

INDEX OF FIGURES	
Figure: 1.1	Total Risk
Figure: 1.2	Risk averter's utility
Figure: 1.3	Risk lover's utility
Figure: 1.4	Risk neutral utility
Figure: 1.5	The efficient frontier
Figure: 1.6	Different optimal portfolios for investor A & B
Figure: 1.7	Positive skew
Figure: 1.8	Negative skew
Figure: 1.9	Kurtosis
Figure: 3.1	BSE Sensex (1980-1990)
Figure: 3.2	BSE Sensex (1990-2005)
Figure: 3.3	NSE Nifty50 (1995-2005)
Figure: 3.4	BSE Sensex (2006-2010)
Figure: 3.5	NSE Nifty50 (2006-2010)
Figure: 3.6	BSE Sensex (2011-2019)
Figure: 3.7	NSE Nifty50 (2011-2019)
Figure: 3.8	BSE Sensex during the various phases of lockdown (January 2020-September 2020)
Figure: 3.9	NSE Nifty50 during the various phases of lockdown (January 2020-September 2020)
Figure: 4.1	Performance of S&P BSE Automobiles sector compared to S&P BSE 500
Figure: 4.2	Performance of S&P BSE Bank sector compared to S&P BSE 500
Figure: 4.3	Performance of S&P BSE Basic materials sector compared to S&P BSE AllCap
Figure: 4.4	Performance of S&P BSE Capital goods sector compared to S&P BSE 500
Figure: 4.5	Performance of S&P BSE Consumer discretionary sector compared to S&P BSE AllCap
Figure: 4.6	Performance of S&P BSE Consumer durables sector compared to S&P BSE 500
Figure: 4.7	Performance of S&P BSE Energy sector compared to S&P BSE AllCap
Figure: 4.8	Performance of S&P BSE Finance sector compared to S&P BSE AllCap
Figure: 4.9	Performance of S&P BSE FMCG sector compared to S&P BSE AllCap
Figure: 4.10	Performance of S&P BSE Healthcare sector compared to S&P BSE AllCap
Figure: 4.11	Performance of S&P BSE Industries sector compared to S&P BSE AllCap
Figure: 4.12	Performance of S&P BSE IT sector compared to S&P BSE AllCap

Figure: 4.13	Performance of S&P BSE Metal sector compared to S&P BSE 500
Figure: 4.14	Performance of S&P BSE Oil & Gas sector compared to S&P BSE 500
Figure: 4.15	Performance of S&P BSE Power sector compared to S&P BSE AllCap
Figure: 4.16	Performance of S&P BSE Realty sector compared to S&P BSE 500
Figure: 4.17	Performance of S&P BSE TECK sector compared to S&P BSE 500
Figure: 4.18	Performance of S&P BSE Telecom sector compared to S&P BSE AllCap
Figure: 4.19	Performance of S&P BSE Utilities sector compared to S&P BSE AllCap
Figure: 4.20	Performance of Commodities Index
Figure: 4.21	Performance of India Consumption Index
Figure: 4.22	Performance of Financial Services Index
Figure: 4.23	Performance of Infrastructure Index
Figure: 4.24	Performance of India Manufacturing Index
Figure: 4.25	Performance of Media Index
Figure: 4.26	Performance of Pharmaceuticals Index
Figure: 4.27	Performance of Private bank Index
Figure: 4.28	Performance of Public Sector Unit bank Index
Figure: 4.29	Performance of Service sector Index
Figure: 5.1	Quartiles
Figure: 5.2	Different kinds of skewness
Figure: 5.3	Different kinds of Kurtosis
Figure: 5.4	Unit root
Figure: 5.5	Clayton Copula
Figure: 5.6	Gumbel Copula
Figure: 5.7	Frank Copula
Figure: 6.1	World Market capitalization
Figure: 6.2	S&P BSE Sensex movement from 2006 to 2020
Figure: 6.3	S&P BSE Sensex returns from 2006 to 2020
Figure: 6.4	NSE Nifty50 movement from 2006 to 2020
Figure: 6.5	NSE Nifty50 returns from 2006 to 2020
Figure: 6.6	Sectoral indices (BSE) movements from 2006 to 2020 ... (1)
Figure: 6.7	Sectoral indices (BSE) movements from 2006 to 2020 ... (2)

Figure: 6.8	Sectoral indices (BSE) returns from 2006 to 2020 ... (1)
Figure: 6.9	Sectoral indices (BSE) returns from 2006 to 2020 ... (2)
Figure: 6.10	Sectoral and thematic indices (NSE) movements from 2006 to 2020
Figure: 6.11	Sectoral and thematic indices (NSE) returns from 2006 to 2020
Figure: 6.12	Beta values - BSE
Figure: 6.13	Beta values - NSE
Figure: 6.14	Standard GARCH graphs (BSE)
Figure: 6.15	Standard GARCH graphs (NSE)
Figure: 6.16	EGARCH graphs (BSE)
Figure: 6.17	EGARCH graphs (NSE)
Figure: 7.1	GJR GARCH graphs (BSE)
Figure: 7.2	GJR GARCH graphs (NSE)
Figure: 7.3	APARCH graphs (BSE)
Figure: 7.4	APARCH graphs (NSE)
Figure: 8.1	Bidirectional causality - S&P BSE Automobile
Figure: 8.2	Bidirectional causality - S&P BSE Consumer discretionary
Figure: 8.3	Bidirectional causality – India Manufacturing index
Figure: 8.4	Bidirectional causality - S&P BSE Basic materials
Figure: 8.5	Bidirectional causality - S&P BSE Utilities
Figure: 8.6	Bidirectional causality - S&P BSE Consumer durables
Figure: 8.7	Bidirectional causality - S&P BSE Finance
Figure: 8.8	Bidirectional causality - Industrials index
Figure: 8.9	T-copula spread (S&P BSE Sensex – S&P BSE Automobiles)
Figure: 8.10	T-copula spread (S&P BSE Sensex – S&P BSE Energy)
Figure: 8.11	T-copula spread (S&P BSE Sensex – S&P BSE Finance)
Figure: 8.12	T-copula spread (S&P BSE Sensex – S&P BSE Bank)
Figure: 8.13	T-copula spread (S&P BSE Sensex – S&P BSE Capital goods)
Figure: 8.14	T-copula spread (S&P BSE Sensex – S&P BSE Metal)
Figure: 8.15	T-copula spread (S&P BSE Sensex – S&P BSE Consumer Discretionary)
Figure: 8.16	T-copula spread (S&P BSE Sensex – S&P BSE Oil & Gas)
Figure: 8.17	T-copula spread (S&P BSE Sensex – S&P BSE Power)

Figure: 8.18	T-copula spread (S&P BSE Sensex – S&P BSE Teck)
Figure: 8.19	T-copula spread (S&P BSE Finance – S&P BSE Capital goods)
Figure: 8.20	T-copula spread (S&P BSE Consumer discretionary G&S – S&P BSE Finance)
Figure: 8.21	T-copula spread (S&P BSE Consumer discretionary G&S – S&P BSE FMCG)
Figure: 8.22	T-copula spread (S&P BSE Consumer discretionary G&S – S&P BSE Automobiles)
Figure: 8.23	T-copula spread (S&P BSE Consumer discretionary G&S – S&P BSE Basic Materials)
Figure: 8.24	T-copula spread (S&P BSE Consumer discretionary G&S – S&P BSE Industrials)
Figure: 8.25	T-copula spread (S&P BSE Consumer discretionary G&S – S&P BSE IT)
Figure: 8.26	T-copula spread (S&P BSE Consumer discretionary G&S – S&P BSE Oil & Gas)
Figure: 8.27	T-copula spread (S&P BSE Consumer discretionary G&S – S&P BSE Teck)
Figure: 8.28	T-copula spread (S&P BSE Consumer discretionary G&S – S&P BSE Bank)
Figure: 8.29	T-copula spread (S&P BSE Finance – S&P BSE Bank)
Figure: 8.30	T-copula spread (S&P BSE Bank – S&P BSE Industrials)
Figure: 8.31	T-copula spread (S&P BSE Bank – S&P BSE Utility)
Figure: 8.32	T-copula spread (S&P BSE Capital goods – S&P BSE Power)
Figure: 8.33	T-copula spread (S&P BSE Industrials – S&P BSE Utilities)
Figure: 8.34	T-copula spread (S&P BSE IT – S&P BSE Teck)
Figure: 8.35	T-copula spread (Nifty50 – Financial Services index)
Figure: 8.36	T-copula spread (Nifty50 – Commodities index)
Figure: 8.37	T-copula spread (Nifty50 – Infrastructure index)
Figure: 8.38	T-copula spread (Nifty50 – India Manufacturing index)
Figure: 8.39	T-copula spread (Nifty50 – India Consumption index)
Figure: 8.40	T-copula spread (Nifty50 – Services sector index)
Figure: 8.41	T-copula spread (Nifty50 – PSU Bank index)
Figure: 8.42	T-copula spread (Financial Services index – India Consumption index)
Figure: 8.43	T-copula spread (Financial Services index – Services sector index)
Figure: 8.44	T-copula spread (Commodities index – PSU bank index)
Figure: 8.45	T-copula spread (Commodities index – India Consumption index)
Figure: 8.46	T-copula spread (Commodities index – Infrastructure index)
Figure: 8.47	T-copula spread (Infrastructure index – India Consumption index)
Figure: 8.48	T-copula spread (India Consumption index – Services sector index)

Figure: 8.49	T-copula spread (India Manufacturing index – Financial services index)
Figure: 8.50	T-copula spread (India Manufacturing index – India Consumption index)
Figure: 8.51	T-copula spread (India Manufacturing index – Private bank index)
Figure: 8.52	T-copula spread (India Manufacturing index – Service sector index)