Y*	Returns the smallest value in a list of arguments, including numbers, text, and logical values
MODE	Y	Returns the most common value in a data set
NEGBINOMDIST	Y	Returns the negative binomial distribution
NORMDIST	Y*	Returns the normal cumulative distribution This function uses NORMSDIST
NORMINV	Y*	Returns the inverse of the normal cumulative distribution This function uses NORMSINV

Function	Implemented in TM1 9.0	Description
NORMSDIST	Y	Returns the standard normal cumulative distribution
NORMSINV	Y	Returns the inverse of the standard normal cumulative distribution
PEARSON	Y	Returns the Pearson product moment correlation coefficient
PERCENTILE		Returns the k-th percentile of values in a range
PERCENTRANK		Returns the percentage rank of a value in a data set
PERMUT	Y	Returns the number of permutations for a given number of objects
POISSON		Returns the Poisson distribution
PROB		Returns the probability that values in a range are between two limits
QUARTILE		Returns the quartile of a data set
RANK		Returns the rank of a number in a list of numbers
RSQ	Y	Returns the square of the Pearson product moment correlation coefficient
SKEW	Y	Returns the skew of a distribution
SLOPE	Y	Returns the slope of the linear regression line
SMALL	Y	Returns the k-th smallest value in a data set
STANDARDIZE	Y	Returns a normalized value
STDEV	Y	Estimates standard deviation based on a sample

Function	Implemented in TM1 9.0	Description
STDEVA	Y	Estimates standard deviation based on a sample, including numbers, text, and logical values
STDEVP	Y	Calculates standard deviation based on the entire population
STDEVPA	Y	Calculates standard deviation based on the entire population, including numbers, text, and logical values
STEYX	Y	Returns the standard error of the predicted y-value for each x in the regression
TDIST		Returns the Student's t-distribution
TINV		Returns the inverse of the Student's t-distribution
TREND	Y	Returns values along a linear trend
TRIMMEAN		Returns the mean of the interior of a data set
TTEST		Returns the probability associated with a Student's t-test
VAR	Y	Estimates variance based on a sample
VARA	Y	Estimates variance based on a sample, including numbers, text, and logical values
VARP	Y	Calculates variance based on the entire population
VARPA	Y	Calculates variance based on the entire population, including numbers, text, and logical values
WEIBULL	Y	Returns the Weibull distribution
ZTEST		Returns the one-tailed probability-value of a z-test

Lookup & Reference Functions

Function	Implemented in TM1 9.0	Description
ADDRESS	Y	Returns a reference as text to a single cell in a worksheet
AREAS		Returns the number of areas in a reference
CHOOSE	Y	Chooses a value from a list of values
COLUMN	Y	Returns the column number of a reference
COLUMNS	Y	Returns the number of columns in a reference
GETPIVOTDATA		Returns data stored in a PivotTable
HLOOKUP	Y*	Looks in the top row of an array and returns the value of the indicated cell.
HYPERLINK	Y	Creates a shortcut or jump that opens a document stored on a network server, an intranet, or the Internet
INDEX	Y	Uses an index to choose a value from a reference or array
INDIRECT		Returns a reference indicated by a text value
LOOKUP	Y*	Looks up values in a vector or array
MATCH		Looks up values in a reference or array
OFFSET		Returns a reference offset from a given reference
ROW	Y	Returns the row number of a reference
ROWS	Y	Returns the number of rows in a reference

Function	Implemented in TM1 9.0	Description
RTD		Retrieves real-time data from a program that supports COM automation
TRANSPOSE		Returns the transpose of an array
VLOOKUP	Y*	Looks in the first column of an array and moves across the row to return the value of a cell

Database & List Management Functions

Function	Implemented in TM1 9.0	Description
DAVERAGE		Returns the average of selected database entries
DCOUNT		Counts the cells that contain numbers in a database
DCOUNTA		Counts nonblank cells in a database
DGET		Extracts from a database a single record that matches the specified criteria
DMAX		Returns the maximum value from selected database entries
DMIN		Returns the minimum value from selected database entries
DPRODUCT		Multiplies the values in a particular field of records that match the criteria in a database
DSTDEV		Estimates the standard deviation based on a sample of selected database entries
DSTDEVP		Calculates the standard deviation based on the entire population of selected database entries

Function	Implemented in TM1 9.0	Description
DSUM		Adds the numbers in the field column of records in the database that match the criteria
DVAR		Estimates variance based on a sample from selected database entries
DVARP		Calculates variance based on the entire population of selected database entries

Text & Data Functions

Function	Implemented in TM1 9.0	Description
ASC		Changes full-width (double-byte) English letters or katakana within a character string to half-width (single-byte) characters
BAHTTEXT		Converts a number to text, using the ß (baht) currency format
CHAR	Y	Returns the character specified by the code number
CLEAN	Y	Removes all nonprintable characters from text
CODE	Y	Returns a numeric code for the first character in a text string
CONCATENATE	Y	Joins several text items to one
DOLLAR	Y	Converts a number to text, using the $ (dollar) currency format
EXACT	Y	Checks to see if two text values are identical
FIND	Y	Finds one text value within another

Function	Implemented in TM1 9.0	Description
FIXED	Y	Formats a number as text with a fixed number of decimals
LEFT	Y	Returns the leftmost characters from a text value
LEN	Y	Returns the number of characters in a text string
LOWER	Y	Converts text to lowercase
MID	Y	Returns a specific number of characters from a text string starting at the position you specify
PROPER	Y	Capitalizes the first letter in each word of a text value
REPLACE	Y	Replaces characters within text
REPT	Y	Repeats text a given number of times
RIGHT	Y	Returns the rightmost characters from a text value
SEARCH	Y	Finds one text value within another (not case-sensitive)
SUBSTITUTE	Y	Substitutes new text for old text in a text string
T	Y	Converts its arguments to text
TEXT	Y	Formats a number and converts it to text
TRIM	Y	Removes spaces from text
UPPER	Y	Converts text to uppercase
VALUE	Y	Converts a text argument to a number

Logical Functions

Function	Implemented in TM1 9.0	Description
AND	Y	Returns TRUE if all arguments are TRUE
FALSE	Y	Returns the logical value FALSE
IF	Y	Specifies a logical test to perform
NOT	Y	Reverses the logic of its argument
OR	Y	Returns TRUE if any argument is TRUE
TRUE	Y	Returns the logical value TRUE

Information Functions

Function	Implemented in TM1 9.0	Description
CELL		Returns information about the formatting, location, or contents of a cell
ERROR.TYPE		Returns number corresponding to error
INFO		Returns information about the current operating environment
ISBLANK		Returns TRUE if the value is blank
ISERR	Y	Returns TRUE if the value is any error value except #N/A
ISERROR	Y	Returns TRUE if the value is any error value
ISLOGICAL		Returns TRUE if the value is a logical value
ISNA	Y	Returns TRUE if the value is the #N/A error value
ISNONTEXT		Returns TRUE if the value is not text
ISNUMBER		Returns TRUE if the value is a number
ISREF		Returns TRUE if the value is a reference
ISTEXT		Returns TRUE if the value is text
N		Returns a value converted to a number
NA	Y	Returns the error value #N/A

Function	Implemented in TM1 9.0	Description
TYPE		Returns a number indicating the data type of a value

Extended Functions

Most of these functions are part of the Analysis ToolPak add-in.

Extended Financial functions

Function	Implemented in TM1 9.0	Description
ACCRINT		Returns the accrued interest for a security that pays periodic interest
ACCRINTM		Returns the accrued interest for a security that pays interest at maturity
AMORDEGRC		Returns the depreciation for each accounting period by using a depreciation coefficient
AMORLINC		Returns the depreciation for each accounting period
COUPDAYBS		Returns the number of days from the beginning of the coupon period to the settlement date
COUPDAYS		Returns the number of days in coupon period that contains the settlement date
COUPDAYSNC		Returns the number of days from the settlement date to the next coupon date
COUPNCD		Returns the next coupon date after the settlement date
COUPNUM		Returns the number of coupons payable between the settlement date and maturity date
COUPPCD		Returns the previous coupon date before the settlement date
CUMIPMT		Returns the cumulative interest paid between two periods

Function	Implemented in TM1 9.0	Description
CUMPRINC		Returns the cumulative principal paid on a loan between two periods
DISC		Returns the discount rate for a security
DOLLARDE		Converts a dollar price, expressed as a fraction, into a dollar price, expressed as a decimal number
DOLLARFR		Converts a dollar price, expressed as a decimal number, into a dollar price, expressed as a fraction
DURATION		Returns annual duration of a security with periodic interest payments
EFFECT		Returns the effective annual interest rate
FVSCHEDULE		Returns the future value of an initial principal after applying a series of compound interest rates
INTRATE		Returns the interest rate for a fully invested security
MDURATION		Returns the Macauley modified duration for a security with an assumed par value of $100
NOMINAL		Returns the annual nominal interest rate
ODDFPRICE		Returns the price per $100 face value of a security with an odd first period
ODDFYIELD		Returns the yield of a security with an odd first period
ODDLPRICE		Returns the price per $100 face value of a security with an odd last period
ODDLYIELD		Returns the yield of a security with an odd last period

Function	Implemented in TM1 9.0	Description
PRICE		Returns the price per $100 face value of a security that pays periodic interest
PRICEDISC		Returns the price per $100 face value of a discounted security
PRICEMAT		Returns the price per $100 face value of a security that pays interest at maturity
RECEIVED		Returns the amount received at maturity for a fully invested security
TBILLEQ		Returns the bond-equivalent yield for a Treasury bill
TBILLPRICE		Returns the price per $100 face value for a Treasury bill
TBILLYIELD		Returns the yield for a Treasury bill
XIRR		Returns the internal rate of return for a schedule of cash flows that is not necessarily periodic
XNPV		Returns the net present value for a schedule of cash flows that is not necessarily periodic
YIELD		Returns the yield on a security that pays periodic interest
YIELDDISC		Returns the annual yield for a discounted security; for example, a Treasury bill
YIELDMAT		Returns the annual yield of a security that pays interest at maturity

Extended Date & Time Functions

Function	Implemented in TM1 9.0	Description
EDATE		Returns date serial number that is the indicated number of months before or after start date
EOMONTH		Returns the serial number of the last day of the month before or after a specified number of months
NETWORKDAYS		Returns the number of whole workdays between two dates
WEEKNUM		Converts a serial number to a number representing where the week falls numerically with a year
WORKDAY		Returns the serial number of the date before or after a specified number of workdays
YEARFRAC		Returns the year fraction representing the number of whole days between start_date and end_date

Extended Math & Trigonometric Functions

Function	Implemented in TM1 9.0	Description
FACTDOUBLE		Returns double factorial of a number
GCD		Returns the greatest common divisor
LCM		Returns the least common multiple
MROUND		Returns a number rounded to the desired multiple
MULTINOMIAL		Returns the multinomial of a set of numbers
QUOTIENT		Returns the integer portion of a division
RANDBETWEEN		Returns a random number between the numbers you specify
SERIESSUM		Returns the sum of a power series based on the formula

Function	Implemented in TM1 9.0	Description
SQRTPI		Returns the square root of (number * pi)

Extended Statistical Functions

Excel does not support Extended Statistical Functions at this time.

Extended Lookup & Reference Functions

Excel does not support Extended Lookup and Reference Functions at this time.

Extended Database & List Management Functions

Excel does not support Extended Database and List Management Functions at this time.

Extended Text & Data Functions

Function	Implemented in TM1 9.0	Description
JIS		Changes half-width (single-byte) English letters or katakana within a character string to full-width (double-byte) characters
PHONETIC		Extracts the phonetic (furigana) characters from a text string

Extended Logical Functions

Excel does not support Extended Logical Functions at this time.

Extended Information Functions

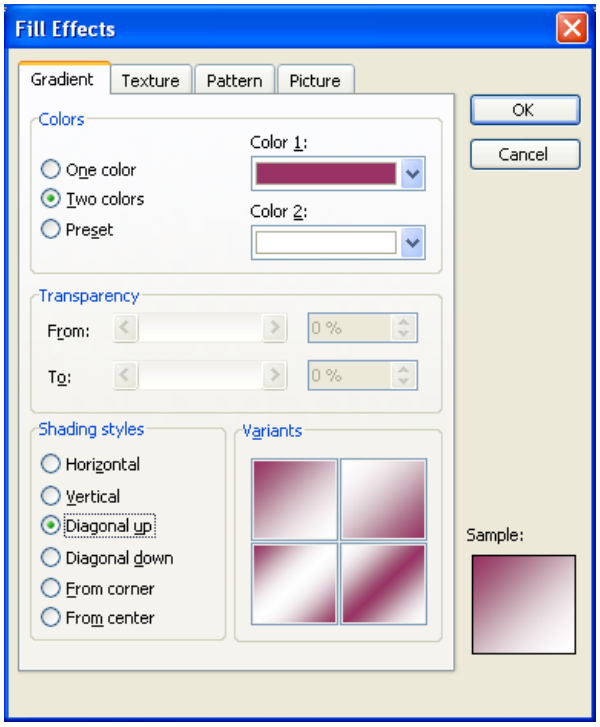
Function	Implemented in TM1 9.0	Description
ISEVEN		Returns TRUE if the number is even
ISODD		Returns TRUE if the number is odd

Importing an Excel Spreadsheet into TM1 Web – Detailed Chart Features

If you build an Excel worksheet with a chart, there are a few limits on the Excel charting features that can be displayed in a web sheet. This section describes those limitations in detail with examples.

Gradients

Chart gradients are set using the Gradient tab of the Fill Effect dialog in Excel:



In the example above, a 2-color gradient fill is set for a bar in a bar chart. Some of these options can be reproduced in an Excel bar chart, and some of them cannot. The following table describes the limitations:

Gradient Features	Variants	Support
Two Color Shading Style: Diagonal Up	 1 2	Variants 1 and 2 of Diagonal Up are supported. You can build a chart in Excel using these gradient variants. They will import successfully into TM1 Web and display in a websheet chart
Two Color Shading Style: Diagonal Up	 3 4	Variants 3 and 4 of Diagonal Up are *not* supported. Diagonal Up Variant 3 displays in TM1 Web as Diagonal Up Variant 1. Diagonal Up Variant 4 displays as Diagonal Up Variant 2
Two Color Shading Style: Diagonal Down	 1 2	Variants 1 and 2 of Diagonal Down are supported. You can build a chart in Excel using these gradient variants. They will import successfully into TM1 Web and display in a websheet chart
Two Color Shading Style: Diagonal Down	 3 4	Variants 3 and 4 of Diagonal Down are *not* supported. Diagonal Down Variant 3 displays in TM1 Web as Diagonal Down Variant 1. Diagonal Down Variant 4 displays as Diagonal Down Variant 2

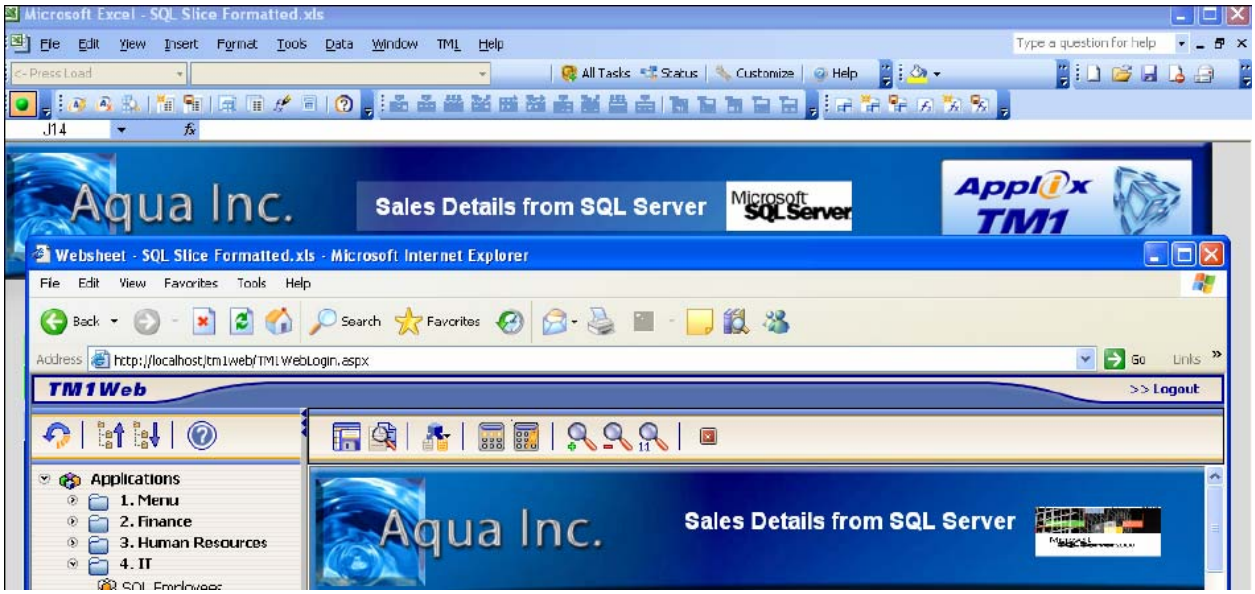
Control Objects Color

The background / foreground color displayed on an Excel spreadsheet may not be supported on TM1 Web for control objects.

You may work around this feature exception by creating a worksheet with control objects on the TM1 Web Server.

Header Background and Objects

As shown below, when you publish from Excel to the Web, you will see differences in the background and some imported objects:



When Excel sets the text box background color to automatic, the web background is lost because, currently, there is no way to edit objects imported from Excel. The result: The Websheet copies whatever image Excel saved.

Drawing Objects with Multiple Text Lines

As shown below, drawing objects with multiple text lines are not supported at this time.

Object in Excel:

Object as displayed on the Web:

Notice that the multiple lines are concatenated into a single long line.

Chart Properties

Upon publishing a X – Y axis chart to a Websheet and then using the Chart Properties dialog box to adjust the Label Format and Precision field, you will find that the change has no effect on the X axis. This feature will be supported in the next release.

Chart Area, X - Y Title Borders, Point Borders

TM1 Web does not support the Excel custom features to set the chart area of the, the X –Y title borders, or the point borders.

The custom scalability feature of the x-axis is not supported.

The five following number formats are supported to scale the y-axis index labels:

General, Number, Currency, Percentage, and Scientific.

Transparencies

The text box transparency feature on a graphic is not supported if you set the transparency percent to anything other than zero.

This is because the text changes to the same transparency percent as the background of the text box and the text disappears.

Also, the custom color pallet in Excel is not supported, which means that any custom color will default to a black background.

Tick Marks

Tick Marks in Excel and Dundas charts are calculated separately using different algorithms. Because of this, the tick marks in your charts may be inconsistent between Excel and TM1 Web.

Donut Chart Type

We do not support using the Donut Chart options with any other chart option. In Excel, if you attempt to overlay any other type of chart on top of the donut chart, when you publish to the Web the two charts overlap.

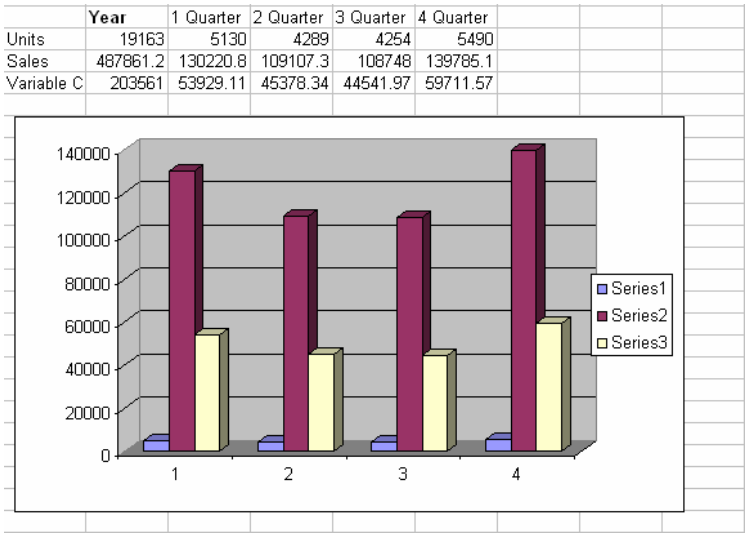
Also, TM1 Web supports donut charts only when charting against a single data series.

Chart Label Alignment

The label alignment feature on charts is not supported.

3D Cluster Chart

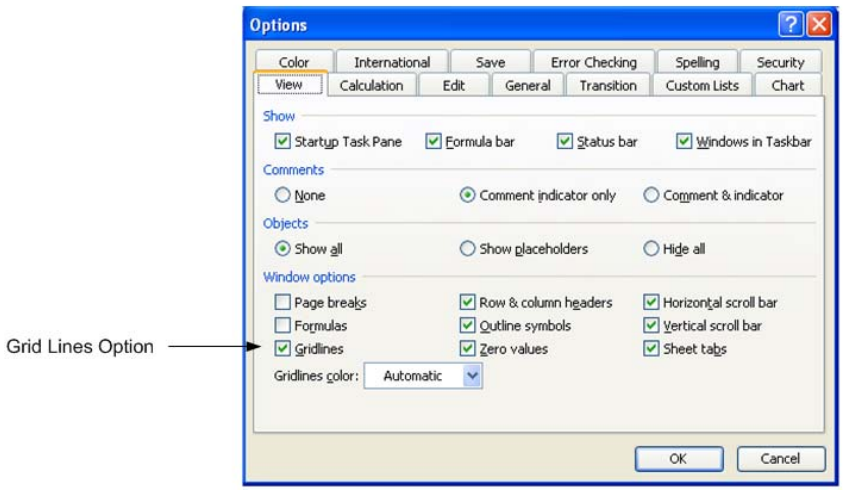
Publishing 3D Cluster Charts from Excel per the following example:



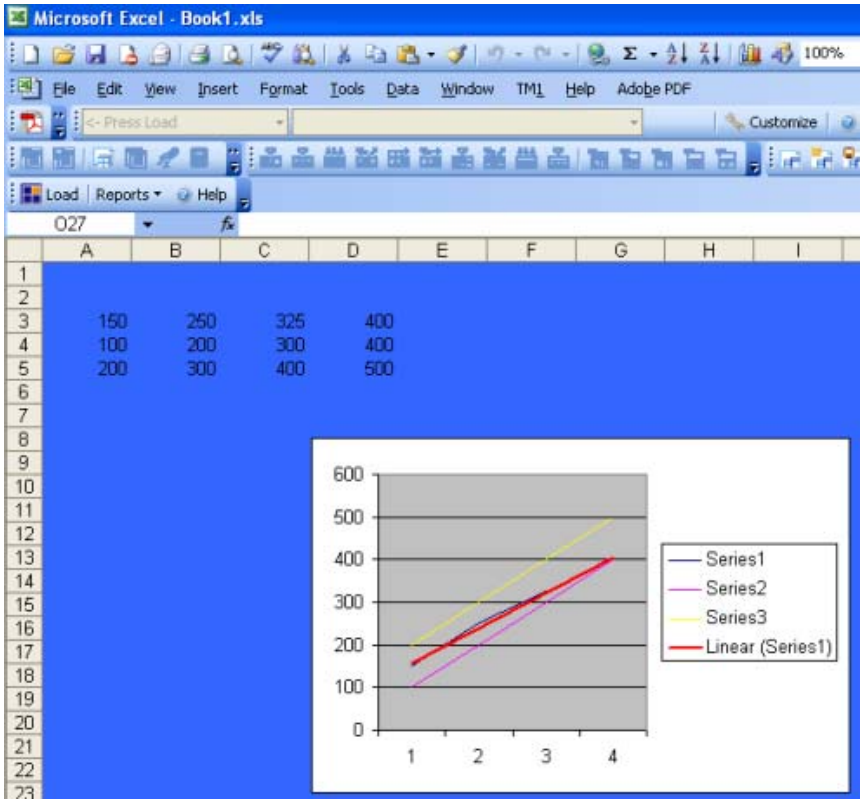
This chart displays as a 2D column cluster chart on the Websheet.

Grid Lines

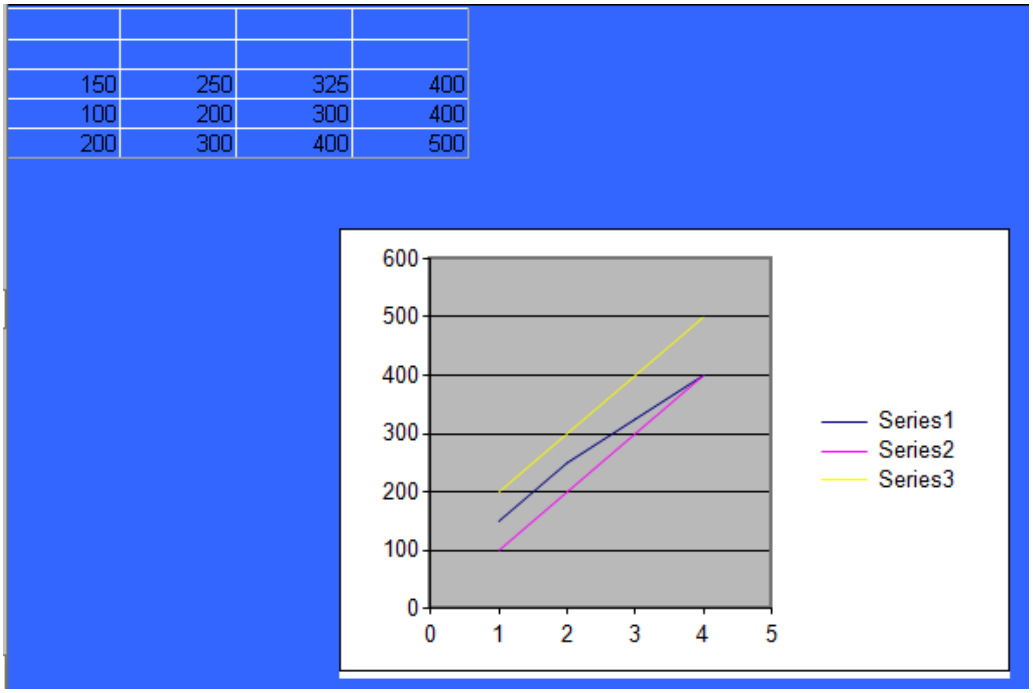
The Grid Lines option is always respected by TM1 Web. The following figure shows the Grid Lines option:



Gridlines appear in TM1 Web as long as the spreadsheet you publish has this option enabled. This can lead to unexpected results. Consider this example:



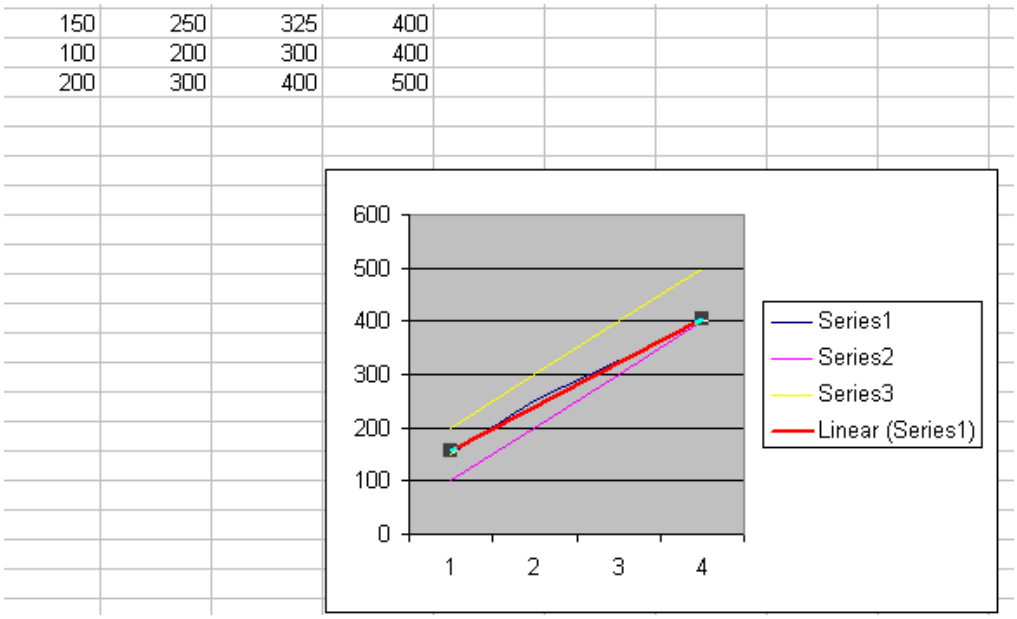
This spreadsheet has the gridlines enabled, but they are not visible because the background color of the spreadsheet hides them. When you publish this spreadsheet to TM1 Web, the gridline appear in the websheet, as shown here:



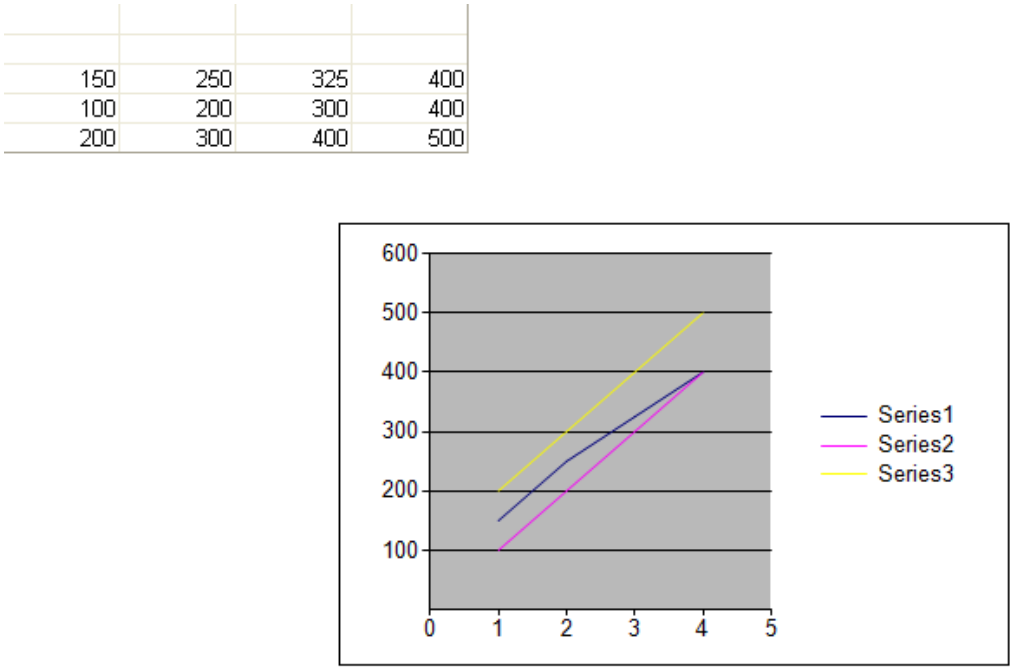
If you do not want gridlines to appear in your websheet, turn the Gridlines option off, and then publish your websheet.

Trend Lines

Trend lines do not import successfully into TM1 Web. The following figure shows an Excel line chart with a trend line:

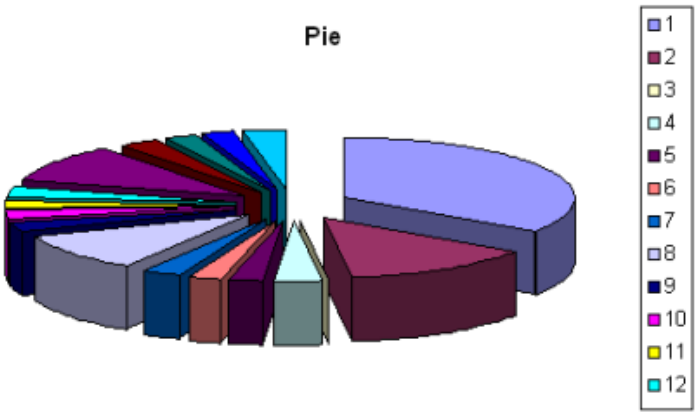


In TM1 Web, the chart appears without the trend line, as shown in the following figure:

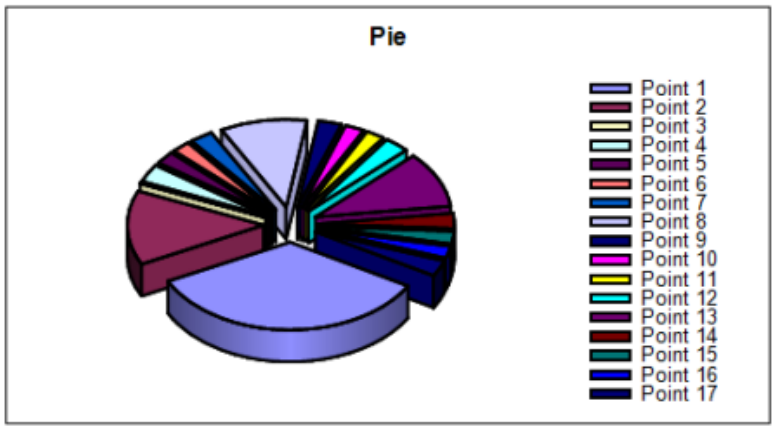


Pie Charts

Values in pie charts are accurately calculated and rendered when they are imported into TM1 Web from Excel. The orientation of the pie and the colors may be inconsistent, however. The following figures show an example from Excel:



This pie is displayed in TM1 Web as follows:



Secondary Axes

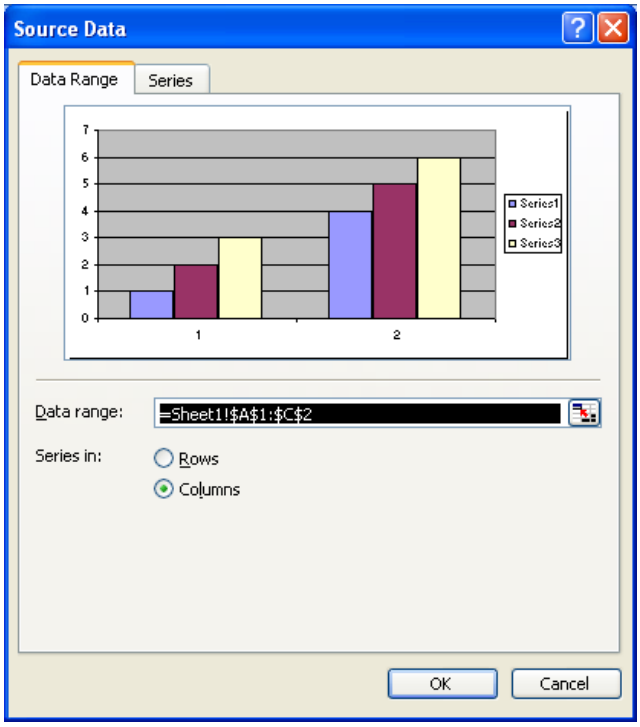
Primary and Secondary axis display check boxes from the chart options dialog axes tab will be honored. Series positioning based on these choices, however, will not be displayed on the web as they appear in Excel; they will retain their original positioning. Also, if a currency format is applied to the secondary value axis, it will appear on the web as a number formatted axis.

Importing an Excel Spreadsheet into TM1 Web – Supported Chart Features

This section lists Excel chart features that you can import successfully into TM1 Web.

Source Data

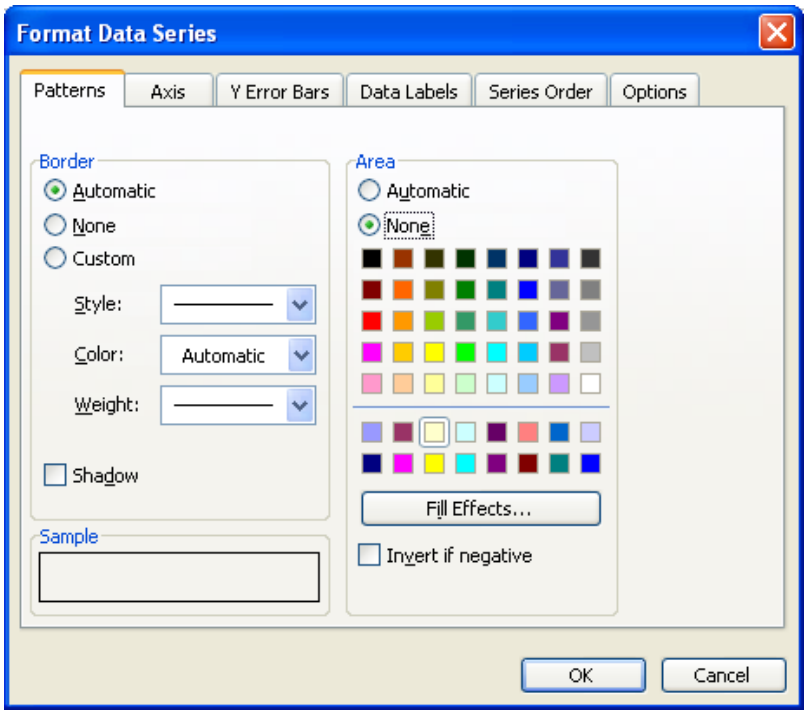
The Excel Source Data dialog box controls the definition and display of series in a chart. All source data options can be imported into TM1 Web:

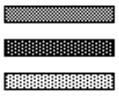


These features successfully import into Excel.

Format Data Series

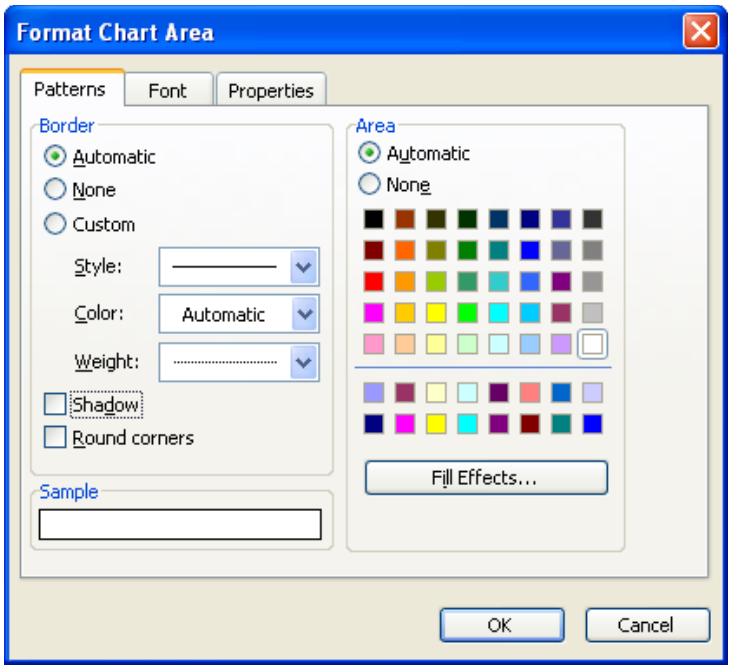
If you click a series in a chart and choose Format Data Series, the following dialog box appears:



Tab	Field	Supported in Websheet
Border		All border options are supported except for the following three border styles: 
Fill Effects	Gradient	Yes, with the limitations described previously in the section entitled “Gradients”
	Pattern	No
	Texture	No
	Picture	Yes
Axis	Secondary Axis	Yes
	Y Error Bars	Not Supported
	Data Labels	Not Supported
Series Order		Not Supported
Options		Not Supported

Format Chart Area

If you right click an Excel chart and choose Format Chart Area, the following dialog box appears:

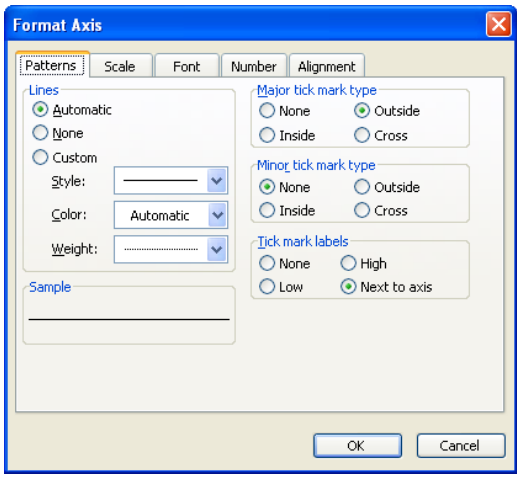


Tab	Field	Supported in Websheet
Border		Not supported
Area		Yes – with limitations If set to None, the chart background becomes white Custom colors, as established through the Color tab on worksheet's Options dialog box, are not supported
Fill Effects	Gradient	Yes, with the limitations described previously in the section entitled "Gradients"
	Pattern	No

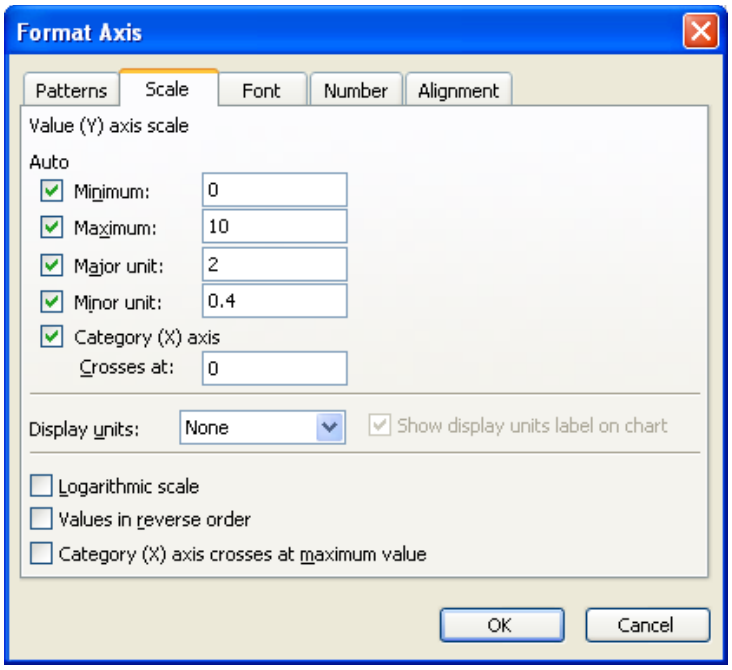
Tab	Field	Supported in Websheet
	Texture	No
	Picture	Yes
Fonts		Not Supported
Properties		Not Supported

Format Axis

If you right click the X Axis or the Y Axis of an Excel chart and choose Format Axis, the following dialog box appears:



Only changes from the Scale tab for the Y axis are supported. Changes to the Scale tab for the X axis ***are not*** supported. The Scale tab the Y axis is shown in the following figure:



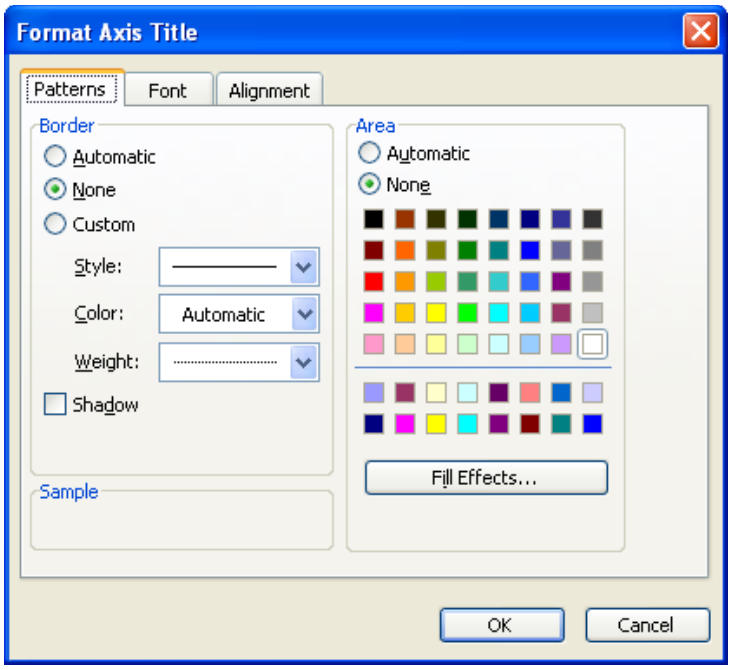
The following options are supported:

- Minimum
- Maximum
- Major Unit
- Minor Unit

You can set these to a valid numerical value or choose Auto. The Y axis in TM1 Web will reflect these values after you publish the spreadsheet.

Format Axis Title

If you right click an X Axis title or a Y Axis title in an Excel chart and choose Format Axis Title, the following dialog box appears:

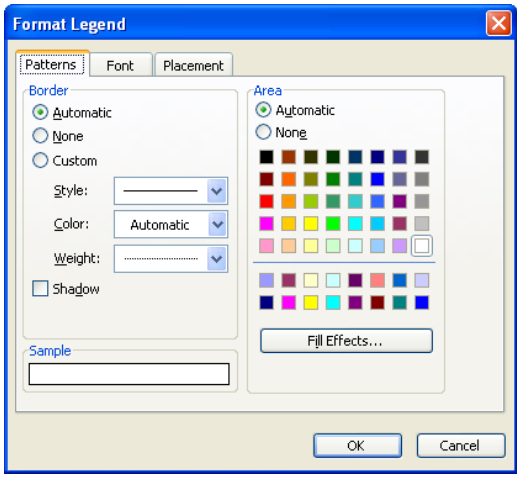


Tab	Field	Supported in Websheet
Patterns	Border	Not supported
	Area	Yes – with limitations. Custom colors, as established through the Color tab on worksheet's Options dialog box, are not supported
Fonts	Font	Yes
	Font Style	Yes
	Size	Yes
	Underline	Yes
	Strikethrough	Yes
	Color	Yes
	Background	No

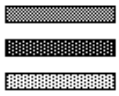
Tab	Field	Supported in Websheet
	Effects	No
	Autoscale	No
Fill Effects	Gradient	Yes, with the limitations described previously in the section entitled “Gradients.”
	Pattern	No
	Texture	No
	Picture	No
Alignment	All	No

Format Legend

If you right-click the plot areas of an Excel chart and choose Format Legend, the following dialog box appears:

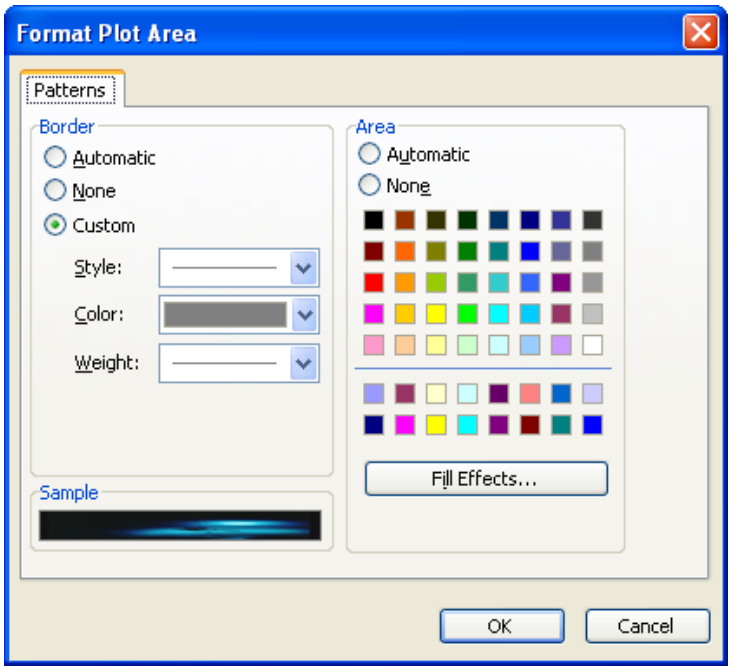


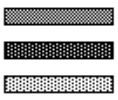
Tab	Field	Supported in Websheet

Tab	Field	Supported in Websheet
Border		All border options are supported except for the following three border styles: 
Area		Yes – with limitations. Custom colors, as established through the Color tab on worksheet's Options dialog box, are not supported
Fill Effects	Gradient	Yes, with the limitations described previously in the section entitled "Gradients"
	Pattern	No
	Texture	No
	Picture	No
Fonts		Yes
Placement		Yes. Only the options in the placement tab are supported. Legends moved manually default to Top

Format Plot Area

If you right-click the plot areas of an Excel chart and choose Format Plot Area, the following dialog box appears:

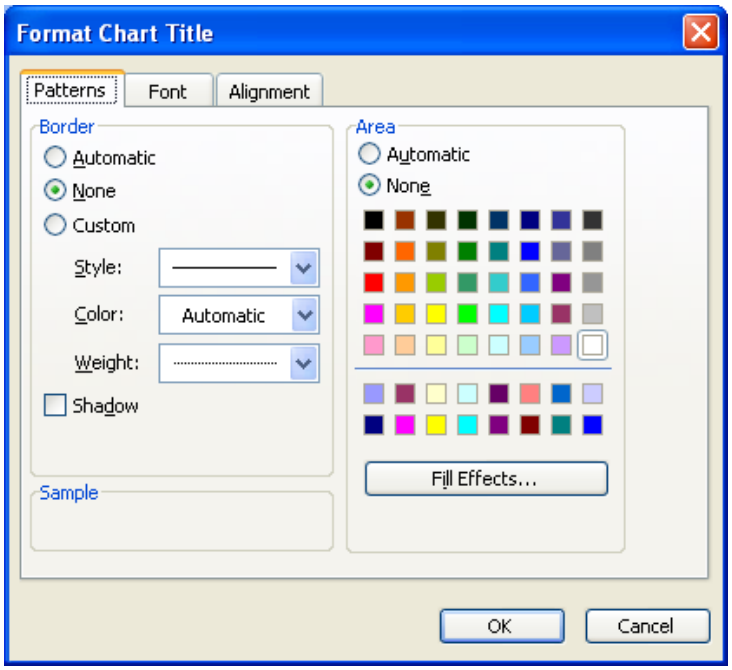


Tab	Field	Supported in Websheet
Patterns	Border	All border options supported except for the following three border styles: 
	Area	Yes – with limitations; Standard Colors are supported. Custom colors, as established through the Color tab on worksheet's Options dialog box, are

Tab	Field	Supported in Websheet
		not supported
Fill Effects	Gradient	Yes, with the limitations described previously in the section entitled “Gradients”
	Pattern	No
	Texture	No
	Picture	Yes

Format Chart Title

If you right-click the chart title an Excel chart and choose Format Chart Title, the following dialog box appears:



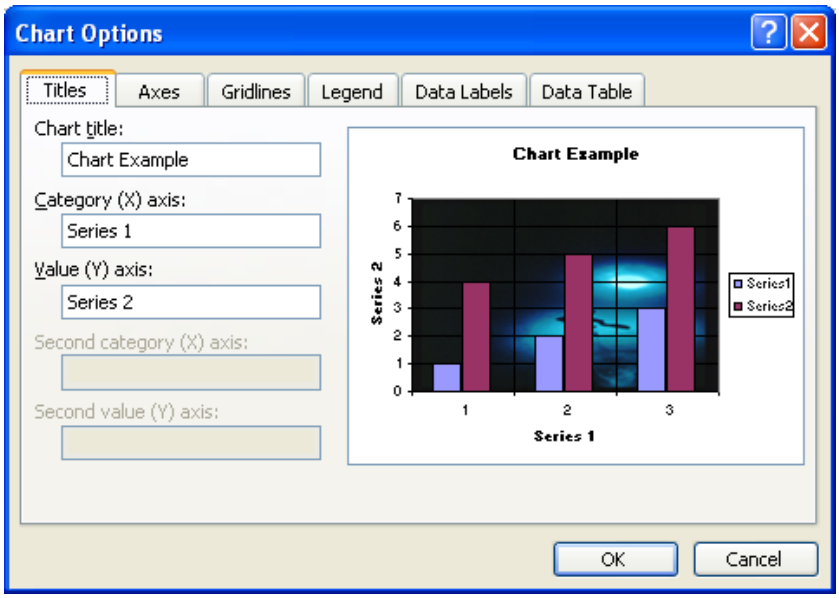
The following table describes TM1 Web support for the features in this dialog box.

Tab	Field	Supported in Websheet
Patterns	Border	All border options are supported except for the following three border styles: 
	Area	Yes; 'None' is white in TM1 Web; standard Excel colors are supported; custom colors, as established through the Color tab on worksheet's Options dialog box, are not supported
Fonts	Font	Yes
	Font Style	No
	Size	Yes
	Underline	No
	Strikethrough	No
	Color	No
	Background	Yes
	Effects	No
	Autoscale	No
Fill Effects	Gradient	Yes, with the limitations described previously in the section entitled "Gradients"
	Pattern	No
	Texture	No

Tab	Field	Supported in Websheet
	Picture	No
Alignment	All	No

Chart Options

If you right click an Excel chart and choose Chart Options, the following dialog box appears:



The following table describes TM1 Web support for the features in this dialog box.

Tab	Field	Supported in Websheet
Titles	Chart Title	Yes
	Category (X) axis	Yes
	Yes	Yes
Axes	All fields	No

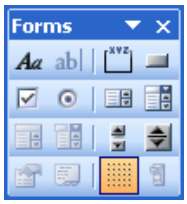
Tab	Field	Supported in Websheet
Gridlines	All options	Yes
Legend	Show Legend	Yes
	Legend Placement	Yes
Data Labels		No
Data Tables		No

Forms Toolbar and Control Box Support

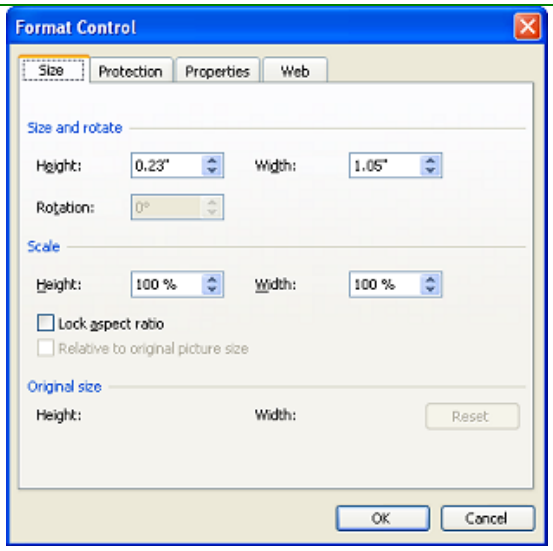
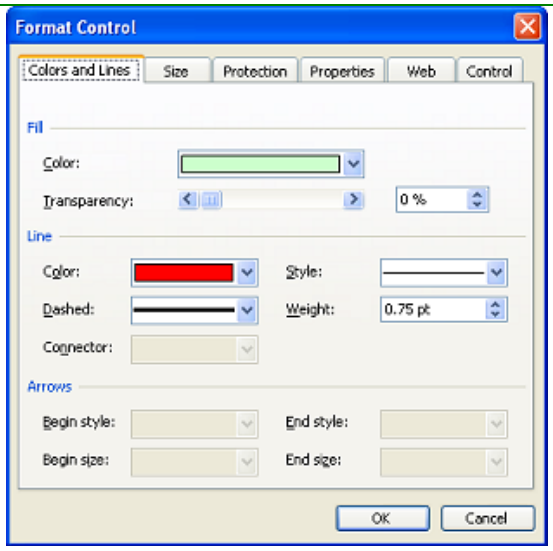
This section describes TM1 Web support for the interactive controls on these Excel toolbars.

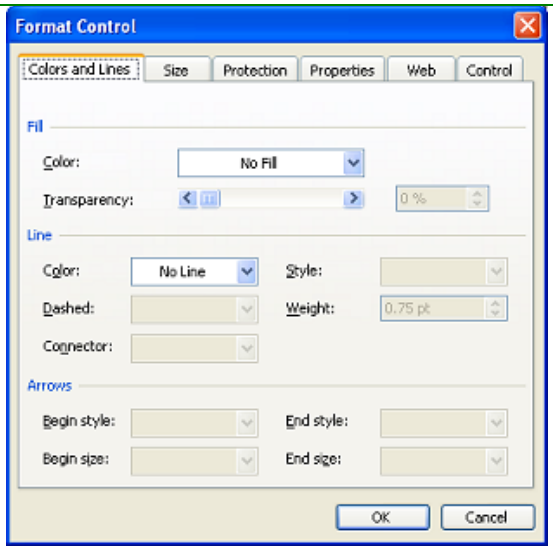
Microsoft Excel Forms Toolbar

To access the Microsoft Forms Toolbar from within Excel, choose **View** → **Toolbars** → **Forms**. The Forms toolbar looks like this:



This following table describes the options on the Forms toolbar, and the TM1 Web support for each option:

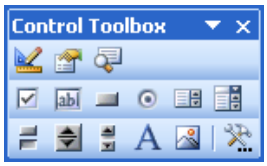
Option	Properties	TM1 Web Support
Label		Labels appear in TM1 Web. However, none of the display properties affect the display of labels.
Edit Box		Not supported
Group Box		Not supported
Button		Not supported
Check Box		TM1 Web displays changes to the following properties: Fill Color Transparency Line Color Line Dashed Line Style Weight Caption – Type in text directly into the check box

Option	Properties	TM1 Web Support
Option Button		TM1 Web displays changes to the following properties: Fill Color Transparency Line Color Line Dashed Line Style Weight Caption – Type text directly into check box
List Box		List boxes appear in TM1 Web. However, none of the display properties affect the display of list boxes
Combo Box		Combo boxes appear in TM1 Web. However, none of the display properties affect the display of list boxes Text alignment is not supported within the box
Combination List – Edit		Not supported
Combination Dropdown Edit		Not supported
Scroll Bar		Not supported
Spinner		Not supported

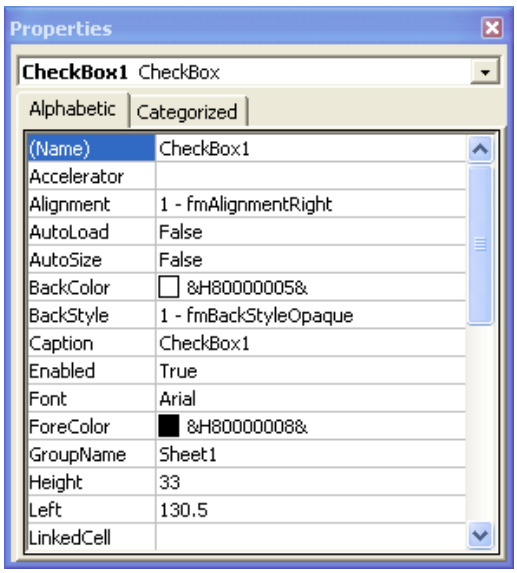
Option	Properties	TM1 Web Support
Control Properties		These toolbar buttons are either not applicable to TM1 Web, or they have no effect on the display of your websheet
Edit Code		
Toggle Grid		
Run Dialog		

Microsoft Excel Control Toolbox

To access the Microsoft Excel Controls Toolbox from within Excel, choose **View** → **Toolbars** → **Control Toolbox**. The Control Toolbox looks like this:



If you draw on of these controls on your Excel Spreadsheet, select the control, and click  Properties, a list like the following appears:



This following table describes the properties on the properties window, and the TM1 Web support for each option.

Option	TM1 Web Supported Properties
Label	Backcolor
	BackStyle – transparence or opaque
	BorderColor
	BorderStyle – none or single
	ForeColor
	Special Effect – special border style
	TextAlign
	Font
List Box	BackColor
	BorderColor
	BorderStyle – none or single
	ForeColor
	Special Effect – special border style
	Font
	List Style – show/hide option button
ComboBox	BackColor
	ForeColor
	Font

Option	TM1 Web Supported Properties
Text Box	BackColor
	BackStyle – transparence or opaque
	BorderColor
	BorderStyle – none or single
	ForeColor
	Special Effect – special border style
	TextAlign
	Font
	MultiLine
Check Box	BackColor
	ForeColor
	Font
Option Button	BackColor
	ForeColor
	Font
Toggle Button	Font
	BackColor
	ForeColor (font color)

Detailed List of TM1 Functions

A “Y” in the Implemented in TM1 9.0 column indicates support for the TM1 Function. The description may provide exceptions or clarification. A blank field in the Implemented in TM1 9.0 column indicates that the feature is not supported when importing a TM1 Function into TM1 Web, at this time.

Core Functions

Function	Implemented in TM1 9.0	Description
DBR	Y	Retrieves a value from a specified TM1 cube
DBRA	Y	Retrieves the value of a specified element attribute
DBRW	Y	Retrieves a value from a specified TM1 cube
DBS	Y	Sends a numeric value to a TM1 cube
DBSA	Y	Sends a value to a specified element attribute
DBSS	Y	Sends a string to a cube
DBSW	Y	Sends a numeric value to a TM1 cube
DFRST	Y	Returns the first element of a specified dimension
DIMIX	Y	Returns the index number of an element within a dimension
DIMNM	Y	Returns the element of a dimension that corresponds to the Index argument
DIMSIZ	Y	Returns the number of elements within a specified dimension
DNEXT		Returns the element name that follows the element specified
DNLEV	Y	Returns the number of hierarchy levels in a dimension
DTYPE	Y	Returns information about the element type of the specified element
ELCOMP	Y	Returns the name of a child of a consolidated element in a specified dimension
ELCOMPN	Y	Returns the number of components in a

Function	Implemented in TM1 9.0	Description
		specified element
ELISCOMP	Y	Determines whether element1 is a child of element2 in the specified dimension
ELISPAR	Y	Determines whether element1 is a parent of element2 in the specified dimension
ELLEV	Y	Returns the level of an element within a dimension
ELPAR	Y	Returns the parent of an element in a specified dimension
ELPARN	Y	Returns the number of parents of an element in a specified dimension
ELSLEN	Y	Returns the length of a string element within a dimension
ELWEIGHT	Y	Returns the weight of a child in a consolidated element
SUBNM	Y	Returns the element of a dimension subset corresponding to the IndexOrName argument
SUBSIZ	Y	Returns the number of elements in a dimension subset
TABDIM		Returns the dimension name that corresponds to the index argument
VIEW		Creates an optimized view of the cube

Additional Functionality

Function	Implemented in TM1 9.0	Description
DBRA Writeback	Y	
DBRW Writeback	Y	
SUBNM Element List	Y	

Deprecated TM1 Functions

These old TM1 functions have been implemented for backward compatibility with older spreadsheets. These functions are deprecated – they will not be supported in future releases of TM1 Web. If you are creating spreadsheets for publication through TM1 Web, you should use supported TM1 functions in place of those listed in the following table.

See the TM1 Server Explorer online help for a complete list of supported TM1 functions.

Function	Implemented in TM1 9.0
DBRX	Y
DBR2	Y
DBR3	Y
DBR4	Y
DBR5	Y
DBR6	Y
DBR7	Y
DBR8	Y
DBR9	Y
DBR10	Y
DBR11	Y
DBR12	Y

Function	Implemented in TM1 9.0
DBR13	Y
DBR14	Y
DBR15	Y
DBR16	Y
DBRW2	Y
DBRW3	Y
DBRW4	Y
DBRW5	Y
DBRW6	Y
DBRW7	Y
DBRW8	Y
DBRW9	Y
DBRW10	Y
DBRW11	Y
DBRW12	Y
DBRW13	Y
DBRW14	Y
DBRW15	Y
DBRW16	Y
DBS2	Y
DBS3	Y
DBS4	Y
DBS5	Y
DBS6	Y

Function	Implemented in TM1 9.0
DBS7	Y
DBS8	Y
DBS9	Y
DBS10	Y
DBS11	Y
DBS12	Y
DBS13	Y
DBS14	Y
DBS15	Y
DBS16	Y
DBSS2	Y
DBSS3	Y
DBSS4	Y
DBSS5	Y
DBSS6	Y
DBSS7	Y
DBSS8	Y
DBSS9	Y
DBSS10	Y
DBSS11	Y
DBSS12	Y
DBSS13	Y
DBSS14	Y
DBSS15	Y

Function	Implemented in TM1 9.0
DBSS16	Y
DBSW2	Y
DBSW3	Y
DBSW4	Y
DBSW5	Y
DBSW6	Y
DBSW7	Y
DBSW8	Y
DBSW9	Y
DBSW10	Y
DBSW11	Y
DBSW12	Y
DBSW13	Y
DBSW14	Y
DBSW15	Y
DBSW16	Y

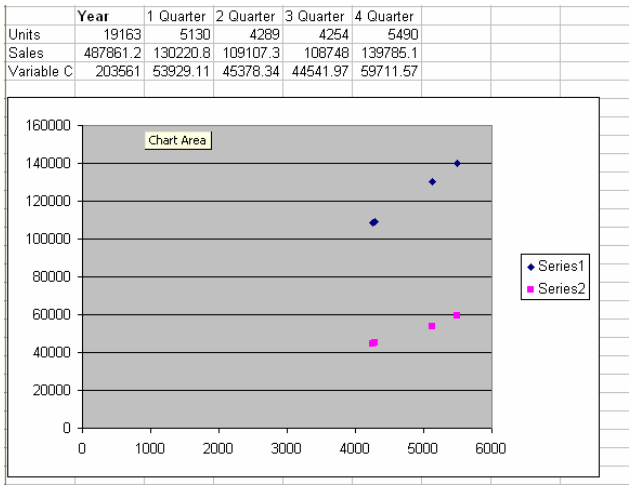
Exporting A TM1 Websheet or Cube Viewer Chart to Excel

Features Exported from Web Sheet Charts

Generally, charts generated in the websheet export successfully to Excel, except as noted here.

XY Scatter Plot Charts

XY scatter plot charts are not displayed correctly when exporting from a websheet to Excel. The plot chart is represented by a point chart, which is not the same, as shown in the following simple example:



Exporting Cube Viewer Charts to Excel – Supported Features

The following Cube Viewer chart features export successfully to Excel except as noted:

- Appearance styles
- Chart title
- Chart types

Chart Type	3D	Description
Area	Yes	
Bar	Yes	
Bubble	Yes	
Column	Yes	
Doughnut	No	
Line	Yes	
Pie	Yes	
Pyramid	No	Pyramids are not similar to the Dundas Pyramids.
Radar	No	
Stacked Area	Yes	
Stacked Area 100	Yes	
Stacked Bar	Yes	
Stacked Bar 100	Yes	
Stacked Column	Yes	
Stacked Column 100	Yes	

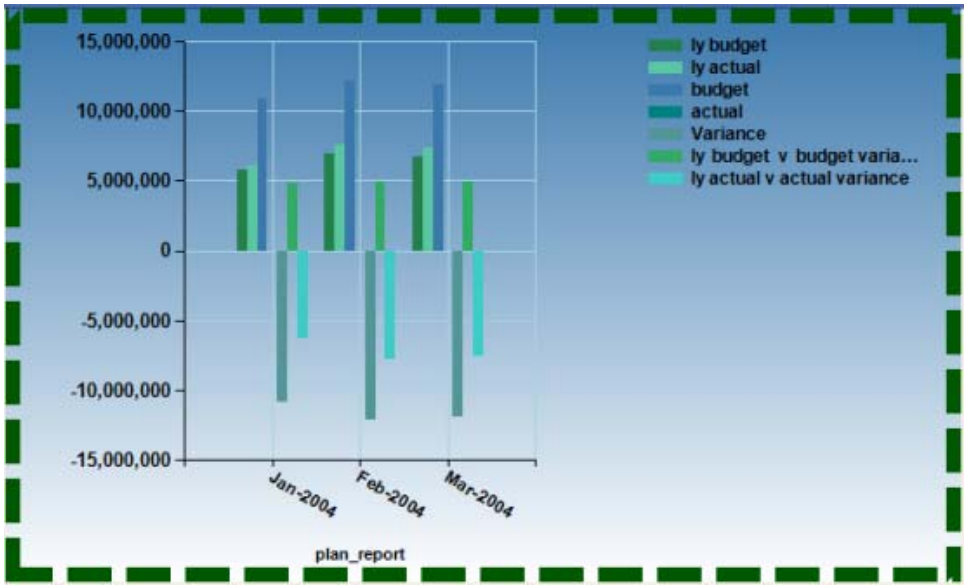
Chart Type	3D	Description
Stock hlc	No	3 Dimensions
Stock ohlc	No	4 Dimensions
Stock vohlc	No	5 Dimensions

- Legends (on and off)
- 3 dimensional charts

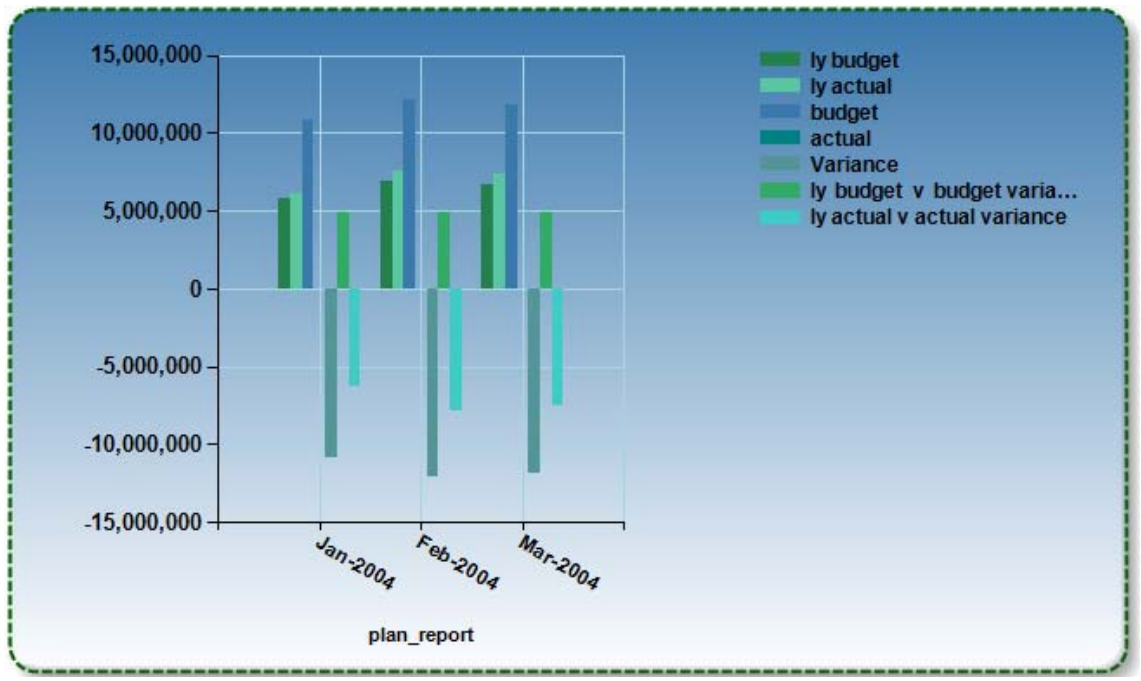
Three dimensional charts export as indicated in the Chart Types list above.

- Point Labels
- Axis Titles and Reversed Axis titles
- Major Grids
- Minor Grids
- Series colors
- Background colors
- Background gradient types
- Chart border styles
- Chart border colors
- Limitations on Chart Border Width

Charts can have a colored border, as set through the Appearance tab on the Chart Properties dialog box. The following chart has a dashed green border with a width of 10:



When you export this chart, Excel displays a maximum border weight of four pixels:



Exporting Cube Viewer Charts to Excel - Features Not Supported

The following Cube Viewer chart features do not export successfully to Excel:

- Chart Title location
- Chart types

The following chart types export as an Excel column cluster chart:

- Box Plot
- Candle Stick
- Error Bar
- Fast Line
- Funnel
- Gantt
- Kagi
- Point
- Point and Figure
- Polar
- Range
- Range Column
- Renko
- Spline
- Spline Area
- Spline Range
- Step Line
- Three Line Break
- Legend style

Legend styles do not export to Excel. Legends that export to Excel always display as a column.

Legend area is always exported as white.

Place legend inside plot area – This feature does not export to Excel. Legends are always displayed outside the plot area.

Legend placement settings- Legends always appear to the right of the chart, no matter what the Legend Placement setting is.

- 3-dimentional charts

You can build 3-dimensional charts and export them to Excel from the cube viewer. The following 3-dimensional chart properties do not export:

3D right angle axes

3D clustered on/off – This option works only for column charts.

3D depth

3D gap depth

3D horizontal rotation

3D vertical rotation

3D perspective

- ‘smart’ labels
- Label angle
- Label font
- Label color
- Label position
- Label format and precision
- x & y axis visible (on/off)
- Axes are always visible in the exported chart.
- x & y axis interlaced strips
- Interlaced strips are not visible in the exported chart.
- x & y axis side margin
- x & y axis fonts
- Fonts on the X and Y axes are always 10 point bold Arial.
- x & y axis label format and precision

- Formats and precision for the X and Y axis labels are not exported to Excel.
- Background hatching patterns

Background hatching patterns are ignored when you export to Excel.