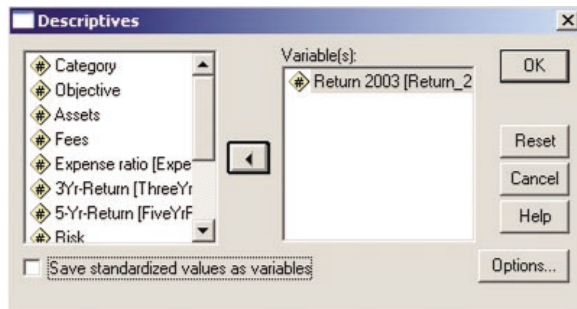


### A3.3 (CD-ROM TOPIC) SPSS FOR DESCRIPTIVE STATISTICS

#### Calculating Descriptive Statistics

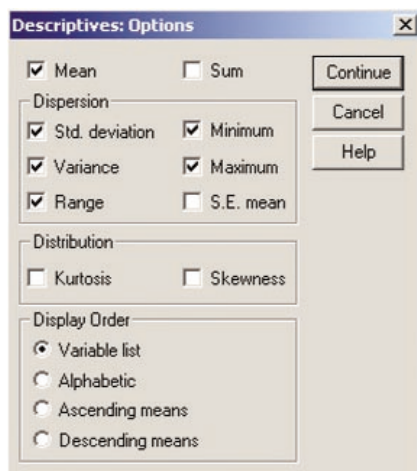
To calculate the descriptive statistics for the 2003 return of *all* the mutual funds, open the **MUTUALFUNDS2004.SAV** file. Select **Analyze** → **Descriptive Statistics** → **Descriptives**.

**Step 1:** In the Descriptives dialog box (see Figure A3.7), enter **Return 2003** in the Variable(s): edit box. Click the **Options** button.



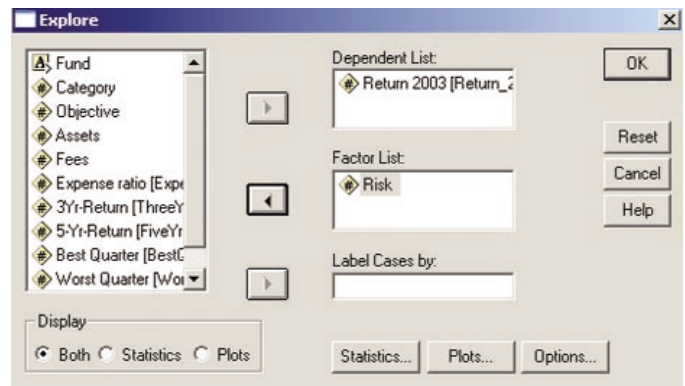
**FIGURE A3.7** SPSS Descriptives Dialog Box

**Step 2:** In the Descriptives: Options dialog box (see Figure A3.8), select the **Mean**, **Std. deviation**, **Variance**, **Range**, **Minimum**, and **Maximum** check boxes. Click the **Continue** button. Then click the **OK** button in the Descriptives dialog box.



**FIGURE A3.8** SPSS Descriptives: Options Dialog Box

To calculate the descriptive statistics for the 2003 return separately for each risk group, select **Analyze** → **Descriptive Statistics** → **Explore**. In the Explore dialog box (see Figure A3.9), enter **Return 2003** in the Dependent List: edit box and **Risk** in the Factor List: edit box. Click the **OK** button.

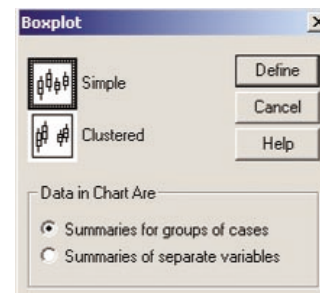


**FIGURE A3.9** SPSS Explore Dialog Box

#### Creating Box-and-Whisker Plots (Boxplots)

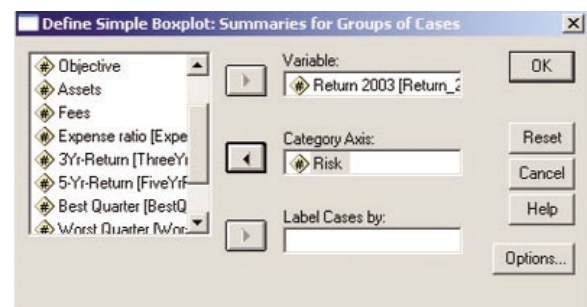
SPSS refers to box-and-whisker plots as boxplots. To create side-by-side boxplots of the 2003 return for the three risk categories, open the **MUTUALFUNDS2004.SAV** file. Select **Graphs** → **Boxplot**.

**Step 1:** In the Boxplot dialog box (see Figure A3.10), select the **Simple** button and click the **Define** button.



**FIGURE A3.10** SPSS Boxplot Dialog Box

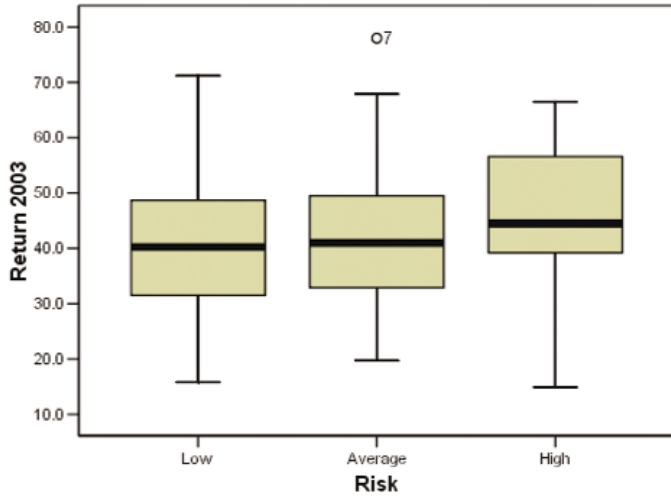
**Step 2:** In the Define Simple Boxplot: Summaries for Groups of Cases: dialog box (see Figure A3.11), enter **Return 2003** in the Variable: edit box, and **Risk** in the Category Axis: edit box.



**FIGURE A3.11** SPSS Define Simple Boxplot: Summaries for Groups of Cases: Dialog Box

**Step 3:** Click the **OK** button.

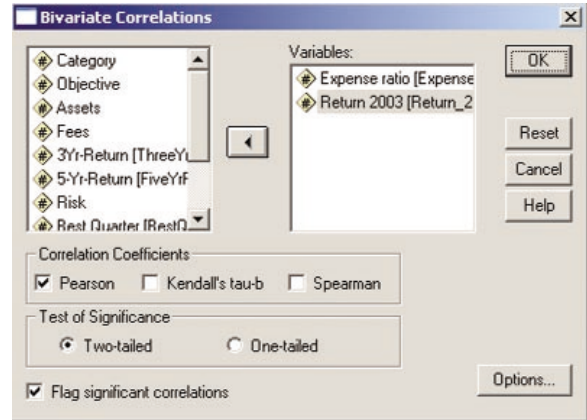
Figure A3.12 is the box-and-whisker plot of 2003 return categorized by risk.



**FIGURE A3.12** Box-and-Whisker Plot of 2003 Return Categorized by Risk

## Calculating a Coefficient of Correlation

To compute the coefficient of correlation for the expense ratio and the return in 2003, open the **MUTUALFUNDS2004.SAV** file. Select **Analyze** → **Correlate** → **Bivariate**. In the Bivariate Correlations dialog box (see Figure A3.13), enter **Expense ratio** and **Return 2003** in the Variables: edit box. Select the **Pearson** check box (for Correlation Coefficients). Click the **OK** button.



**FIGURE A3.13** SPSS Bivariate Correlations Dialog Box