Table of Contents

Editors							V
Contrib	outors						vii
-	1						
Forewo							
Sandra	Ro						xxix
Preface							xxxi
Pleiace							лллі
List of	Abbre	viatio	ns				xxxiii
Contractor	- 1						
CHAPTE		ות	1 1				
Unders		0	скспа	n			1
Jake va							1
§1.01		oductic					1
§1.02	Core	Conce	-				2
	[A]	Reco	rd-Ke	eping		2	2
	[B]	How	Com	outers Encode Data			3
	[C]	How	Com	outers Store Large Numbers			4
	[D]	Com	puter	Programming			6
		[1]	Varia	ables			6
		[2]	Cont	rol Structures			7
		[3]		Structures			8
		[-]	[a]	The Array			9
			[b]	The Linked List			9
		[4]	Synt				10
		[5]	-	n Program Code to Machine Cod	ρ		10
§1.03	The			s of Blockchain	C		10
81.02							11
	[A]			Function			
	[B]			ographic Hash Function			13
		[1]	The	'Always the Same' Property			13

	[2] The 'Digital Signature' Property	13
	[3] The 'No Reverse Engineering' Property	14
	[C] The Hash List	15
	[D] The Merkle Tree	16
	[E] Public-Private Key Encryption	17
§1.04	Database Concepts	20
	[A] Database Operations	22
	[B] A Transaction Log Distinguished from a Database	22
	[C] Database Transactions: The ACID Properties	23
§1.05	Networking Fundamentals	24
	[A] P2P Networks	24
§1.06	Core Blockchain Functionality	25
	[A] Tying Blocks Together to Prevent Tampering	26
	[B] Adding a Time Cost	27
	[1] The Nonce	28
	[2] The Probabilities of Generating a Particular Hash Value	28
	[a]. Randomness	28
	[b] Sample Space	28
	[3] Not Replacing Generated Events	29
	[4] A Cryptographic Hash Function Behaves Like a Random	
	Variable	30
	[5] Requiring a Hash Value Below a Certain Value	31
	[C] The Proof of Work Process	31
§1.07	Transactions on the Bitcoin Blockchain	32
	[A] Bitcoin Scripting	33
	[B] Entitlement Tracking	33
	[C] The UTXO Database	34
§1.08	The Distributed Blockchain	34
	[A] The Bitcoin Network	34
	[B] The Memory Pool	36
	[C] Adding a Mined Block	36
	[D] The Double Spending Problem	37
	[E] The Mining Reward	38
	[F] Mining Pools	38
	[G] The 51% Attack	39
§1.09	Blockchain Forks	40
	[A] The Soft Fork	40
	[B] The Hard Fork	40
§1.10	Blockchain as a Platform	41
	[A] Ethereum	41
	[1] Gas: Limiting How Long a Program Can Run	42
	[2] An Ethereum Transaction	43
	[3] Ethereum Transaction Account Types	44
	[a] The EOA	44
	[b] The Contract Account	44

		[4]	The Ethereum Virtual Machine	44
§1.11	Smar	t Cont	racts	45
U	[A]	Progr	amming Smart Contracts	46
	[B]	Oracl	es	46
	[C]	Decer	ntralized Applications	47
§1.12	Toke	ns on	the Blockchain	48
	[A]	The E	ERC-20 Token Standard	48
	[B]	Crow	dfunding on the Blockchain	49
		[1]	Initial Coin Offerings	49
		[2]	Token Generation Events	50
		[3]	Initial Exchange Offerings	51
		[4]	Security Token Offerings	51
		[5]	A Note on Token Fungibility	51
§1.13	Bitco	in and	Ethereum Governance	52
	[A]	The E	Bitcoin Governance Process	52
		[1]	Bitcoin Improvement Proposals	53
		[2]	Segwit	54
	[B]	Ether	eum Governance	55
	[C]	Off-C	hain and On-Chain Governances	55
§1.14	Movi	ng Bey	vond Ethereum	 55
	[A]	Publi	c (Permissionless) Blockchains	56
	[B]	Priva	te (Permissioned) Blockchains	56
	[C]	Distri	buted Ledger Technologies	56
§1.15			System Consensus Theory	57
	[A]	-	nronous Versus Asynchronous Processes	57
	[B]		LP Impossibility Result	57
	[C]		ensus Mechanism Properties	58
		[1]	The CAP Theorem	58
§1.16			and Consensus Approaches	59
	[A]		ntine Fault Tolerance (BFT)-Based Networks	59
		[1]	Ripple	60
		[2]	Stellar	62
	[B]		of Stake-Based Networks	62
	[0]	[1]	Peercoin	62
	[C]	-	ated Proof of Stake-Based Networks	63
		[1]	BitShares	64
	[D]		ted Acyclic Graph-Based Networks	64
		[1]	Graph Basics	64
			Using a DAG as a Ledger IOTA	65 66
§1.17	Entor		Blockchain Platforms	67
91.17		-		67
	[A]	[1]	rledger Fabric	68
		[1]	Sawtooth	68
			Proof of Elapsed Time Consensus	68
		[3]	riou of hapsed rime consensus	00

		[4]	Transaction Families	70
§1.18	Scalir	ng the	Blockchain	70
	[A]	Share	ling	70
	[B]	Sideo	chains	71
		[1]	The Lightning Network	72
	[C]	Mult	ilayer Blockchains	74
§1.19	Block	kchain	as a Service	75
Further	Readi	ng		75
Снартен	x 2			
Blockcl	nain ar	nd Inf	ormation Security	
Dave H	irsch			77
§2.01	Risks		Vulnerabilities	78
	[A]	Priva	ate Keys: A Single Point of Failure	81
		[1]	Lost Private Keys Typically Means a Total Loss of Bitcoins	0.1
			Held at the Associated Public Key Address	81
			[a] Legal Implications of Lost Private Keys	83
			[b] Policy Considerations	84
		[2]	Death: Risks Associated with Digital Asset Inheritance	85
			[a] Legal Implications of Dying Without a Plan to	0.0
			Transfer Private Keys	86
			[b] Policy Implications	86
		[3]	Stolen Keys: Beware of Hacking, Malware, and	0.0
			Man-in-the-Middle Attacks	86
			[a] Legal Implications	89
			[b] Policy Considerations	90
		[4]	Compromised Keys: Digital Assets Are Only as Secure as	00
			the Keys That Control Them	90
			[a] Legal Implications	92
		(- 1	[b] Policy Implications	92
		[5]	Kidnapping Seeking Digital Assets: The Intersection of	02
			Physical and Information Security	93 96
			[a] Legal Implications of Kidnapping for Ransom	96 97
		[7]	[b] Policy Implications	97
		[6]	SIM Swapping: Exploiting Vulnerabilities in Digital	00
			Identities	98 102
			[a] Legal Implications of SIM Swaps	102 103
	[D]	D'	[b] Policy Implications	105
	[B]	0	tal Asset Exchanges and Third-Party Services: Different	103
			es, Different Risks	103
		[1]	Digital Asset Exchanges: Hacks Happen	104
			[a] Legal Implications	106
		[2]	[b] Policy Implications Reliance on Third Partics: Exit Scame Happen	107
		[2]	Reliance on Third Parties: Exit Scams Happen	
			[a] Legal Implications	110

			[b] Policy Implications	111
		[3]	Third-Party Exploits: Trust Misplaced	112
			[a] Legal Implications	115
			[b] Policy Implications	116
§2.02	Tools	and M	Methods to Address Risks	118
3=	[A]	Indiv	idual Options for Protecting Digital Assets	118
		[1]	Paper Wallets	118
		[2]	Hardware Wallets	119
		[3]	Multi-sig Wallets	120
	[B]	Outso	ourcing Security: Custodians	120
Further	Readi	ng		120
CHAPTER	3			
Blockch		-	on	
Thomas	Richte	er		123
§3.01	Defin	ing Bl	ockchain for Regulation Purposes	123
1314	[A]	Back	ground: The 'Legal Factor'	123
	[B]	The N	Meaning of 'Blockchain' in the Context of Regulation	125
		[1]	The Relevance of a Legal Definition	125
		[2]	Various Organizational Forms of Blockchains	126
		[3]	Legal Relevance of the Blockchain Protocol	129
		[4]	Inherent Characteristics of Blockchains and Their Legal	
			Implications	131
		[5]	Summary	132
	[C]	The N	Meaning of 'Regulation' in the Context of Blockchain	133
		[1]	Which Kind of Regulation Can Be Relevant for	
			Blockchains?	133
		[2]	Which Legal Subjects Can Be Relevant for Blockchains?	135
		[3]	'Code Is Law' and 'Code As Law'	136
		[4]	Summary	138
§3.02	Regul	latory	Challenges	139
	[A]	Decer	ntralization as Key Challenge	139
	[B] ·	Jurisc	liction	139
	[C]	Anon	ymity	140
§3.03	Regul	latory	Concepts	141
	[A]	The F	Regulatory Principle of Technology Neutrality	142
	[B]	Regul	ating the Use Case Versus Regulating the Technology	144
	[C]	Regul	atory Sandboxing	145
§3.04	Regul	latory	Actors	146
	[A]	Gove	rnments and Law Makers	146
	[B]	Regul	atory Authorities and Enforcement Agencies	147
	[C]	Court	S	147
	[D]	Interr	national and European Bodies and National Banks	148
§3.05	Addre		of Regulation	149
	[A]	Addre	essing 'the Blockchain' as Subject of Regulation	149

	, ,		149
	0,	rrangements and	
			150
	[3] Decentralized Autonomous Organiz	ations as a New	
	Corporate Form		150
	[4] Summary		152
[B]	Addressing Blockchain Actors as Subjects	of Regulation	152
	[1] Validation Nodes ('Nodes')		152
	[2] Mining Nodes ('Miners')		154
	[3] Blockchain Users		154
	[4] Coders		155
Exai	nples of Specific Blockchain Regulation		155
[A]	United States		155
[B]	Outside of the US		159
[C]	Definition and Summary		160
Outl	ook: Financial Services Prudential Regulation	n	160
Sum	mary		161
er Read	ng		161
er 4			
chain a	nd Smart Contracts		
Trillmi	ch, Matthias Goetz & Chris Ewing		163
Terr	inology and Characteristics: What Is a Sma	art Contract?	163
[A]			163
[B]		ract'	164
	Exan [A] [B] [C] Outlo Summer Readi er Readi rer 4 chain an <i>Trillmio</i> [A]	Services Act 2018 [3] Decentralized Autonomous Organize Corporate Form [4] Summary [B] Addressing Blockchain Actors as Subjects [1] Validation Nodes ('Nodes') [2] Mining Nodes ('Miners') [3] Blockchain Users [4] Coders Examples of Specific Blockchain Regulation [A] United States [B] Outside of the US [C] Definition and Summary Outlook: Financial Services Prudential Regulation Summary er Reading FER 4 chain and Smart Contracts <i>Trillmich, Matthias Goetz & Chris Ewing</i> Terminology and Characteristics: What Is a Sma [A] History of the Term 'Smart Contract'	 [2] The Malta Innovative Technology Arrangements and Services Act 2018 [3] Decentralized Autonomous Organizations as a New Corporate Form [4] Summary [B] Addressing Blockchain Actors as Subjects of Regulation [1] Validation Nodes ('Nodes') [2] Mining Nodes ('Miners') [3] Blockchain Users [4] Coders Examples of Specific Blockchain Regulation [A] United States [B] Outside of the US [C] Definition and Summary Outlook: Financial Services Prudential Regulation Summary Er 4 chain and Smart Contracts Trillmich, Matthias Goetz & Chris Ewing Terminology and Characteristics: What Is a Smart Contract? [A] History of the Term 'Smart Contract'

- [C] Terminology
 - [1] The Meaning of the Term 'Smart' in Smart Contract 165
 - [2] What Does the Term 'Contract' Mean in Smart Contract? 165

165

166

167

169

169

170

171

173

174

175

176

176

177

177

178

181

182

- [3] The Attempt to Develop a Definition
- [D] Characteristics of 'Smart Contracts' as an Application of a Blockchain

§4.02 Fields of Application

[A] Legal Profession[B] Insurance Industry[C] Music Industry/Media industry

[D] Energy Supply Industry

- [E] Internet of Things
- [F] Sharing Economy

§4.03 Contract Law Issues

- [A] Applicable Law Versus 'Code in Law'[B] Formation of a Smart Contract
 - [1] Contracting Parties
 - [2] Form Requirements
 - [3] Offer and Acceptance
 - [C] Regulatory Issues and Smart Contracts

	[D]	Consumer-Protection Laws and Smart Contracts	182
	נטן	[1] EU Directive 2011/83/EU	182
		[2] Unfair Standard Terms	183
	[E]	Interpretation of Smart Contracts and Their Terms	184
	[E]	Performance and Remedies	186
§4.04	Outlo		188
34.01	[A]	Benefits, Opportunities and Limitations of Smart Contracts	188
	[B]	Use of Smart Contracts in the Future	191
Further		ng	192
-	F		
CHAPTER		nd Data Privacy	
		t, Lothar Determann & William Long	193
§5.01		duction and Executive Summary	193
§5.02		onal Data in the Context of the GDPR	194
35.02	[A]	Definition of Personal Data in the Context of a Blockchain	194
	[]	[1] Public Keys	195
		[2] Transactional Data	197
	[B]	How Is Personal Data Processed on a Blockchain?	198
	[C]	Application of the GDPR to the Blockchain	199
§5.03		ifying Controllers and Processors in a Blockchain Environment	
0		r the GDPR	201
	[A]	Definition of Controller and Processor	201
	[B]	Legal Status of Participants of a Blockchain Network	201
		[1] Static Number of Roles and Responsibilities	201
		[2] Miners	203
		[3] Nodes	205
		[4] Wallets	206
		[5] Users of a Blockchain	206
		[6] Developer of Smart Contracts	208
		[7] Oracles	209
		[8] Governance Bodies and Joint-/Co-controllership	210
	[C]	Frictions Between Controllership and Obligations under the	
		GDPR	211
§5.04	Lega	Basis and Consent under the GDPR	212
	[A]	Contractual Necessity	214
	[B]	Consent	214
	[C]	Legitimate Interest	216
	[D]	Compliance with a Legal Obligation	217
1.2	[E]	Special Categories of Personal Data	218
§5.05		rity of Data Processing on a Blockchain in the Context of the	
	GDP		218
	[A]	Personal Data Versus Anonymous Data	218
	[B]	Particular Security Techniques	218
		[1] Encryption	219

		[2] Hashing[3] Multi-layered Blockchains	219
		[3] Multi-layered Blockchains[4] Storing Personal Data Off-Chain	220
	[C]	Principles of Purpose Limitation and Data Minimization	220
	[0]	[1] Purpose Limitation	221 221
		[2] Data Minimization	221
		[3] Evaluation in the Light of the Principles of Purpose	225
		Limitation and Data Minimization: Multi-layered	
		Blockchains Versus Off-Chain Storage	223
	[D]	Recommendation for Security Measures in a Blockchain	223
		Environment	225
	[E]	Implications in the Case of Security Breaches	225
§5.06	Data	Subject Rights under the GDPR	226
	[A]	How Do Data Subject Rights Apply to the Blockchain?	226
	[B]	Right to Access Personal Data	227
	[C]	Right to Rectification	228
	[D]	Right to Erasure	229
		[1] What Does Erasure Mean?	229
		[2] The Techniques to Erase Data	230
		[3] Public Keys/Identifiers of Blockchain Users	232
§5.07		untability Principles under the GDPR	233
	[A]	Lawfulness, Fairness and Transparency	234
	[B]	Purpose Limitation, Data Minimization and Storage Limitation	235
	[C]	Use of Data Privacy Impact Assessment	236
	[D]	Data Protection by Design and Default	237
	[E]	Record of Processing Activities	240
	[F]	Appointment of a DPO	240
§5.08		national Data Transfers on a Blockchain under the GDPR	241
§5.09	Outlo		243
§5.10		chain and US Privacy Law	243
	[A]	US Privacy Law Versus EU Data Protection Regulation	244
	[B]	Federal and State Law	249
	[C]	Diverse Terminology	249
	[D]	General and Specific US Privacy Laws applied to Blockchain	250
		[1] General US Privacy Laws	250
	[17]	[2] Specific US Privacy Laws	252
	[E]	Blockchain and CCPA	255
		[1] Scope of CCPA	256
		[2] Which Blockchain Participants Must Comply with CCPA?	257
		[3] CCPA Compliance Obligations	258
		[4] Data Access and Deletion Rights	261
Further	Readi	[5] Sanctions and Remedies	262
. untilel	i cuul	"'ð	264

Снарт	er 6		
Capita	l Mark	ets	
Micha	el Juene	emann	265
§6.01	Capi	tal Markets and Blockchain	
Micha	el Juene	emann	265
	[A]	What Makes a Token a Security?	265
	[B]	Blockchain Finality	268
	[C]	Special Requirements for Prospectuses	271
	[D]	Regulatory Specifics for Organized Trade	273
§6.02	-	tal Markets and Blockchain: Country Report – Austria	
Johani		nk & Philipp Kinsky	275
	[A]	What Makes a Token a Security?	276
	[B]	Blockchain Finality	277
	[C]	Special Requirements for Prospectuses	278
	[D]	Regulatory Specifics for Organized Trade	278
§6.03		tal Markets and Blockchain: Country Report – Belarus	C
Klim S		ky & Mikhail Khodosevich	280
	[A]	What Makes a Token a Security?	280
	[B]	Blockchain Finality	281
	[C]	Special Requirements for Prospectus	282
	[D]	Regulatory Specifics for Organized Trade	284
§6.04	-	tal Markets and Blockchain: Country Report – Estonia	
Kirsti I			286
	[A]	What Makes a Token a Security?	286
	[B]	Blockchain Finality	290
	[C]	Special Requirements for Prospectus	291
66 OF	[D]	Regulatory Specifics for Organized Trade	292
§6.05		tal Markets and Blockchain: Country Report – Finland	202
Μικά Ι			293
	[A]	What Makes a Token a Security?	294 296
	[B]	Blockchain Finality	296
	[C]	Special Requirements for Prospectus	297
	[D] [E]	Regulatory Specifics for Organized Trade Conclusion	300
§6.06		tal Markets and Blockchain: Country Report – France	500
	nd Levy		300
Dertitut	[A]	What Makes a Token a Security?	300
	[A]	Blockchain Finality	301
	[D]	Special Requirements for Prospectus	303
	[C]	Regulatory Specifics for Organized Trade	305
§6.07		tal Markets and Blockchain: Country Report – Germany	505
	el Juene	이 것 같은 것 같	306
	[A]	What Makes a Token a Security?	306
	[B]	Blockchain Finality	308
	[D]	Special Requirements for Prospectus	310
	[0]	opena negatemente for riospectat	010

	[D]	Regulatory Specifics for Organized Trade	312
§6.08	Cap	oital Markets and Blockchain: Country Report – Italy	
Stefand	o Febb	i	314
	[A]	What Makes a Token a Security?	314
	[B]	Blockchain Finality	316
	[C]	Special Requirements for Prospectuses	316
	[D]	Regulatory Specifics for Organized Trade	318
§6.09	Cap	ital Markets and Blockchain: Country Report - Liechtenstein	
Johanr	ies Dü	Г	321
	[A]	What Makes a Token a Security?	323
	[B]	Special Requirements for a Prospectus	324
	[C]	Blockchain Finality	325
	[D]	Regulatory Specifics for Organized Trade	328
§6.10	Cap	ital Markets and Blockchain: Country Report – Poland	
Aleksa	ndra V	Widziewicz	329
	[A]	What Makes a Token a Security?	329
	[B]	Blockchain Finality	331
	[C]	Special Requirements for Prospectus	332
	[D]	Regulatory Specifics for Organized Trade	332
§6.11	Cap	ital Markets and Blockchain: Country Report – Spain	
Jose Lu		ente Howell	334
	[A]	What Makes a Token a Security?	334
	[B]	Blockchain Finality	337
	[C]	Special Requirements for Prospectus	337
	[D]	Special Requirements for Organized Trade	338
§6.12	Capi	ital Markets and Blockchain: Country Report – Switzerland	
Olivier	Favre	& Fabio Elsener	340
	[A]	What Makes a Token a Security?	341
	[B]	Blockchain Finality	342
		[1] Payment Tokens and Utility Tokens Without Claims	342
		[2] Asset Tokens and Utility Tokens Conferring Claims	342
		[3] Developments: DLT Rights	343
	[C]	Regulatory Specifics for Organized Trade	344
		[1] Payment Tokens and Utility Tokens	344
		[2] Asset Tokens	345
		[3] Developments: Introduction of DLT Trading Facility	346
§6.13	Capi	tal Markets and Blockchain: Country Report – Singapore	
Kim Kit	Ow		347
	[A]	What Makes a Token a Security?	347
	[B]	Blockchain Finality	348
	[C]	Special Requirements for Prospectus	350
	[D]	Regulatory Specifics for Organized Trade	352
	[E]	Conclusion	353
§6.14	Capit	tal Markets and Blockchain: Country Report – Canada	
Daniel I	Fuke &	B Mike Stephens	353

	[A]	What Makes a Token a Security	354
	[B]	Crypto Winter	356
	[C]	Special Requirements for Prospectus	357
	[D]	Regulatory Specifics for Organized Trade	358
		[1] Registration Request and Oversight	358
		[2] Regulatory Gaps	358
		[3] Enforcement	358
	[E]	Conclusion	360
§6.15	Capi	tal Markets and Blockchain: Country Report – USA	
James (Gatto		360
	[A]	What Makes a Token a Security?	360
		[1] US SEC	361
		[2] The Commodities Futures Trading Commission	362
		[3] The Financial Crimes Enforcement Network	363
		[4] FINRA	365
		[5] The IRS	365
		[6] State Laws	365
Further	Read	ing	366
Снарте	r 7		
Blockcl	hain ai	nd Intellectual Property	
Andrea	s Holz	warth-Rochford	369
§7.01	Intro	duction	369
§7.02	Trad	emark	371
	[A]	Definition	371
	[B]	Duration	371
	[C]	Territory	371
	[D]	Goods and Services	372
	[E]	Types of Trademarks	372
	[F]	Registration Process	373
	[G]	Post Registration	374
	[H]	Enforcement	374
	[I]	Examples and Practical Hints	375
§7.03	Desig	gns	376
	[A]	Definition	376
	[B]	Duration/Territory	376
	[C]	Registration/Invalidity Procedures/Protection Requirements	378
	[D]	Enforcement	379
	[E]	Examples and Practical Hints	380
§7.04	Сору	right	381
	[A]	Definition	381
	[B]	Rights Given by Copyright, Duration and Practical Hints	381
§7.05	Open	a Source	382
§7.06	Pater	nts/Utility Models	385
	[A]	Definition/Content of Patent Application	385

	[B]	Rights Provided by a Patent	385
	[C]	Territory	386
		[1] European Patents/Planned European Unitary Patent	387
		[2] Further Regional Patents European Patents/Planned	
		European Unitary Patent	389
	[D]	Protection Requirements EPO	389
		[1] Novelty/Grace Period	389
		[2] Priority	390
		[3] International Patent Applications	391
		[4] Exclusion from Patentability	392
		[5] Assessing Patentability of CII: Examples of	
		Blockchain-Related EP Patents	393
		[6] Opposition Procedure	396
		[7] Enablement	397
	[E]	Protection Requirements USPTO: Examples of	
		Blockchain-Related US Patents	398
	[F]	Practical Hints Protection by Patents	401
		[1] Strategic Considerations	401
		[2] Observation/Surveillance of Third-Party Rights	401
		[3] Transfer of Rights	402
		[a] German Act on Employee Inventions	403
	[G]	Utility Models	404
		[1] Background	404
		[2] Registration Procedure: Branching Off	405
		[3] Protection Requirements/Duration	406
		[4] Protectable Subject Matter	407
		[5] Summary of Pros and Cons of Utility Models	407
§7.07	Trad	e Secret	408
	[A]	General Background	408
	[B]	Legal Basis: Definition	409
	[C]	Practical Aspects	410
Further	Read	ing	413
Снартер			
Blockch	nain ai	nd Antitrust	
Jay Mod	lrall		415
§8.01	Intro	duction	415
§8.02	Antie	competitive Agreements, Decisions and Concerted Practices	416
	[A]	Introduction to Concepts	416
	[B]	Horizontal Agreements and Blockchain	418
		[1] Information Exchange	419
		[2] Standardization	421
	[C]	Vertical Agreements and Blockchain	422
	[D]	Appropriate Safeguards	424
§8.03	Abus	se of Dominance	424

	[A]	Introduction of Concepts	424
	[B]	Big Data	426
		[1] Mandating Data Access	427
		[2] Policing Data Sharing and Pooling	429
	[C]	Online Platforms	430
		[1] Most Favoured Nations	431
		[2] Multi-homing	431
		[3] Interoperability	431
		[4] Transparency	432
		[5] Leveraging	432
		[6] Self-Preferencing	432
	[D]	Article 102 TFEU and Blockchain	432
	[E]	Appropriate Safeguards	433
§8.04	Mer	ger Control	434
	[A]	Introduction to Concepts	434
	[B]	Full-Function Joint Ventures	435
	[C]	Gun-Jumping	436
	[D]	Merger Control and Blockchain	437
	[E]	Appropriate Safeguards	442
Further Reading			443
Bibliography			445
Electronic References			465
Table of Cases			475
Index			479