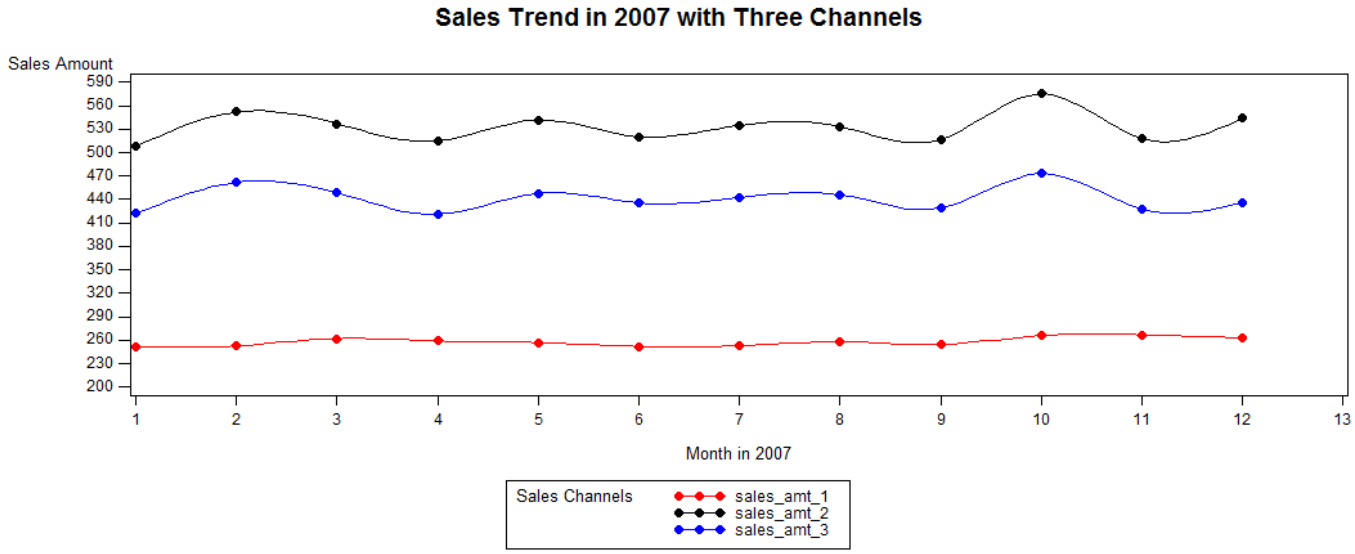
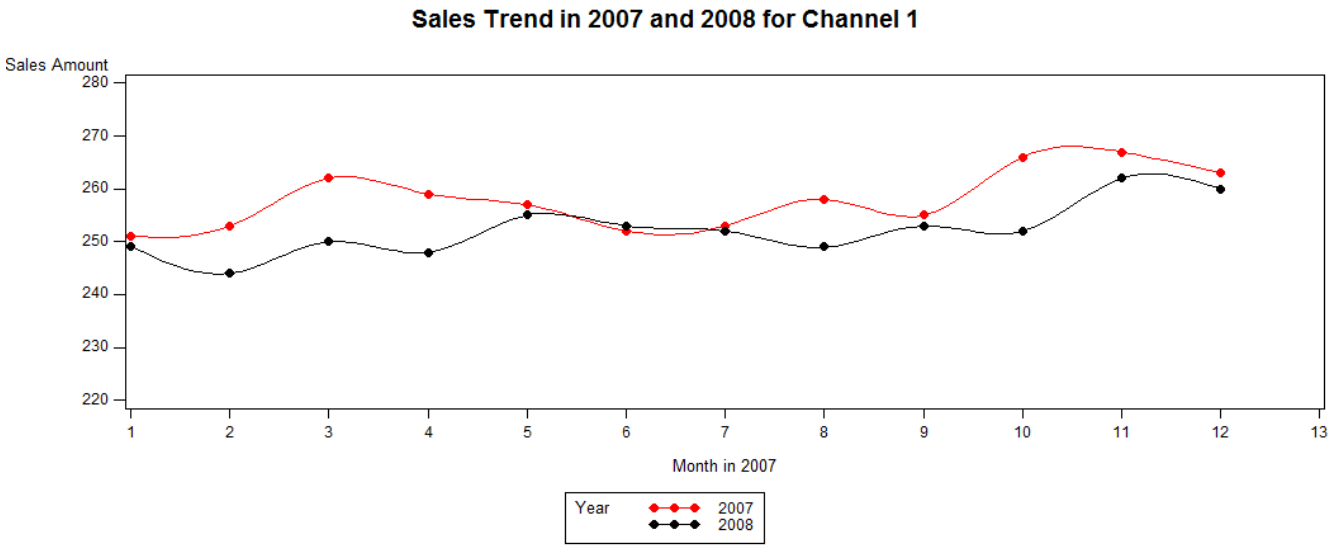
SAS Data sets for Q1 to Q4: WORK.Groceries

Q1. Applying the 'PROC GPLOT' to the SAS table 'WORK.Groceries'. You will obtain an output plot shown below

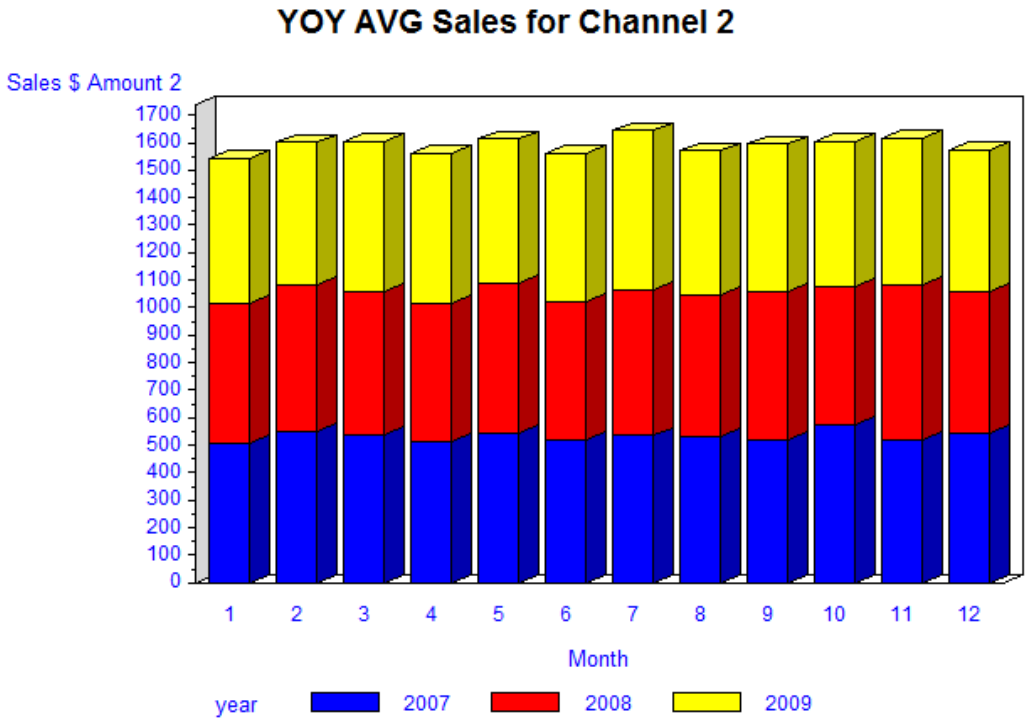


Where the AXIS1 (i.e. horizontal AXIS) lists the month information in 2007, and AXIS2 (i.e. vertical AXIS)is about the sales amount for different sales channels (corresponding to the variables 'sales_amt_1', 'sales_amt_2' and 'sales_amt_3'). Those points in plot are connected using the 'spine' method defined in the global 'symbol' statement. Also, make sure you should define the 'legend and its label' 'labels of both AXISES', 'title' and 'colors' shown in the plot.

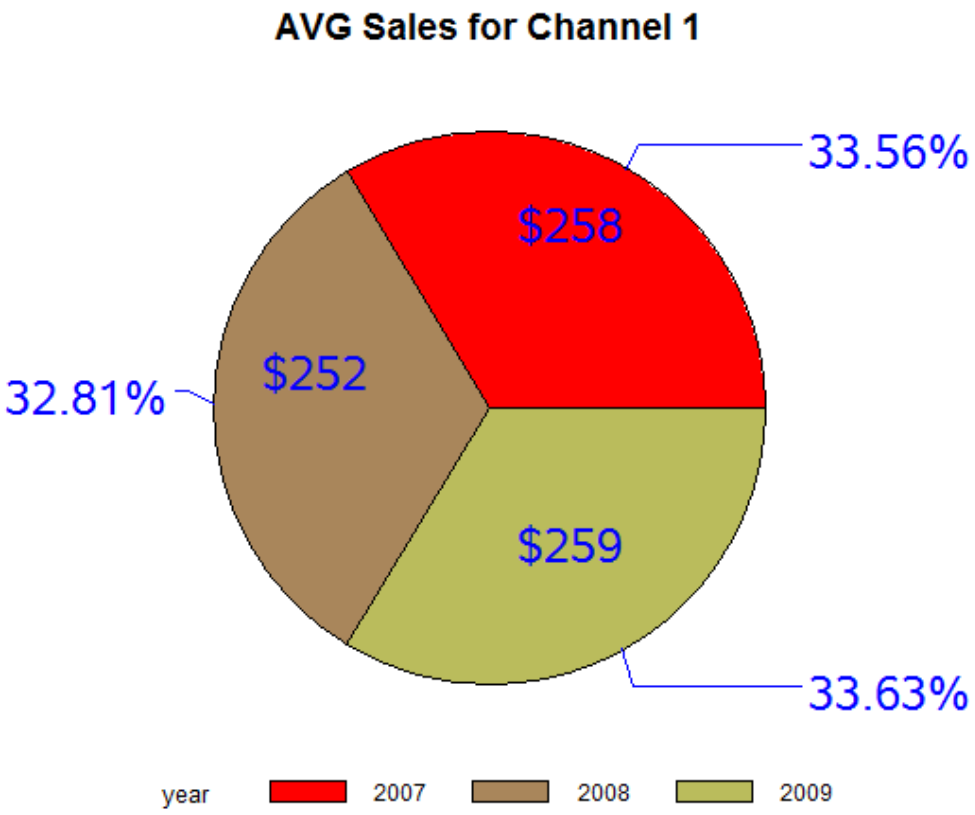
Q2. Following Q1, using the 'PROC GPLOT' to the SAS data set 'WORK.Groceries'. You will obtain an output plot shown below. Where it is required to draw a trend plot to compare the curves for the variable 'sales_amt_1' between the year 2007 and 2008. In addition, make sure to define the 'legend and its label' 'labels of both AXISES', 'title' and 'colors' shown in the plot.



Q3. Following Q1 and Q2, applying the 'PROC GCHART' to the SAS table 'WORK.Groceries'. You will obtain an output plot shown below. Where you are required to draw 3D BARCHART plot to compare the bars for each (from 1 to 12) monthly value of variable 'sales_amt_2' between year 2007 and 2008. Also, make sure you should define the 'PATTERN and colors' 'labels of both AXISES' and 'title' shown in the plot.



Q4. Following Q1 to Q3, using the 'PROC GCHART' to the SAS table 'WORK.Groceries'. You can get a resulting plot shown below. Where it is required to draw a PIE chart to compare the portion of the average value of 'sales_amt_1' for years 2007, 2008 and 2009. Also make sure to define the 'PATTERN and colors' 'legend and its label','value of the pie portions','percent values' and 'title' shown in the plot.



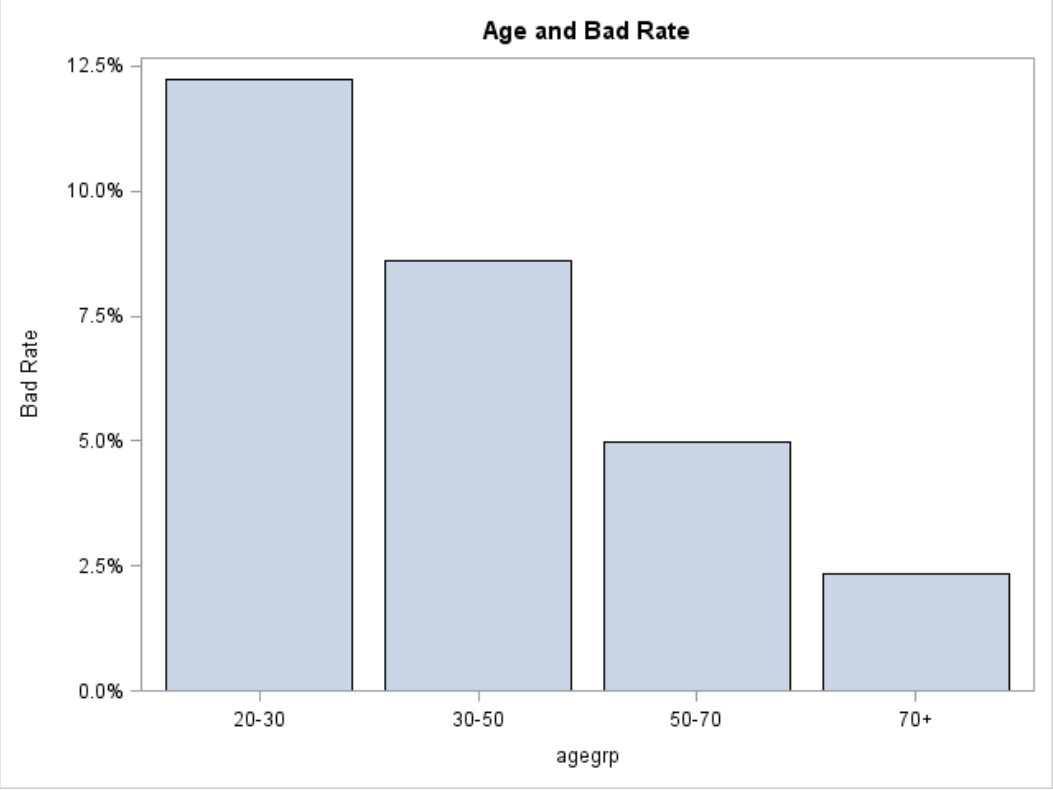
SAS Data sets for Q5 to Q7: WORK.Risk_data

Q5. Using the SAS GTL to draw the following bar chart based on the data set 'work.risk' created by executing the following SAS codes:

```
data risk;
  set risk_data;
  utilization=utilization/100;
  agegrp=put(age,agef.);
  format utilization percent11.1;
run;

proc sort data=risk;
  by age;
run;
```

Where the Y AXIS measures the mean value of the variable 'high_risk_ind' for each group of the variable 'agegrp'. Please set the title and labels of X and Y AXISES shown in the plot.

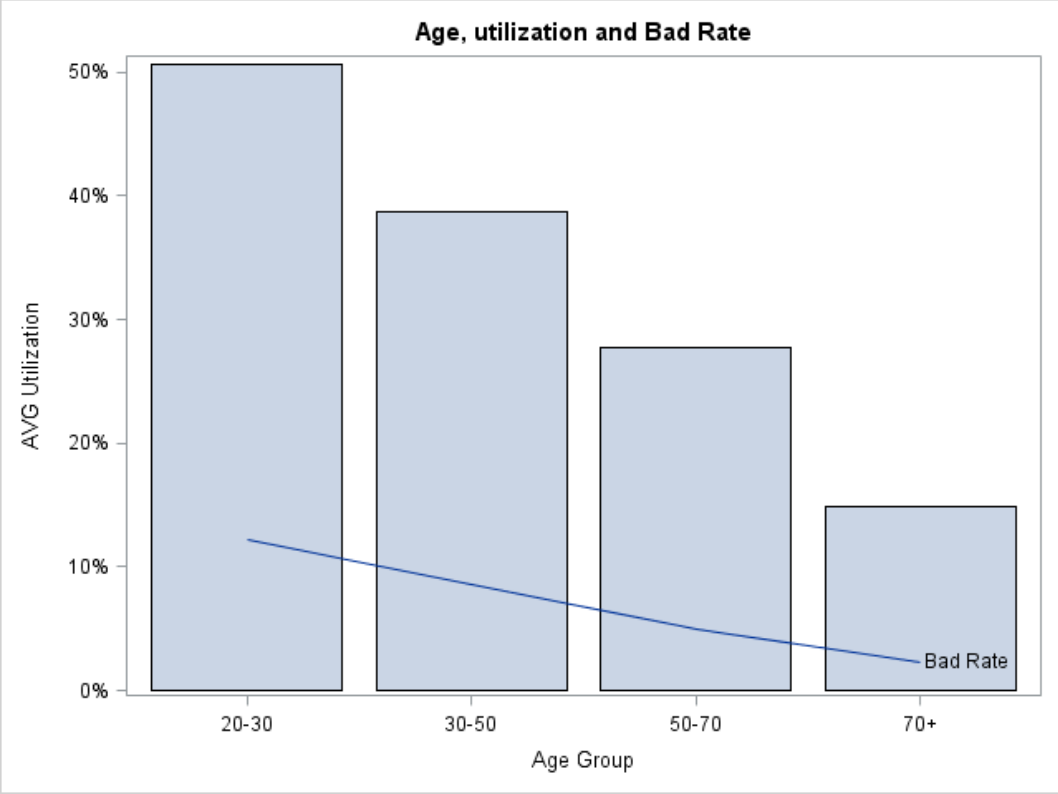


Q6. Using the SAS 'GTL' to draw the following bar/series chart based on the data set 'work.bucket' created by executing the following SAS codes (following Q5):

```
proc sort data=risk;
  by age;
run;

proc means data=Risk;
 var utilization high_risk_ind age income;
 by agegrp;
 output out=bucket (drop=_freq_ _type_)
 mean=utilization high_risk_ind age income;
run;
```

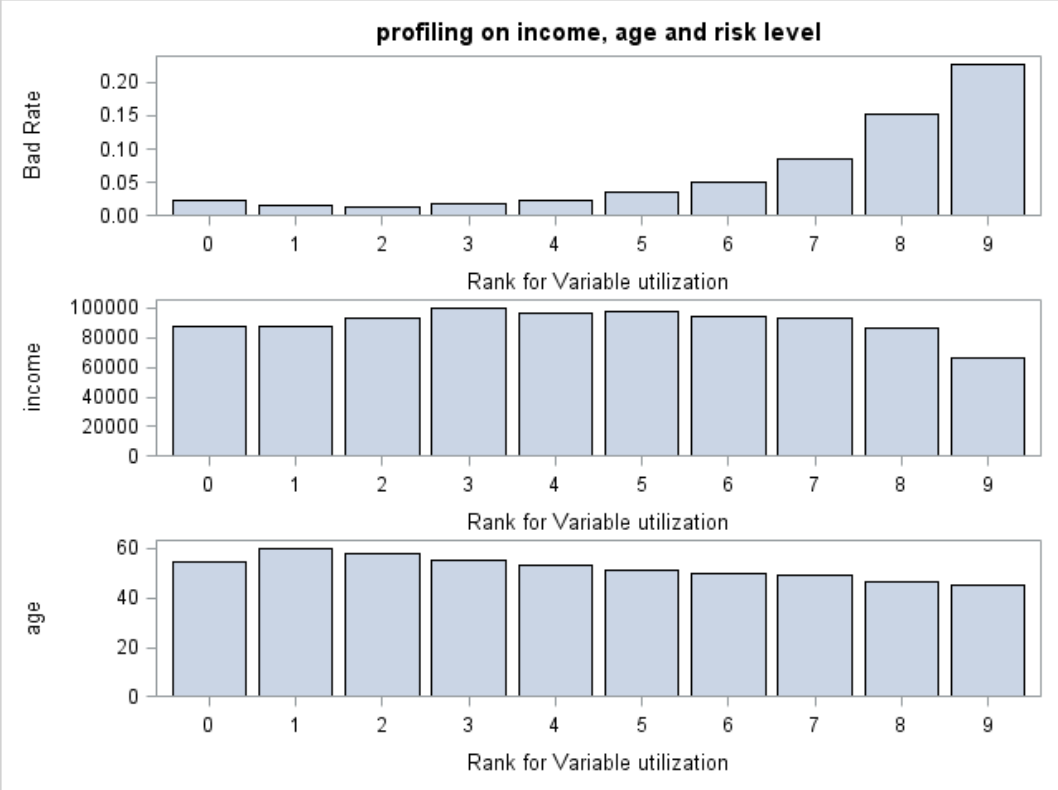
Where the Y AXIS measures the mean value of the variable 'Utilization' (match the bars) for each group of the variable 'agegrp', and the curve describes the average value of the variable ' high_risk_ind' (i.e. 'bad rate' curve). Please make sure to set the curve label, title and labels of X and Y AXISES shown in the plot.



Q7. Using the SAS GTL to make the following bar charts in different panels based on the data set 'work.bucket' which is created by executing the following SAS codes (following Q5):

```
proc rank data=risk_data groups=10 out=Risk_ut;
   var utilization;
   ranks ugrp;
run;
proc sort data=Risk_ut;
   by ugrp;
run;
proc means data=Risk_ut;
   var utilization high_risk_ind age income;
   by ugrp;
   output out=bucket (drop=_freq_ _type_)
   mean=utilization high_risk_ind age income;
run;
```

Note there are three panels in the plot. The Y AXIS in 3 panels are the measure of the following variables in table 'bucket' respectively (1)'Bad Rate' (the value of variable 'high_risk_ind'), (2) 'income' (the value of variable 'income') and (3) 'age' (the value of variable 'age'). The X AXIS is all the same measure of the variable 'ugrp', labeled as 'rank for variable utilization'.



SAS Data sets for Q8: WORK.consumer_info

Q8. Applying the SAS 'GTL' 'Dynamic Template' method to create the following bar charts. Please check text boxes in the first plot, these

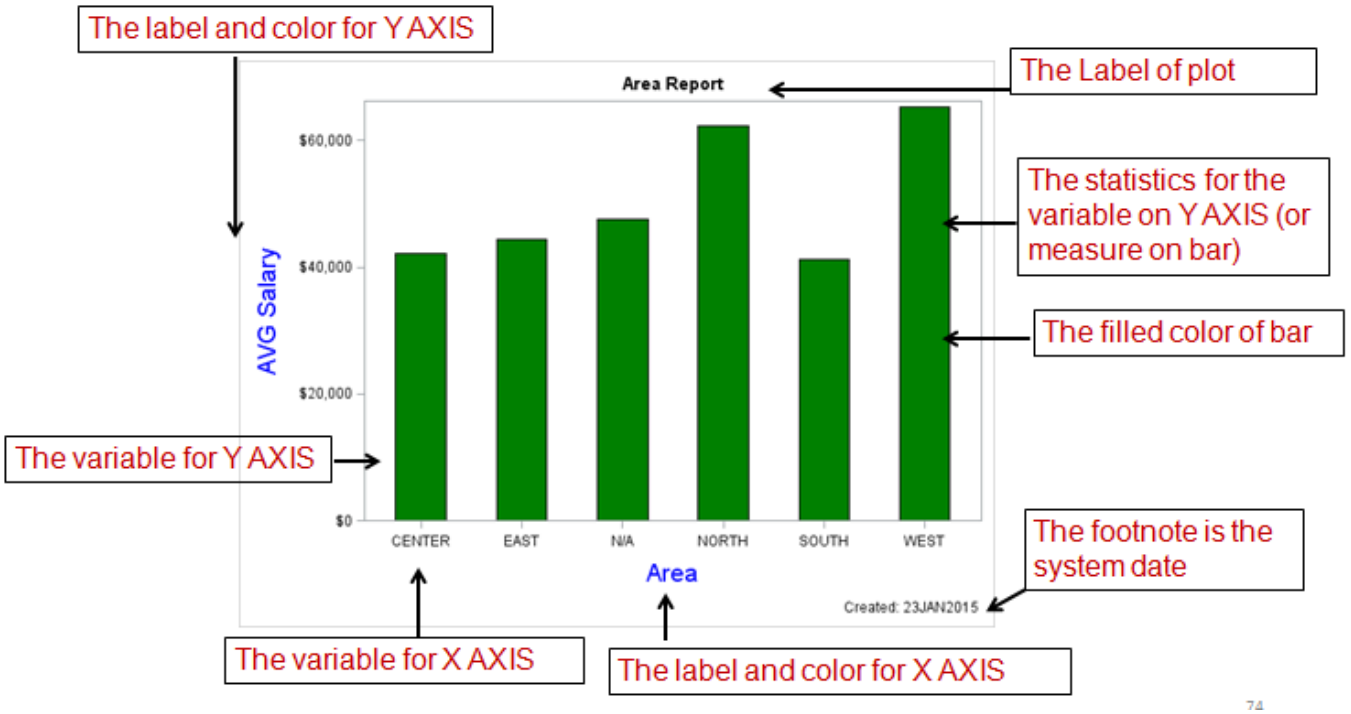
features in GTL are either macro variables or dynamic graphics variables. After you have defined these variables in GTL and run the following two SAS programs:

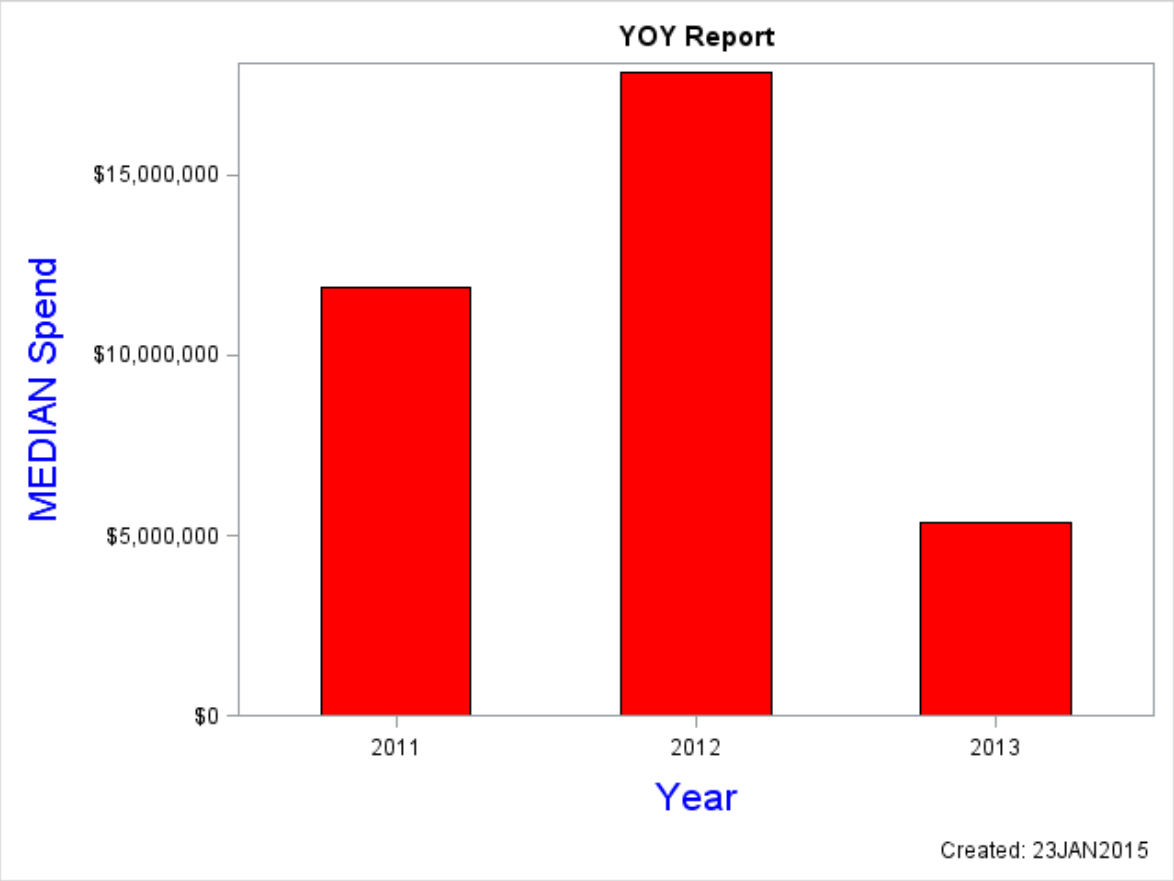
```
%let axislabelsize=15;    %let axislabelcolor=BLUE;
%let barfillcolor=GREEN;  %let statistics=MEAN;
proc sgrender data=consumer_info template=dynagr;
 dynamic var1='area' var2='salary'
 xlabel='Area' ylabel='AVG Salary' plottitle='Area Report';
run;
```

and

```
%let axislabelsize=15;  %let axislabelcolor=BLUE;
%let barfillcolor=RED;  %let statistics=MEDIAN;
proc sgrender data=consumer_info template=dynagr;
 dynamic var1='year' var2='spend'
 xlabel='Area' ylabel=' MEDDIAN Salary' plottitle='YOY Report';
run;
```

you will obtain the following two bar charts:




YOY Report
MEDIAN Spend
$15,000,000
$10,000,000
$5,000,000
$0
2011
2012
2013
Year
Created: 23JAN2015