Part One: The logic of non-rational behaviour in financial markets

1 Wholly individual or indivisibly whole
   Introduction 9; The relationships in nature 10; The break with tradition 10; The conceptual revolution 11; The problem of motivation 11; The dualistic nature of motivation 12; Conclusion 13

2 Two’s a crowd
   Introduction 15; The influence of groups 16; The insights of Gustave Le Bon 16; The group’s ability to organize itself 17; Mind as a dynamic principle 18; The group mind 19; The triune human brain 20; The neocortex 21; The amygdala 22; The response to a threat 22; The ‘intelligence’ of crowd 23

3 The individual in the crowd
   The integrative tendency 26; Identification 26; Beliefs 27; Self-awareness and confirmity enforcement 27; The crowd leader 28; The findings of Stanley Milgram 29; Altruism and conflict 29; Splitting and projection 30; Conclusion 30
4 The systems approach to crowd behaviour
Introduction 33; Non-equilibrium conditions 34; Openness to the environment: the exchange of energy 34; Openness to the environment: the exchange of information 35; The mechanism for transmitting information 35; Feedback loops and the transformation of information 36; Oscillating systems 37; The role of the crowd leader 37; The interrelationship between a crowd and its environment 38; Conclusion 39

5 Cycles in the crowd
Introduction 41; The life cycle 41; Co-evolution 43; Limit cycles 44; Limit cycles through time 45; Limits cycles in nature 46; Multiple limit cycles 47; Multiple cycles in two dimensions 48; The impact of shocks 48; The profile of shocks 49; Shocks in two dimensions 50; Some insights into social change 50

6 Approaches to forecasting crowd behaviour
Introduction 54; Random or non-random 54; Price movements in the Dow 55; Strange attractors 58; Predictable price movements 60; Methods of predicting price movements 60; Economic forecasting 61; Problems with economic forecasting 61; Problems with conceptual framework 62; The rational expectations hypothesis 63; Bubbles and crashes 64; Non-linear mathematics 65; The challenge to economic theory 65; Technical analysis 66; The past and present as a guide to the future 67; The rationale behind technical analysis 67

Part Two: The dynamics of the bull–bear cycle

7 The stock market crowd
Introduction 73; The individual investor 73; The dealing strategy 74; The financial market crowd 74; The influence of emotions 76; The herd instinct 76; The mechanism of price fluctuations 77; The bull–bear life cycle in emotions 78; The objectives of technical analysis 78; The influence of price movements on crowd psychology 79; The contest between the two crowds 79; The influence of prices on behaviour 80; The shift from isolation to belonging 80; The limit cycle between prices and behaviour 81; Beliefs and leadership 82; Individuals as crowd leaders 82; The conditions for effective leadership 83; Investment advisers 83; Conclusion 84
### 8 The shape of the bull–bear cycle
Introduction 87; The limit cycle between prices and sentiment 88; The bias in the limit cycle 89; The influence of ‘external’ factors 90; The limit cycle between equity markets and the economy 91; The influence of shocks 92; Pro-trend shocks 93; Contra-trend shocks and energy gaps 93; Shocks and the limit cycle 94; The return to the limit cycle 95; Practical implications 97; The pattern of adjustment after troughs 97; The reversal process 98; The idealized three-stage reversal pattern 99; The influence of fear 100; The bias in the bull–bear cycle 101; Asymmetric investment attitudes 101; The price pulse 102; The time hierarchy 103; Price–sentiment limit cycles 103; Limit cycles and the transmission of shocks 103; The hierarchy of fluctuations 104; Conclusion 104

### 9 Energy gaps and pro-trend shocks
Introduction 108; Energy gaps 110; Bridging energy gaps 111; Bridging the first energy gaps in financial markets 112; Bridging the second energy gap in financial markets 113; The importance of timing 115; Pro-trend shocks in financial markets 116; Energy gaps and information flows 118; Changes in the quality of information 119; Identifying the shock point 120; The pattern of a trend 120; Conclusion 121

### 10 The spiral and the golden ratio
Introduction 124; The mathematics of the spiral 124; The Fibonacci number sequence 125; Fibonacci’s rabbit problem 126; The Fibonacci sequence and nature 126; The properties of the Fibonacci sequence 127; The important ratios 128; The golden ratio 128; The golden ratio in geometry 128; The golden measure and the human body 129; The golden measure in nature 130; Three terms from two 130; The golden rectangle and the golden ratio 131; The spiral of rectangles 132; The golden spiral 132; Properties of the golden spiral 133; The golden measure and ancient religious insight 134; The ‘laws’ of life 135; Information and the human mind 135; Recognizing information 136; Understanding by analogy 136; Creative insight 137; Self-organizing hierarchies 137; Metaphor and reality 138; Financial market crowds 139; The golden measure and financial markets 140
11 The mathematical basis of price movements 142
Introduction 142; The calculation of price targets 143; The application of the target formula 144; Examples from the UK gilt-edged market 146; additional examples 148; Examples from the US Treasury bond market 151; Conclusion 153

12 The shape of things to come 155
Introduction 155; Examples 155; Price and momentum 158; Momentum examples 159; Imitations of cyclicality 160; Stylized patterns 162; Asymmetry 162; Conclusion 163

Part Three: Forecasting turning points

13 The phenomenon of cycles 167
Introduction 167; The influence of groups 168; Satiation 169; Transformation of energy and information 169; The patterns that connects 170; Tracking the cycle 171; Momentum indices 171; Momentum and the cycle 172; Anticipating inflexion points 173; Velocity and non-confirmation 174; Acceleration and the cycle 175; Conclusion 176

14 The threefold nature of cycles 178
Introduction 178; The 11½-year cycle in the Dow 178; Idealized cycles 181; Comparing the cycles 182; The 11½-year cycle and the panic of 2008 186; Actual cycle timings 188; The four-year cycle in the Dow 189; Triads, dyads and energy gaps 189; The 1987 Crash 190; Confirming the energy gap 193; The Wall Street Crash 193; Cycle characteristics 194; Cycle functions 195; Cycle translation 196; Translations within a triad 196; The influence of higher-level cycles 197; Cycle biases and energy gaps 198; Cycle behavioural traits 199; Behavioural traits in a base cycle 199; Behavioural traits in a trend cycle 200; Behavioural traits in a terminal cycle 200; A schematic for financial markets 201; Limited cycle patterns 202; Conclusion 202

15 Economic cycles 205
Introduction 205; Note on economic theory 206; An integrative view 207; Relationships between economic cycles 208; From Kitchin to Strauss and Howe 208; From
Contents

Strauss and Howe to Kitchin 208; Kuznets and Kondratyev 209; Economic theory and technical analysis 210; Cycle characteristics 211; Biases in cycles 211; An example from history 213; Juglar cycles during the 1946 to 1980 Berry cycle 213; Theory and fact 214; The first cycle 215; The second cycle 215; The third cycle 216; Evolution 217; Labelling the cycles 218; Conclusion 219

16 Recurrence in economic and financial activity 221
Introduction 221; Economic and financial market cycles 221; Searching for cycles 222; The 1866–94 cycle 223; The 1894–1921 cycle 224; The 1921–46 cycle 225; Strauss and Howe meta-cycle 226; The Berry terminal cycle 227; The first Juglar cycle 228; The second Juglar cycle 228; The third Juglar cycle 229; Confirming the 1946 low 229; The 1946–80 Berry adaptation cycle 230; The 1970–80 Juglar cycle 231; The Kitchin triad 231; The post-1980 Berry regeneration cycle 233; The Juglar transition and innovation cycles 234; Kitchin cycles in the Juglar innovation cycle 235; The Juglar disruption cycle 235; Kitchin cycles in the Juglar disruption cycle 237; Conclusion 238

17 Integrating the cycles 240
Introduction 240; Historical schematic 240; Historical experience 242; Survey of the schematic diagram 243; The differing nature of upswings and downswings 245; Using the schematic diagram 246; Disruption vs depression 247; The next Berry crisis cycle 248; Kondratyev cycles 248; The post-1949 Kondratyev cycle 251; Price cycles and output cycles 253; Kondratyev, Berry, and Strauss and Howe 254; Juglar disruption and Berry crisis 255; Conclusion 257

18 Forecasting with cycles 259
Introduction 259; The post-1980 Berry cycle 259; Cycle alignment 260; Sentiment in a Juglar innovation cycle 261; Sentiment in the Juglar disruption cycle 262; Comparisons with previous terminal cycles 263; Comparisons with averages of previous cycles 265; Financial markets and the economy 266; Conclusion 268
Price patterns in financial markets
Introduction 269; Hierarchical trends 269; Markets and fundamental trends 270; Economic cycles, price patterns and price trends 271; The pattern of a trend 271; The five-three wave pattern in complex structures 272; The Elliott wave principle 273; Investment guidelines 274; The buy signal after a low 274; Warning of a bear phase 275; The terminal cycle 276; The location of corrections 277; The strength of a contra-trend rallies 279; Non-confirmation revisited 279; Anticipating turning points 281; The golden ratio formulae 281; Some examples 282; Conclusion 284

The Elliott wave principle
Elliott's discovery 285; The price pulse as the basis of the wave principle 286; The basic wave pattern 286; Corrections 287; A universal phenomenon 287; The wave principle as a natural phenomenon 288; Derived rules: trend indications 288; Derived rules: impulse waves 289; Derived rules: corrections 289; Complications within the system 289; Fifth-wave variations: failures and extension 290; Behaviour following failure or extension 290; Fifth-wave variations: diagonal triangles 292; Variations in corrections: the three-phase A-wave 292; The flat correction 293; Complex corrections 294; Triangles 295; The implications of a triangle 295; Inverted corrections 297; The 'rule of alternation' 297; The problem with the Elliott wave principle 298

Information shocks and corrections
Introduction 301; Information shocks 301; Information shocks and a five-wave trend 302; Shocks and cycles 302; Information shocks and boundaries 305; Corrections and shocks 306; The golden ratio boundaries 308; Technical corrections and fundamental reversals 308; Top retracements 309; Base retracements 311; Corrections and trend reversals 312; The 1987 Crash and the 2000–02 bear 312; Hierarchical structuring 313; Guidelines for calculating boundaries 315; Pro-trend shocks 316; A practical example 318; The base pattern 318; The wave 4 correction 319; The dollar–yen bear market 320; Conclusion 321
22 The confirmation of buy and sell signals
Introduction 323; Investor confidence and price
flucuations 324; Overextended markets and the principle
of non-confirmation 324; Indicators of investor behaviour
325; Volume and open interest 326; The level of volume
327; The level of open interest 327; Sudden changes in
indicators 328; The direction and change in volume and
open interest 328; Changing emotions during the cycle
328; Sharp rises in volume and open interest 329; The
reversal process 329; Volume and open interest during
fifth waves 329; Volume and open interest during re-tests
330; The wider implications of falling open interest 331;
Momentum and overextended markets 333; Momentum
and non-confirmation 333; Measures of momentum 333;
Rates of change 334; Deviations from a moving average
335; The relative strength index (RSI) 336; Momentum
trading rules 337; The directional indicator 337; The
advance–decline index 338; A second price index 339; The
principle of direct confirmation: the Dow theory 339; The
principle of direct confirmation: other indices 343;
Conclusion 343

Part Four: The psychology of trading

23 The psychology of fear
Introduction 349; The subconscious mind 350; The role of
habits 351; The response to a threat 352; Stress 354; The
influence of emotions 355; Beliefs and memories 356;
Conclusion 358

24 The troubled trader
Introduction 361; The three-part mind 362; The
psychological matrix 362; Basic personality types 363;
Primary behavioural characteristics 364; The gut-oriented
personality 365; The heart-oriented personality 366; The
head-oriented personality 366; The chink in the ego’s
armour 367; Basic motivations 367; Avoidance
compulsions 368; Response strategies 369; Some
awkward personal questions 370; The threat from financial
markets 371; Financial markets and personal space 372;
Financial markets and the self-image 372; Financial
markets and fear 373; The emergence of the crowd 374;
Conclusion 374
25  The psychology of success  377
   Introduction 377; Basic requirements 377; Goal-setting 378; Goals for the trader 379; Practical considerations 380; The five aspects of effective goal-setting 381; Converting desires into actual beliefs 383; Visualization 383; Writing down and affirmations 384; Strategy for achieving goals 385; Strategies for traders 386; Method 386; Energy 387; Physical health 387; Mental and emotional health 388; Stress 389; Relaxation techniques 390; Conclusion 391

26  Summary and conclusions  393

Index  397