



UNIVERSITAS
GADJAH MADA

Bond price sensitivity, duration and convexity
ARDIYANTO, Dimas, Prof.Dr. Eduardus Tandililin, MBA
Universitas Gadjah Mada, 2004 | Diunduh dari <http://etd.repository.ugm.ac.id/>

TABLE OF CONTENT

	Page
Title.....	i
Approval.....	ii
Declaration.....	iii
Preface.....	iv
Table of Content.....	vi
List of Tables.....	ix
List of Figures.....	x
Abstract.....	xi
CHAPTER I INTRODUCTION	1
1.1. Background	1
1.2. Research Problem.....	7
1.3. Research Objectives	7
1.4. Research Benefits	7
CHAPTER II INDONESIAN BOND MARKET.....	8
2.1. Indonesian Bond Market History	8
2.2. Bond Market Outlook.....	10
2.3. Indonesian Bond Market	12
2.3.1. Primary Market	14
2.3.1.. A. Getting Ready to Go Public	16



2.3.1. B. Capital Market Supporting Professions and Institutions for the Go Public Process.....	16
2.3.1. C. Listing on the Exchange	17
2.3.1. D. Listing Fee.....	17
2.3.2. Secondary Market	18
2.3.2. A. Trading System	19
2.3.2. B. Over The Counter - Fixed Income Service	20
2.3.2. C. Indonesian Government Securities Trading System (IGSTS).....	22
2.4. Application of Tax on Bonds Transaction	26
CHAPTER III THEORITICAL REVIEW	28
3.1. Risk Exposure	28
3.2. Measures of Bond Price Volatility	30
3.3. Duration.....	31
3.4. Convexity	35
3.5. Yield-To-Maturity.....	38
3.6. The Previous Studies.....	41
3.7. Hypothesis Analysis.....	44
CHAPTER IV RESEARCH METHOD	46
4.1. Population and Sample.....	47
4.2. Data Collection.....	47
4.3. Variable Definition.....	48
4.4. Technique of Analysis.....	50



UNIVERSITAS GADJAH MADA	4.5. Hypothesis Test.....	52
CHAPTER V RESEARCH FINDINGS AND ANALYSIS.....		54
5.1. Data Analysis	54	
5.2. Measuring Bond Duration and Convexity on Samples.....	55	
5.3. Measuring Bond price Changes with Duration and Convexity Method	56	
5.4. Hypothesis Test and Discussion.....	57	
5.4.1. Hypothesis Test Result.....	57	
5.4.2. Discussion	58	
CHAPTER VI CONCLUSIONS AND RECOMMENDATIONS		63
6.1. Conclusions	63	
6.2. Limitations	63	
6.3. Recommendations	63	
REFERENCES.....	64	
APPENDICES:	67	
1. Calculation of Bonds' Yield-to-Maturity	67	
2. Calculation of Bonds' Duration.....	68	
3. Calculation of Bonds' Convexity	69	
4. Bonds' Yield-to-Maturity, Duration and Convexity.....	92	
5. Calculation of Bonds' Expected and Market Price.....	93	
6. SPSS Output.....	94	



UNIVERSITAS
GADJAH MADA

Bond price sensitivity, duration and convexity
ARDIYANTO, Dimas, Prof.Dr. Eduardus Tandililin, MBA
Universitas Gadjah Mada, 2004 | Diunduh dari <http://etd.repository.ugm.ac.id/>

LIST OF TABLES

	Page
Table 2.1. Statistics Data as of October 2004	13
Table 2.2. Tax Scheme for Bond	27
Table 5.1. Bond Sample, Yield-to-Maturity, Duration and Convexity.....	55
Table 5.2. Measuring Bond price Changes with Duration Along with Convexity Method	56
Table 5.3. SPSS Output - Statistic Test	57
Table 5.4. The Range of Expected and Market price.....	59



UNIVERSITAS
GADJAH MADA

Bond price sensitivity, duration and convexity
ARDIYANTO, Dimas, Prof.Dr. Eduardus Tandililin, MBA
Universitas Gadjah Mada, 2004 | Diunduh dari <http://etd.repository.ugm.ac.id/>

LIST OF FIGURES

	Page
Figure 2.1. Indonesian Bond Trading Scheme.....	14
Figure 2.2. 3 Stages of Process in IPO.....	15
Figure 2.3. Listing Process.....	17
Figure 2.4. Over The Counter – Fixed Income Service Mechanism	22
Figure 2.5. Indonesian Government Securities Trading System Mechanism...	24
Figure 2.6. Indonesian Government Securities Trading System Settlement	25
Figure 3.1. Duration and Convexity.....	35
Figure 3.2. Convexity of Two Bonds.....	37
Figure 3.3. Shape of Price-Yield Relationship for an Option-Free Bond.....	41