

# Contents

<b>Introduction .....</b>	VII
<b>1. Basic definitions and notation .....</b>	1
1.1. Fixed population approach .....	1
1.2. Model approach .....	6
1.3. Outline of statistical inference in auditing .....	8
<b>2. Compliance tests .....</b>	10
2.1. Testing hypotheses on fraction of accounting errors .....	10
2.2. Verification using an exact test .....	12
2.3. Approximation of the test statistic distribution .....	13
2.4. Bayesian approach .....	18
<b>3. Substantive tests based on basic random samples .....</b>	22
3.1. Testing hypotheses on total accounting amount errors .....	22
3.2. Basic sampling designs and schemes .....	24
3.3. Simple random sample mean .....	28
3.4. Ratio and regression statistics .....	42
3.5. Mean from stratified random sample .....	45
<b>4. Substantive tests based on complex sampling designs .....</b>	54
4.1. Monetary sampling designs .....	54
4.2. Horvitz-Thompson statistic .....	71
4.3. Continuous population approach .....	80
<b>5. Substantive tests based on mixture distributions .....</b>	90
5.1. Model of accounting observations .....	90
5.2. Inference on the basis of the Poisson distribution .....	95
5.3. Model-design approach .....	103
<b>6. Appendix .....</b>	106
6.1. Proofs of theorems or derivations of expressions .....	106
6.2. Computer programs .....	125
<b>Summary in Polish .....</b>	143
<b>References .....</b>	147