Contents

Part I

Financial Risk Measures

Chapter 1

Expected Shortfall

1.1 Other Closely Related Risk Measures

Other closely related risk measures are:

- expected tail loss
- tail conditional expectation (TCE)
- tail VAR
- conditional VAR
- tail conditional VAR
- worst conditional expectation
- and expected shortfall

1.2 Expected Shortfall

For more on ES and its precursors, see Artzner et. al. (1999, p. 223-224), Acerbi (2004). The ES is the average of the worst $100\,(1-\alpha)\,\%$ of losses:

$$ES = \frac{1}{1-\alpha}\int_{\alpha}^{1} q_p dp \tag{1.1}$$