Fundamentals of Entrepreneurial Finance

MARCO DA RIN AND THOMAS HELLMANN



Contents

I.	Int	roduction to Entrepreneurial Finance	1
	1.1	What Is Entrepreneurial Finance?	1
		Why Is Entrepreneurial Finance Challenging?	5
		Why Is Entrepreneurial Finance Important?	6
		Key Facts about Entrepreneurial Finance	10
	1.5	The Entrepreneurial Financing Process	16
		1.5.1 The Need for Frameworks	16
		1.5.2 The FIRE Framework	16
		1.5.3 FIRE in Practice	24
	1.6	Who Are the Investors?	26
		1.6.1 Main Types of Investors	26
		1.6.2 The FUEL Framework	28
	Sur	nmary	32
	Rev	view Questions	33
2.	Eva	aluating Venture Opportunities	35
	2.1	Assessing Opportunities	35
		2.1.1 The Venture Evaluation Matrix	36
		2.1.2 The WorkHorse Case Study	38
	2.2	Explaining the Venture Evaluation Matrix	39
		2.2.1 Need	40
		2.2.2 Solution	41
		2.2.3 Team	45
		2.2.4 Market	49
		2.2.5 Competition	53
		2.2.6 Network	57
		2.2.7 Sales	60
		2.2.8 Production	62
		2.2.9 Organization	64
	2.3	Drawing Conclusions from the Venture Evaluation Matrix	66
		2.3.1 Three Perspectives on Attractiveness	67
		2.3.2 Three Competitive Advantages	67
		2.3.3 Assessing Risk	69
		2.3.4 Interactions Across Cells	69
	2.4	How Entrepreneurs Use the Venture Evaluation Matrix	70
		2.4.1 The Entrepreneur's Decision	70
		2.4.2 Writing a Business Plan	72
	2.5	How Investors Use the Venture Evaluation Matrix	76
		2.5.1 The Venture Evaluation Matrix Spreadsheet Tool	77
		2.5.2 Investor Due Diligence	79
		2.5.3 The Investor's Decision	83
	Sur	nmary	85
		view Ouestions	86

xxii contents

3	The	e Financial Plan	89
	3.1	The Purpose of the Financial Plan	89
	3.2	Financial Projections	90
		3.2.1 The Three Reflections	90
		3.2.2 The Structure of Financial Projections	92
		3.2.3 Sources of Information	93
		3.2.4 Developing Financial Projections	94
	3.3	Defining A Timeline with Milestones	94
	3.4	Estimating Revenues	97
		3.4.1 The Top-Down Approach	97
		3.4.2 The Bottom-Up Approach	99
		3.4.3 Combining Approaches	100
	3.5	Estimating Costs	102
		3.5.1 Terminology	102
		3.5.2 Costs of Goods Sold	103
		3.5.3 Operating Expenses	105
		3.5.4 Capital Expenditures	107
	3.6	Pro Forma Financial Statements	107
		3.6.1 The Structure of Financial Statements	107
		3.6.2 Interpreting Financial Projections	109
		3.6.3 Income Versus Cash Flows	113
		3.6.4 Testing financial projections	117
		3.6.5 Simplifications	117
	3.7	Formulating the financial plan	118
		3.7.1 The Attractiveness of he Venture	118
		3.7.2 Financing Needs	120
		3.7.3 Pitching the Financial Plan	124
	Sur	nmary	127
	Rev	view questions	128
4.	Ow	vnership and Returns	131
	4.1	The Mechanics of Ownership and Valuation	131
		4.1.1 Pre-Money and Post-Money Valuation	131
		4.1.2 Price and Number of Shares	134
		4.1.3 Stock Options	137
		4.1.4 The Capitalization Table	139
		4.1.5 Dilution with Multiple Rounds	141
	4.2	Investor Returns	145
		4.2.1 Risk and Return	145
		4.2.2 Three Measures of Return	147
		4.2.3 Comparing Return Measures	150
		4.2.4 Returns with Multiple Rounds	154
	4.3	The Determinants of Valuation And Returns	156
		4.3.1 The Relationship Between Valuation and Returns	156
		4.3.2 The Economic Determinants of Valuation	158
	4.4	The Determinants of Founder Ownership	162
		4.4.1 Founder Agreements	162
		4.4.2 Principles for Internal Allocation	163
		4.4.3 The FAST Tool	166
	Sur	nmary	173
		view Questions	173

CONTENTS	xxiii	

5.	Val	uation Methods	177
	5.1	The Valuation of Entrepreneurial Companies	177
		5.1.1 The Purpose of Performing a Valuation	177
		5.1.2 The Challenges of Performing a Valuation	178
	5.2	The Venture Capital Method	180
		5.2.1 Valuation with a Single Investment Round	180
		5.2.2 Valuation with Multiple Investment Rounds	182
		5.2.3 Estimating the Inputs	184
		5.2.4 Model Variants	189
	5.3	The Discounted Cash Flow Method	190
		5.3.1 The Mechanics of the DCF Method	191
		5.3.2 Estimating the Inputs	192
	5.4	Methods of Comparables	195
		5.4.1 The Investment Comparables Method	195
		5.4.2 The Exit Comparables Method	197
	5.5	Modelling Uncertainty	204
		5.5.1 Scenario Analysis and Simulations	205
		5.5.2 PROFEX	208
	5.6	The Choice of Valuation Model	210
		nmary	211
	Rev	riew Questions	212
6.	Ter	m Sheets	215
	6.1	Term Sheet Fundamentals	215
		6.1.1 The Role of Term Sheets	215
		6.1.2 Contingent Contracting and Milestones	218
		6.1.3 Overview of Terms	221
	6.2	Cash Flow Rights	222
		6.2.1 Convertible Preferred Stock	223
		6.2.2 Participating Preferred Stock	228
		6.2.3 Reasons for Using Preferred Stock	231
	6.3	Compensation	234
		6.3.1 Founder Employment Agreements	234
		6.3.2 Employee Stock Option Plans	237
	6.4	An Overview of Other Terms	238
		6.4.1 Control Rights	238
		6.4.2 Future Fundraising	239
		6.4.3 Investor Liquidity	240
		6.4.4 Additional Clauses	243
	6.5	Valuation Versus Terms	246
	6.6	Convertible Notes	250
		6.6.1 How Convertible Notes Work	250
		6.6.2 Valuation Caps	252
	Summary		255
	Review Questions		255
7.	Stru	ucturing Deals	259
		The Art of Structuring Deals	259
		The Fundraising Process	261
		7.2.1 Preparing the Fundraising Campaign	261

xxiv contents

	7.2.2 Executing the Fundraising Campaign	262
	7.2.3 Valuing an Idea	265
	7.3 Finding a Match	267
	7.3.1 Investor Deal Sourcing	267
	7.3.2 Investor Screening	268
	7.3.3 The MATCH Tool	269
	7.4 Syndication	271
	7.4.1 Reasons to Syndicate	271
	7.4.2 The Structure of Syndicates	273
	7.5 Deal Negotiations	274
	7.5.1 Bargaining Theory	274
	7.5.2 Negotiation Analysis	277
	7.5.3 Closing the Deal	279
	7.5.4 Deal Negotiations with Investor Competition	286
	7.6 Living With The Deal	288
	7.6.1 The Importance of Trust	288
	7.6.2 A Long-Term Perspective	289
	Summary	293
	Review Questions	294
8.	Corporate Governance	297
	8.1 The Need for Corporate Governance	297
	8.1.1 Why Companies Need Investor Involvement	298
	8.1.2 Why Investors Oversee Their Companies	298
	8.2 Corporate Governance Structures	301
	8.2.1 Voting Rights	301
	8.2.2 Board Of Directors	302
	8.2.3 Informal Control	305
	8.3 Investor Value-Adding	307
	8.3.1 Picking versus Making Winners	307
	8.3.2 How Investors Add Value	309
	8.3.3 Where Investors Add Value	312
	8.3.4 The Question of Replacing Managers	315
	8.3.5 Assessing Value-Adding Fit	319
	Summary	321
	Review Questions	321
9.	Staged Financing	325
	9.1 The Rationale for Staged Financing	325
	9.2 Structuring Staged Financing Deals	330
	9.2.1 Staged Investments and Ownership	330
	9.2.2 The Option Value of Staging	333
	9.2.3 Tranching	338
	9.2.4 Old versus New Investors	341
	9.3 Term Sheets for Staging	347
	9.3.1 The Liquidation Stack	347
	9.3.2 Anti-dilution Rights	350
	9.3.3 Additional Rights	357
	9.4 Managing Financial Difficulties	361
	9.4.1 Down Rounds	362
	9.4.2 Turnarounds	363

	Oynamic Strategies .5.1 Dynamic Investment Strategies	366 366
	.5.2 Dynamic Valuation Profiles	368
Sumr	•	369
	ew Questions	370
ICCVIC	w Questions	
10. Deb	t Financing	373
10.1	Fundamentals of Debt	373
	10.1.1 What Is Debt?	373
	10.1.2 The Structure of Debt Contracts	375
10.2	Debt versus Equity	378
	10.2.1 The Fallacy That Debt Is Cheaper Than Equity	378
	10.2.2 Comparing Debt and Equity	383
10.3	Why Banks Don't Lend to Start-ups	385
10.4	Alternative Types of Debt	390
	10.4.1 Personal Loans and Credit Cards	390
	10.4.2 Trade Credit	392
	10.4.3 Discounting and Factoring	393
	10.4.4 Venture Leasing	397
	10.4.5 Venture Debt	398
10.5	Valuation with Debt	403
	10.5.1 Enterprise versus Equity Value	403
	10.5.2 Adjusting Valuation Methods for Debt	404
Sumr	mary	408
Revie	w Questions	408
11. Exit		411
11.1	The Importance of Exiting Investments	411
	11.1.1 Reasons for Exit	412
	11.1.2 The Four Main Types of Exit	413
	11.1.3 The Exit Decision	416
	11.1.4 The Timing of Exit	417
11.2	Initial Public Offerings	419
	11.2.1 Benefits and Costs	420
	11.2.2 Preparing for an IPO	421
	11.2.3 Pricing the IPO	424
	11.2.4 Structuring the IPO	425
	11.2.5 After the IPO	428
11.3	Acquisitions	432
	11.3.1 Strategic Motives	432
	11.3.2 Preparing for an Acquisition	434
	11.3.3 Structuring an Acquisition	435
	11.3.4 After the Acquisition	437
11.4	Sale To Financial Buyers	440
	11.4.1 Buyouts	440
	11.4.2 Secondary Sales	441
	Closing Down the Company	444
11.6	Determinants of the Exit Decision	446
	11.6.1 Market Forces	446
	11.6.2 Economic Fundamentals	449
	11.6.3 Internal Company Dynamics	451

xxvi contents

	Sumn	nary w Questions	456 456
12.		ure Capital	461
		The Venture Capital Model	461
	12.2	Institutional Investors (LPs)	463
		12.2.1 Portfolio Allocation Choices	465
		12.2.2 Building a VC Portfolio	467
	12.3	Limited Partnership Agreements	469
		12.3.1 Fund Structure	470
		12.3.2 Fund Rules	472
		12.3.3 GP Compensation	473
	12.4	12.3.4 GP Incentives	476
	12.4	VC Firms (GPs)	477
		12.4.1 Internal Structure	477
		12.4.2 Fundraising	480
		12.4.3 Networks	480
	12 5	12.4.4 Alternatives to the Partnership Model	481
	12.5	Investment Strategies	482 482
		12.5.1 The Investment Strategy	
		12.5.2 Investment Strategy Styles	486 487
		12.5.3 Implementing the Investment Strategy12.5.4 An Example	489
	126	Risk And Return in VC	493
	12.0	12.6.1 Gross Returns to the VC Fund	493
		12.6.2 Net Returns to Limited Partners	495
		12.6.3 Assessing VC Fund Performance	498
	Sumn	_	502
		w Questions	502
l3.	Early	<i>y</i> -Stage Investors	507
	13.1	Founders, Family, and Friends	507
		13.1.1 Reasons for Investing	507
		13.1.2 How Family and Friends Invest	509
	13.2	Angel Investors	510
		13.2.1 Different Types of Angel Investors	510
		13.2.2 How Angels Invest	512
	13.3	Corporate Investors	513
		13.3.1 The Motivation of Corporate Investors	514
		13.3.2 The Structure of Corporate Investors	519
		13.3.3 How Corporates Invest	522
	13.4	Crowdfunding	524
		13.4.1 The Structure of Crowdfunding Platforms	524
		13.4.2 Motivations in Crowdfunding	526
		13.4.3 Crowdfunding Campaigns	528
		13.4.4 Returns from Crowdfunding	530
	13.5	Initial Coin Offerings	531
		13.5.1 The Blockchain and Cryptocurrencies	531
		13.5.2 The Structure of Initial Coin Offerings	534
		13.5.3 The Current Debate About Initial Coin Offerings	536

CONTENTS	xxvii	

13.6 Further Investor Types	539
13.6.1 Accelerators and Incubators	539
13.6.2 Technology Transfer Funds	540
13.6.3 Social Impact Venture Investors	541
13.7 Comparing Early-Stage Investors	542
Summary	548
Review Questions	548
14. Ecosystems	553
14.1 Entrepreneurial Ecosystems	553
14.1.1 Ecosystem Structure	554
14.1.2 Overview of Leading Ecosystems	557
14.2 How Do Entrepreneurial Ecosystems Work?	561
14.2.1 Interactions Within the Talent Pool	561
14.2.2 Interactions with Investors	563
14.2.3 Interactions with Supporting Parties	565
14.3 The Role of Government	566
14.3.1 Should the Government Support Entrepreneurial Ecosystems?	567
14.3.2 Government Funding	569
14.3.3 Tax Credits	571
14.3.4 Capital Markets	573
14.3.5 Framework Conditions	573
14.3.6 Demand Side Policies	574
14.4 Global Ecosystems	576
14.4.1 The Global Movement of Capital	576
14.4.2 The Global Movement of Talent	579
Summary	581
Review Questions	582
Bibliography	585
Index	617