
Gevorg Hunanyan

The Consequences of Short-Sale Constraints on the Stability of Financial Markets

With a foreword by Hon.-Prof. Dr. Axel Wieandt and
Dr. Sebastian Moenninghoff

Contents

Introduction	1
1 Portfolio Selection	9
1.1 Prerequisites	9
1.2 Separation theorem	14
1.3 Risk-taking behaviour	21
1.3.1 Restricted short-selling	24
1.3.2 Prohibited short-selling	26
1.4 Default risk	27
2 CAPM Equilibrium	33
2.1 Existence and uniqueness	35
2.2 The case with two investors	37
2.3 The case with three and more investors	42
3 Dynamic Model	45
3.1 Prerequisites	46
3.2 Asset price dynamics	52
3.3 Price volatility	58
4 Security Market Line	61
4.1 Systematic risk	62
4.2 Restricted short-selling	71
4.3 Prohibited short-selling	74
Conclusion	79
Appendix	81
A.1 Mathematical proofs	81
A.2 Minimum-variance portfolio	101
A.3 Primitive expectations	103
A.4 Slutsky decomposition	106
A.5 Elliptical distributions	107

Bibliography

111