A2.3 (*CD-ROM TOPIC*) USING SPSS FOR TABLES AND CHARTS

You can use SPSS to create many of these tables and charts discussed in this chapter. If you have not already read Appendix 1.4, "Introduction to SPSS," you should do so now.

Loading the Mutual Fund Data

To import the mutual funds data set into SPSS, open SPSS, and then select **File ➔ Open ➔ Data**. In the Open File edit box, locate SPSS directory on the CD provided with this text. In the File name: edit box enter **MUTUALFUNDS2004.SAV**. Click the **Open** button. The data set is now loaded into the SPSS Data editor.

Bar Chart

Open the data file **MUTUALFUNDS2004.SAV**. Select **Analyze ➔ Descriptive Statistics ➔ Frequencies**.

Step 1: In the Frequencies dialog box (see Figure A2.16), enter **Risk** in the Variables: edit box. Click the **Charts** button.

Step 2: In the Frequencies:Charts dialog box (see Figure A2.17), select the **Bar charts** option button. Click the **Continue** button to return to the Frequencies dialog box. Click the **OK** button to produce the bar chart.

Figure SPSS A2.18 illustrates the bar chart for risk.

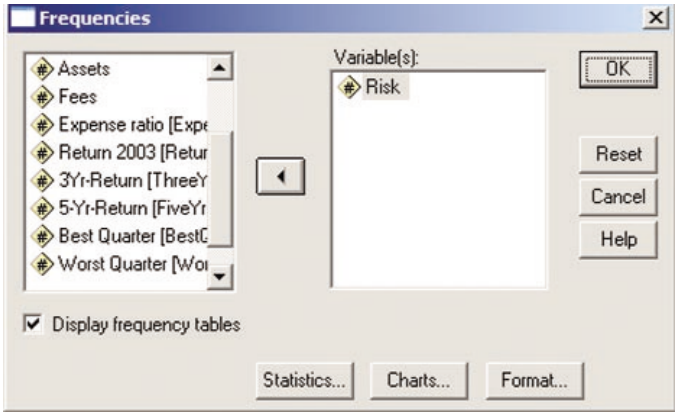

FIGURE A2.16 SPSS Frequencies Dialog Box

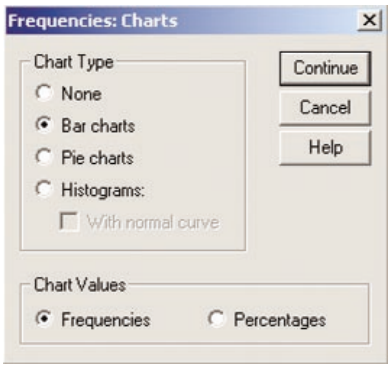

FIGURE A2.17 SPSS Frequencies:Charts Dialog Box

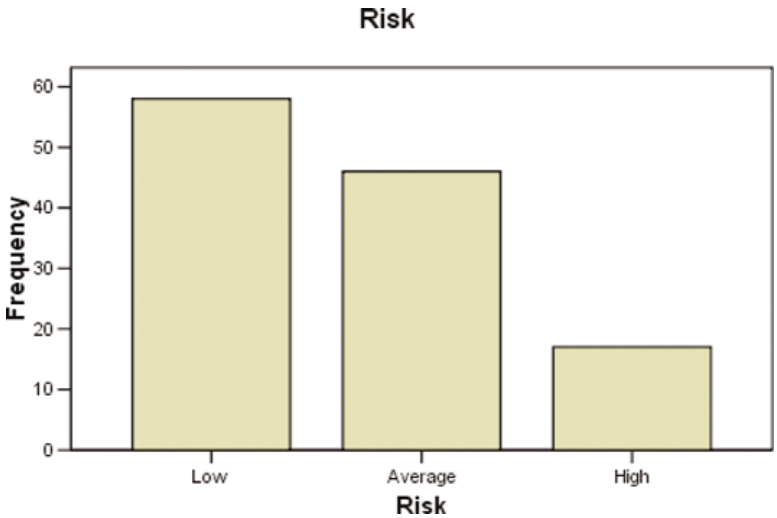

FIGURE A2.18 SPSS Bar Chart of Risk

Pie Chart

Open the data file **MUTUALFUNDS2004.SAV**. Select **Analyze ➔ Descriptive Statistics ➔ Frequencies**.

Step 1: In the Frequencies dialog box, enter **Risk** in the Variables: edit box. Click the **Charts** button.

Step 2: In the Frequencies:Charts dialog box, select the **Pie charts** option button. Click the **Continue** button to return to the Frequencies dialog box. Click the **OK** button to produce the pie chart.

Figure A2.19 illustrates the pie chart for risk.

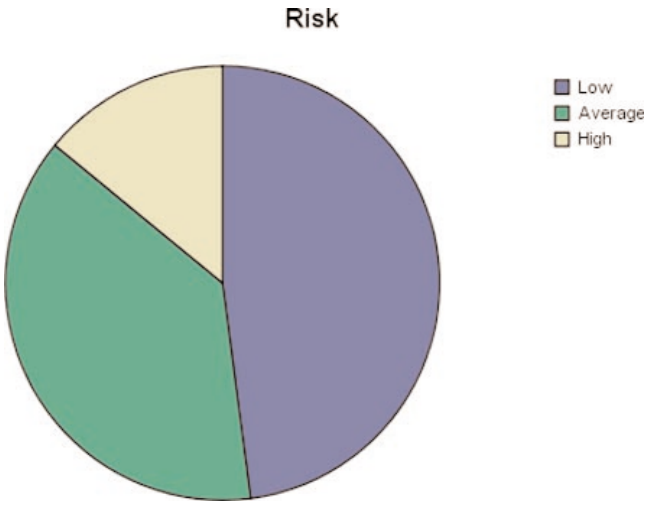

FIGURE A2.19 SPSS Pie Chart of Risk

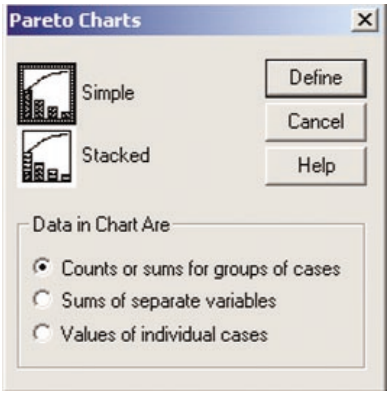

FIGURE A2.20 SPSS Pareto Charts Dialog Box

Pareto Diagram

Open the data file **MUTUALFUNDS2004.SAV**. Select **Graphs ➔ Pareto**.

Step 1: In the Pareto Charts dialog box (see Figure A2.20), select **Simple** Pareto chart and the **Counts or sums of groups of cases** option button. Click the **Define** button.

Step 2: In the Define Simple Pareto: Counts or Sums for Groups of Cases dialog box (see Figure A2.21), select the **Counts** option button and the **Display cumulative line** check box. Enter **Risk** in the Category Axis: edit box. Click the **OK** button.

Figure A2.22 illustrates the Pareto diagram for risk.

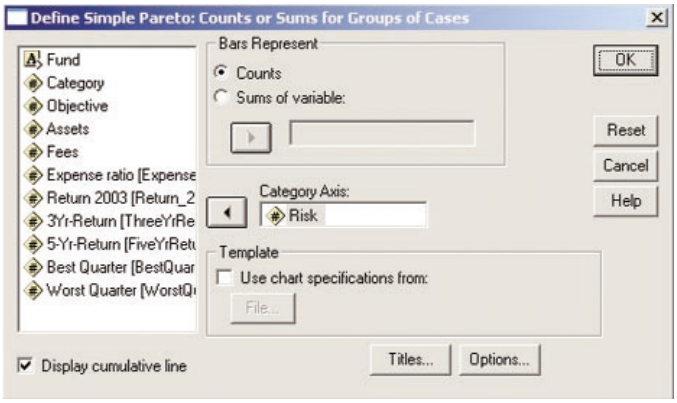

FIGURE A2.21 SPSS Define Simple Pareto: Counts or Sums for Groups of Cases Dialog Box

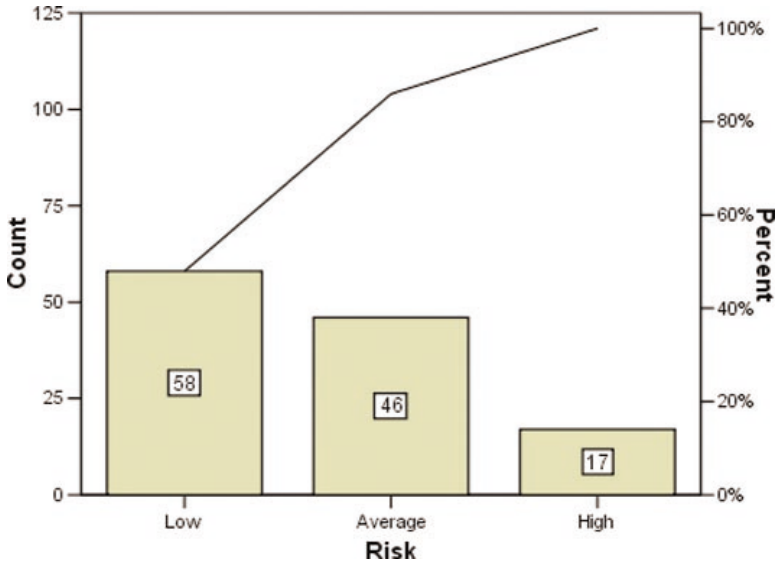

FIGURE A2.22 SPSS Pareto Diagram of Risk

Histogram

To create the histogram similar to the one in Figure 2.9 panel A on page 38, you first need to select only the mutual funds that have a growth objective. Open the data file **MUTUALFUNDS2004.SAV** and select **Data ➔ Select Cases**.

Step 1: In the Select Cases dialog box (see Figure A2.23), select the **If condition is satisfied** option button, and click the **If** button below this line.

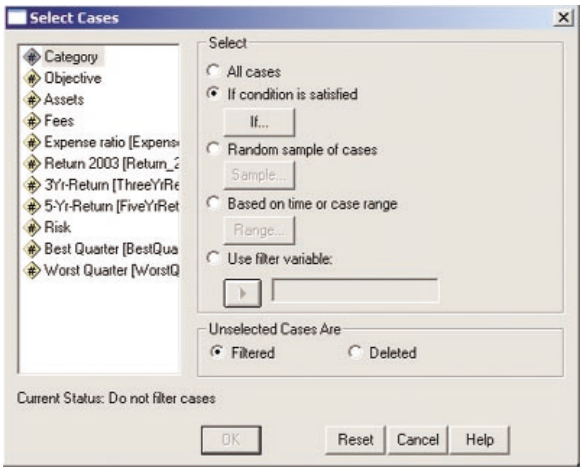

FIGURE A2.23 SPSS Select Cases Dialog Box

Step 2: In the Select Cases: If dialog box (see Figure A2.24), enter **objective = 0** in the edit box next to the right arrow button. Click the **Continue** button to return to the Select Cases dialog box. Click the **OK** button in the Select cases dialog box to return to the Data Editor. Notice that the unselected cases (those that have a Value objective) are marked with a diagonal line through the row number.

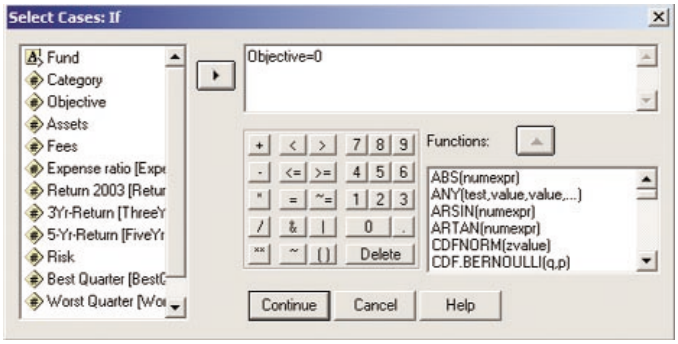

FIGURE A2.24 SPSS Select Cases: If Dialog Box

Step 3: Select **Analyze ➔ Descriptive Statistics ➔ Frequencies**. In the Frequencies dialog box, enter **Return2003** in the Variables: edit box. Click the **Charts** button. In the Frequencies:Charts dialog box, select the **Histograms** option button. Click the **Continue** button to return to the Frequencies dialog box. Click the **OK** button to produce the histogram.

Figure A2.25 displays the histogram of the 2003 return for the growth mutual funds.

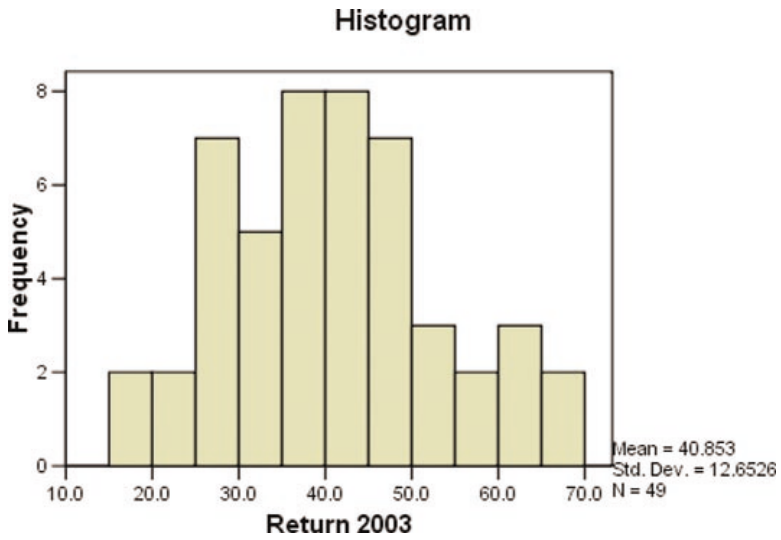

FIGURE A2.25 SPSS Histogram of the 2003 Return for Growth Mutual Funds

Cross-Tabulation Table and Side-By-Side Bar Chart

Open the data file **MUTUALFUNDS2004.SAV**. Select **Analyze ➔ Descriptive Statistics ➔ Crosstabs**.

Step 1: In the Crosstabs dialog box (see Figure A2.26), enter **Objective** in the Row(s): edit box and **Risk** in the Column(s): edit box. Select the **Display clustered bar charts** check box. Click the **Cells** button.

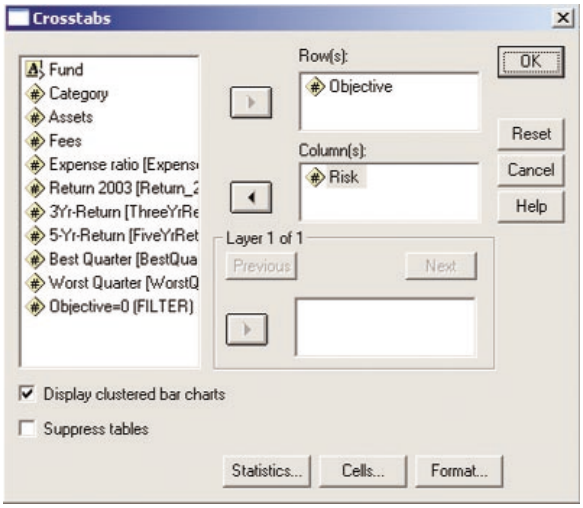

FIGURE A2.26 SPSS Crosstabs Dialog Box

Step 2: In the Crosstabs: Cell Display edit box (see Figure A2.27), select the **Observed** check box, and the **Row**, **Column**, and **Total** percentages check boxes. Click the **Continue** button in the Crosstabs: Cell Display dialog box. Click the **OK** button.

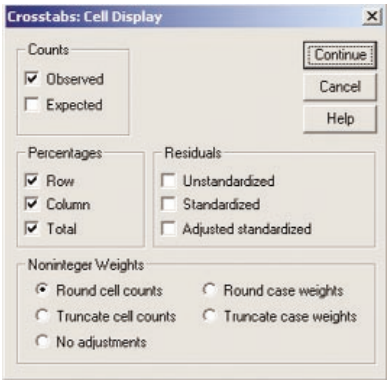

FIGURE A2.27 SPSS Crosstabs: Cell Display Dialog Box

Objective * Risk Crosstabulation

			Risk			
			Low	Average	High	Total
Objective	Growth	Count	12	23	14	49
		% within Objective	24.5%	46.9%	28.6%	100.0%
		% within Risk	20.7%	50.0%	82.4%	40.5%
		% of Total	9.9%	19.0%	11.6%	40.5%
	Value	Count	46	23	3	72
		% within Objective	63.9%	31.9%	4.2%	100.0%
		% within Risk	79.3%	50.0%	17.6%	59.5%
		% of Total	38.0%	19.0%	2.5%	59.5%
Total		Count	58	46	17	121
		% within Objective	47.9%	38.0%	14.0%	100.0%
		% within Risk	100.0%	100.0%	100.0%	100.0%
		% of Total	47.9%	38.0%	14.0%	100.0%

FIGURE A2.28 Cross-tabulation of Objective and Risk Created from SPSS

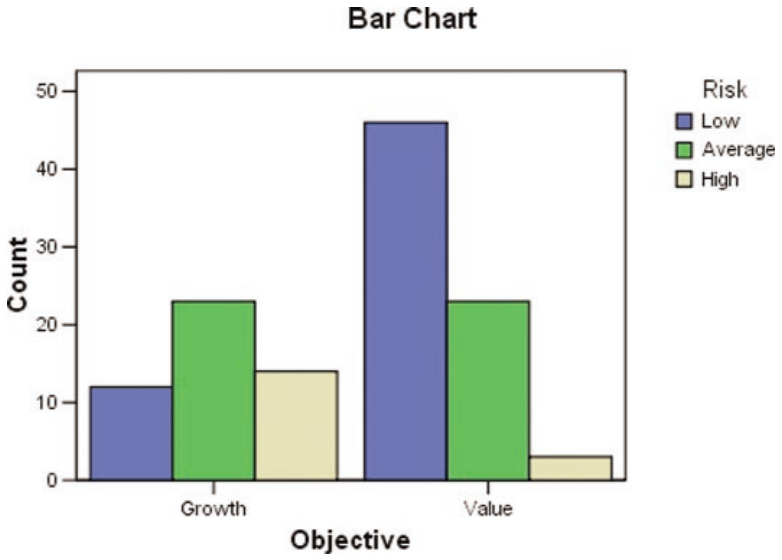

FIGURE A2.29 SPSS Side-by-Side Bar Chart of Objective and Risk

Figure A2.28 displays the cross-classification table of objective and risk. Figure A2.29 displays the side-by-side bar chart of objective and risk.

Scatter Diagram

Open the data file **MUTUALFUNDS2004.SAV**. Select **Graphs ➔ Scatter**.

Step 1: In the Scatterplot dialog box (see Figure A2.30), select **Simple** and click the **Define** box.

Step 2: In the Simple Scatterplot dialog box (see Figure A2.31), enter **Return 2003** in the Y Axis: edit box and **Expense Ratio** in the X Axis: edit box. Click the **OK** button.

Figure A2.32 illustrates the scatter diagram of expense ratio and 2003 return.

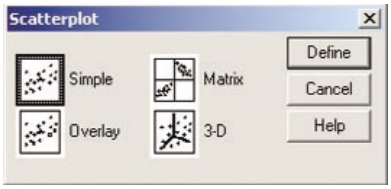

FIGURE A2.30 SPSS Scatterplot Dialog Box

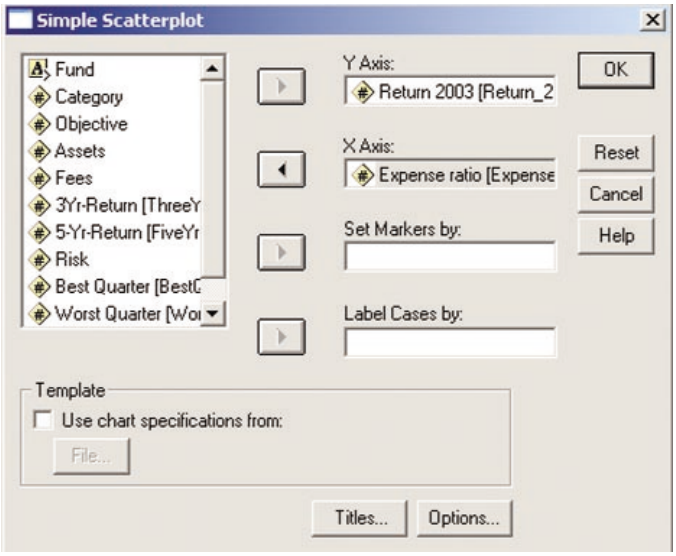

FIGURE A2.31 SPSS Simple Scatterplot Dialog Box

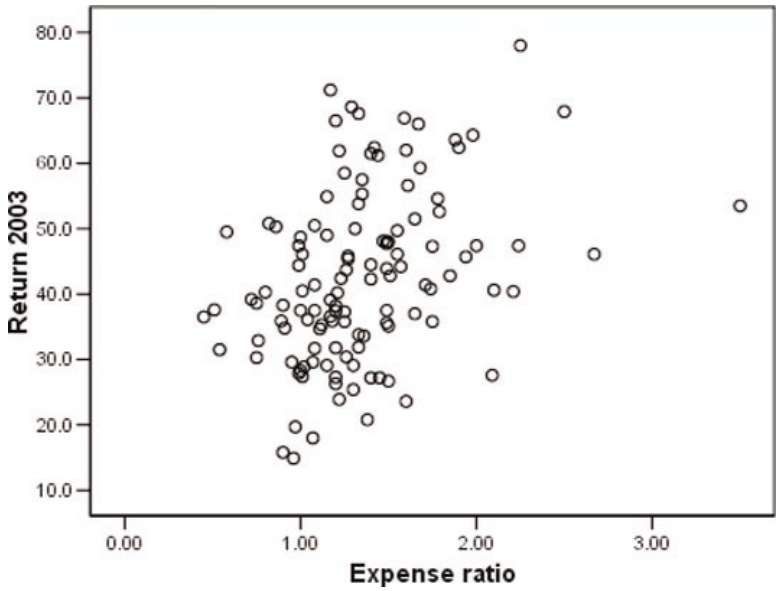

FIGURE A2.32 SPSS Scatter Diagram of Expense Ratio and 2003 Return