PIERRE VERNIMMEN

Corporate FINANCE

Theory and Practice

YANN LE FUR

PASCAL QUIRY MAURIZIO DALLOCCHIO ANTONIO SALVI

Contents

Foreword by Richard Roll Preface List of frequently used symbols		xv xvii xxi
	, , ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	^^1
1	What is corporate finance?	
1,1	THE FINANCIAL MANAGER IS FIRST AND FOREMOST A SALESMAN	i
1.2	OF FINANCIAL SECURITIES	4
1.3	VALUED CONTINUOUSLY IN THE FINANCIAL MARKETS	7
1.4	The state of the s	10
1.5	AND HE REMEMBERS TO DO AN OCCASIONAL REALITY CHECK!	11
Se	ction I Financial analysis	15
Par	rt One Fundamental concepts in financial analysis	17
2	Cash flows	19
2.1	OPERATING AND INVESTMENT CYCLES	20
2.2	FINANCIAL RESOURCES	22
3	Earnings	29
3.1	Additions to wealth and deductions to wealth	29
3.2	DIFFERENT INCOME STATEMENT FORMATS	34
4	Capital employed and invested capital	44
4.1	THE BALANCE SHEET: DEFINITIONS AND CONCEPTS	45
4.2	THE CAPITAL-EMPLOYED ANALYSIS OF THE BALANCE SHEET	47
4.3	A SOLVENCY-AND-LIQUIDITY ANALYSIS OF THE BALANCE SHEET	51
4.4	A DETAILED EXAMPLE OF A CAPITAL-EMPLOYED BALANCE SHEET	53
5	Walking through from earnings to cash flow	57
5.1	ANALYSIS OF EARNINGS FROM A CASH FLOW PERSPECTIVE	57
5.2	CASH FLOW STATEMENT	61
6	Getting to grips with consolidated accounts	73
6.1	CONSOLIDATION METHODS	73
6.2	CONSOLIDATION-RELATED ISSUES	80
6.3	TECHNICAL ASPECTS OF CONSOLIDATION	85

7	How to cope with the most complex points in financial accounts	94
7.1	Accruals	95
7.2	CONSTRUCTION CONTRACTS	95
7.3	CONVERTIBLE BONDS AND LOANS	96
7.4	CURRENCY TRANSLATION ADJUSTMENTS	97
7.5	DEFERRED TAX ASSETS AND LIABILITIES	97
7.6	DILUTION PROFIT AND LOSSES	99
7.7	EXCHANGEABLE BONDS	100
7.8	GOODWILL	100
7.9	INTANGIBLE FIXED ASSETS	101
7.10	Inventories	104
7.11	LEASES	106
7.12	MANDATORY CONVERTIBLE BONDS	108
7.13	OFF-BALANCE-SHEET COMMITMENTS	108
7.14	Preference shares	110
7.15	PERPETUAL SUBORDINATED LOANS AND NOTES	111
7.16	Provisions	111
7.17	STOCK OPTIONS .	115
7.18	TANGIBLE FIXED ASSETS	116
7.19	TREASURY SHARES	117
Par	t Two Financial analysis and forecasting	121
8	How to perform a financial analysis	123
8.1	WHAT IS FINANCIAL ANALYSIS?	123
8.2	ECONOMIC ANALYSIS OF COMPANIES	125
8.3	An assessment of a company's accounting policy	137
8.4	STANDARD FINANCIAL ANALYSIS PLAN	138
8.5	THE VARIOUS TECHNIQUES OF FINANCIAL ANALYSIS	139
8.6	RATINGS	142
8.7	Scoring techniques	143
8.8	EXPERT SYSTEMS	144
9	Margin analysis: Structure	155
9.1	HOW OPERATING PROFIT IS FORMED	156
9.2	HOW OPERATING PROFIT IS ALLOCATED	166
9.3	FINANCIAL ASSESSMENT	167
9.4	PRO FORMA INCOME STATEMENTS (INDIVIDUAL AND CONSOLIDATED ACCOUNTS)	172
9.5	CASE STUDY: ERICSSON	172
10	Margin analysis: Risks	178
10.1	How operating leverage works	178
10.2	A MORE REFINED ANALYSIS PROVIDES GREATER INSIGHT	182
10.3	FROM ANALYSIS TO FORECASTING: THE CONCEPT OF NORMATIVE MARGIN	187
10.4	CASE STUDY: ERICSSON	188
11	Working capital and capital expenditures	193
11.1	THE NATURE OF WORKING CAPITAL	193
11.2	WORKING CAPITAL TURNOVER RATIOS	197

11.3	READING BETWEEN THE LINES OF WORKING CAPITAL	201
11.4	Analysing capital expenditures	207
11.5	CASE STUDY: ERICSSON	210
12	Financing	217
12.1	A DYNAMIC ANALYSIS OF THE COMPANY'S FINANCING	218
12.2	A STATIC ANALYSIS OF THE COMPANY'S FINANCING	220
12.3	Case study: Ericsson	227
13	Return on capital employed and return on equity	232
13.1	ANALYSIS OF CORPORATE PROFITABILITY	232
13.2	LEVERAGE EFFECT	234
13.3	USES AND LIMITATIONS OF THE LEVERAGE EFFECT	243
13.4	CASE STUDY: ERICSSON	246
14	Conclusion of financial analysis	252
14.1	SOLVENCY	252
14.2	VALUE CREATION	254
14.3	FINANCIAL ANALYSIS WITHOUT THE RELEVANT ACCOUNTING DOCUMENTS	255
	CASE STUDY: ERICSSON	256
Sec	tion II Investment analysis	259
Part	One Investment decision rules	261
15	The financial markets	263
15.1	THE RISE OF CAPITAL MARKETS	263
15.2	THE FUNCTIONS OF A FINANCIAL SYSTEM	268
15.3	THE RELATIONSHIP BETWEEN BANKS AND COMPANIES	270
	FROM VALUE TO PRICE (1): FINANCIAL COMMUNICATION	271
15.5	FROM VALUE TO PRICE (2): EFFICIENT MARKETS	272
	LIMITATIONS IN THE THEORY OF EFFICIENT MARKETS	277
15.7	INVESTORS' BEHAVIOUR	282
16	The time value of money and Net Present Value (NPV)	290
16.1	CAPITALISATION	290
16.2	Discounting	294
16.3	PRESENT VALUE AND NET PRESENT VALUE OF A FINANCIAL SECURITY	296
16.4	THE NPV DECISION RULE	297
16.5	WHAT DOES NET PRESENT VALUE DEPEND ON?	298
	SOME EXAMPLES OF SIMPLIFICATION OF PRESENT VALUE CALCULATIONS	299
	SPECIAL NPV TOPICS	302
17	The Internal Rate of Return (IRR)	309
	The Internal Rate of Return (IRR) How is internal rate of return determined?	309 309
17.1	• •	
17.1 17.2	HOW IS INTERNAL RATE OF RETURN DETERMINED?	309

18	Incremental cash flows and other investment criteria	327
18.1	THE PREDOMINANCE OF NPV AND THE IMPORTANCE OF IRR	327
18.2	THE MAIN LINES OF REASONING	329
	WHICH CASH FLOWS ARE IMPORTANT?	333
	OTHER INVESTMENT CRITERIA	334
19	Measuring value creation	345
19.1	ACCOUNTING CRITERIA	348
19.2	ECONOMIC CRITERIA	353
19.3	MARKET CRITERIA	357
19.4	PUTTING THINGS INTO PERSPECTIVE	359
20	Risk and investment analysis	367
	A CLOSER LOOK AT RISK	368
20.2	THE CONTRIBUTION OF REAL OPTIONS	373
Par	t Two The risk of securities and the cost of capital	385
21	Risk and return	387
	Sources of risk	387
	RISK AND FLUCTUATION IN THE VALUE OF A SECURITY	389
	TOOLS FOR MEASURING RETURN AND RISK	392
	How diversification reduces risk	394
	PORTFOLIO RISK	396
	MEASURING HOW INDIVIDUAL SECURITIES AFFECT PORTFOLIO RISK:	3/
21.0	THE BETA COEFFICIENT	40
21.7	CHOOSING AMONG SEVERAL RISKY ASSETS AND THE EFFICIENT FRONTIER	405
	CHOOSING BETWEEN SEVERAL RISKY ASSETS AND THE EFFICIENT PROVIDER CHOOSING BETWEEN SEVERAL RISKY ASSETS AND A RISK-FREE ASSET:	70.
21.0	THE CAPITAL MARKET LINE	407
21 0	HOW PORTFOLIO MANAGEMENT WORKS	411
21.,	TION FORTFOLIO MANAGEMENT WORKS	-111
	The cost of equity	419
	RETURN REQUIRED BY INVESTORS: THE CAPM	420
	PROPERTIES OF THE CAPM	424
_	THE LIMITS OF THE CAPM MODEL	425
	MULTIFACTOR MODELS	429
	THE COST OF EQUITY BASED ON HISTORICAL RETURNS	432
22.6	THE COST OF EQUITY BASED ON CURRENT MARKET PRICES	434
22.A	A FORMAL DERIVATION OF THE CAPM	44(
23	From the cost of equity to the cost of capital	443
	THE COST OF CAPITAL AND THE eta OF ASSETS	443
	ALTERNATIVE METHODS FOR ESTIMATING THE COST OF CAPITAL	444
23.3	SOME PRACTICAL APPLICATIONS	450
	CAN CORPORATE MANAGERS INFLUENCE THE COST OF CAPITAL?	453
	COST OF CAPITAL: A LOOK AT THE EVIDENCE	455

24	The term structure of interest rates	
		461
	FIXED INCOME SECURITIES AND RISK	461
	THE DIFFERENT INTEREST RATE CURVES	463
24.3	RELATIONSHIP BETWEEN INTEREST RATES AND MATURITIES	466
	THE STOCHASTIC APPROACH TO MODELLING THE RATE STRUCTURE A FLASHBACK	469
24.5	A FLASHBACK	469
Se	ction III Corporate financial policies	473
		473
	t One Financial securities	475
_	Enterprise value and financial securities	477
	A COMPLETELY DIFFERENT WAY OF LOOKING AT THINGS	477
	DEBT AND EQUITY	478
	OVERVIEW OF HOW TO COMPUTE ENTERPRISE VALUE	480
25.4	VALUATION BY DISCOUNTING FREE CASH FLOWS	480
26.	Debt securities	485
26.1	BASIC CONCEPTS	487
26.2	THE YIELD TO MATURITY	489
26.3	FLOATING RATE BONDS	492
26.4	OTHER DEBT SECURITIES	495
26.5	THE VOLATILITY OF DEBT SECURITIES	499
26.6	DEFAULT RISK AND THE ROLE OF RATING	503
27	Managing net debt	512
	GENERAL FEATURES OF CORPORATE FINANCING	512
	MARKETABLE DEBT SECURITIES	. 517
	BANK DEBT PRODUCTS	520
	LEASING	527
27.5	PROJECT FINANCING	530
	INVESTMENT OF CASH	533
		333
28	Shares	F20
_	BASIC CONCEPTS	538
	PRICE/EARNINGS RATIO	538
	KEY MARKET DATA	545
	ADJUSTING PER-SHARE DATA FOR TECHNICAL FACTORS	548
,	THE STATE DATA FOR TECHNICAL PACTORS	550
20	Ontions	
29	Options	556
	DEFINITION AND THEORETICAL FOUNDATION OF OPTIONS	557
	MECHANISMS USED IN PRICING OPTIONS	559
	ANALYSING OPTIONS	561
	PARAMETERS TO VALUE OPTIONS	56 4
	METHODS FOR PRICING OPTIONS	566
∠y.o	TOOLS FOR MANAGING AN OPTIONS POSITION	570

xiii

30	Hybrid securities	577
	WARRANTS	578
	CONVERTIBLE BONDS	582
	Preference shares	588
30.4	OTHER HYBRID SECURITIES	591
31	Selling securities	601
31.1	GENERAL PRINCIPLES IN THE SALE OF SECURITIES	601
31.2	INITIAL PUBLIC OFFERINGS (IPOS)	607
31.3	CAPITAL INCREASES	613
31.4	BLOCK TRADES OF SHARES	618
31.5	Bonds	620
31.6	CONVERTIBLE AND EXCHANGEABLE BONDS	626
31.7	SYNDICATED LOANS	626
Par	t Two Capital structure policies	635
32	Value and corporate finance	637
_	THE PURPOSE OF FINANCE IS TO CREATE VALUE	637
	VALUE CREATION AND MARKETS IN EQUILIBRIUM	640
32.3	VALUE AND ORGANISATION THEORIES	644
32.4	How can we create value?	650
32.5	VALUE AND TAXATION	651
33	Capital structure and the theory of perfect capital markets	657
	THE EVIDENCE FROM THE REAL WORLD	658
	THE CAPITAL STRUCTURE POLICY IN PERFECT FINANCIAL MARKETS	660
7.6	The tradeoff model	668
	THE BENEFITS OF DEBT	669
	THE COSTS OF DEBT	681
	THE TRADEOFF MODEL	687
	THE CAPITAL STRUCTURE CHOICE: THE ENDESA CASE	695
	De la companya della companya della companya de la companya della	400
35	Debt, equity and options theory	698
	ANALYSING THE FIRM IN LIGHT OF OPTIONS THEORY	699
	CONTRIBUTION OF THE OPTIONS THEORY TO THE VALUATION OF EQUITY	701
	Using options theory to analyse a company's financial decisions	704
35.4	RESOLVING CONFLICTS BETWEEN SHAREHOLDERS AND CREDITORS	708
_	Working out details: The design of the capital structure	716
	THE MAJOR CONCEPTS	717
	COMPETITORS, LIFECYCLE AND OTHER CAPITAL STRUCTURE DETERMINANTS	722
	OTHER FACTORS AFFECTING THE CAPITAL STRUCTURE CHOICE	726
	EFFECTS OF THE FINANCING CHOICE ON ACCOUNTING AND FINANCIAL CRITERIA	729
	WORKING OUT THE DETAILS OF THE CAPITAL STRUCTURE	733
	CAPITAL STRUCTURE POLICIES: A LOOK AT THE EVIDENCE	741
364	CADITAL STRUCTURE RESIGN. THE ALITALIA CASE	747

Pai	t Three Equity capital and dividend policies	753
37	Internal financing: Reinvesting cash flow	755
37.1	REINVESTED CASH FLOW AND THE VALUE OF EQUITY	756
37.2	INTERNAL FINANCING AND THE VARIOUS STAKEHOLDERS	759
37.3	INTERNAL FINANCING AND RETURN CRITERIA	760
38	Returning cash to shareholders: Dividend policies	768
	DIVIDENDS AND MARKET VALUE	768
	DIVIDEND DISTRIBUTION IN PRACTICE	772
	SHARE BUYBACKS	778
38.4	TAXATION OF DIVIDENDS, SHARE BUYBACKS AND CAPITAL REDUCTION	783
39		792
39.1	A DEFINITION OF CAPITAL INCREASE	792
39.2	CAPITAL INCREASES AND FINANCE THEORY	794
	OLD AND NEW SHAREHOLDERS	796
39.4	CAPITAL INCREASES AND FINANCIAL CRITERIA	799
Sec	ction IV Financial management	809
Par	t One Valuation and financial engineering	811
40	Valuation	813
40.1	OVERVIEW OF THE DIFFERENT METHODS	813
	PREMIUMS AND DISCOUNTS	814
40.3	VALUATION BY DISCOUNTED CASH FLOW	818
40.4	MULTIPLE APPROACH OR PEER GROUP COMPARISONS	826
40.5	THE SUM-OF-THE-PARTS METHOD AND RESTATED NET ASSET VALUE (RNAV)	832
	EXAMPLE: VALUATION OF ERICSSON	835
40.7	COMPARISON OF VALUATION METHODS	837
41	Choice of corporate structure	844
	Shareholder structure	844
41.2	INITIAL PUBLIC OFFERINGS (IPOS) AND CORPORATE GOVERNANCE	853
41.3	HOW TO STRENGTHEN CONTROL OVER A COMPANY	857
41.4	FINANCIAL SECURITIES' DISCOUNTS	865
41.5	ORGANISING A DIVERSIFIED GROUP	867
42	Taking control of a company	873
42.1	THE RISE OF MERGERS AND ACQUISITIONS	873
42.2	CHOOSING A NEGOTIATING STRATEGY	877
42.3	TAKING OVER A LISTED EUROPEAN COMPANY	882
43	Mergers and demergers	894
43.1	ALL-SHARE DEALS	894
43.2	THE MECHANICS OF ALL-SHARE TRANSACTIONS	899
43.3	DEMERGERS AND SPLITOFFS	904

44	Leveraged buyouts (LBOs)	912
44.1	LBO STRUCTURES	912
44.2	THE PLAYERS	915
44.3	LBOS AND FINANCIAL THEORY	920
45	Bankruptcy and restructuring	923
+5.1	CAUSES OF BANKRUPTCY	923
45.2	BANKRUPTCY AND FINANCIAL THEORY	928
45.3	An illustrative example of financial restructuring	931
Par	t Two Managing net debt and financial risks	937
46	Managing cash flows	939
46.1	BASIC TENETS	939
46.2	CASH MANAGEMENT	942
46.3	CASH MANAGEMENT WITHIN A GROUP	947
46.4	INVESTMENT OF CASH	951
47	Asset-based financing .	956
47.1	REASONS FOR USING ASSET-BASED FINANCING	956
47.2	MAIN TECHNIQUES	958
47.3	ACCOUNTING TREATMENT	964
47.4	CONSEQUENCES FOR FINANCIAL ANALYSIS	968
48	Managing financial risks	972
48.1	THE VARIOUS SOURCES OF FINANCIAL RISK	972
48.2	MEASURING FINANCIAL RISKS	973
48.3	PRINCIPLES OF FINANCIAL RISK MANAGEMENT	975
48.4	ORGANISED MARKETS-OTC MARKETS	985
Glos	sarv	992
Inde	Index	
Vernimmen.com		1031
Cribsheet		1032