
TABLE OF CONTENTS

AUTHOR BIOGRAPHIES	v
PREFACE.....	vii
ACKNOWLEDGEMENTS	ix
PART I. INTRODUCTION TO FINANCIAL REGULATION	1
1.1. FINANCE TODAY	3
I. INTRODUCTION	3
II. THE FUNCTIONS OF FINANCE.....	8
A. The Role of the Financial System	8
B. Financial Intermediation	9
III. FINANCIAL SERVICES IN THE UNITED STATES	12
A. Overview	12
B. Insured Depository Institutions.....	15
C. Insurance Companies	16
D. Securities Firms.....	18
E. Consumer Finance.....	19
F. Financial Conglomerates.....	20
G. Payment Systems	21
H. Asset Managers.....	22
I. Derivatives	24
J. Shadow Banking.....	25
1. Securitization	26
2. Fannie Mae and Freddie Mac.....	28
3. Money Market Mutual Funds.....	29
4. Wholesale Funding.....	30
K. Challenges Ahead	32
1. Fintech and Innovation.....	32
2. Climate Change.....	33
1.2. THE HISTORY OF U.S. FINANCIAL REGULATION: A THEMATIC OVERVIEW	35
I. INTRODUCTION	36
II. THE FIRST AND SECOND BANKS OF THE UNITED STATES (1790–1863).....	36
A. The First Bank of the United States	36
B. The Second Bank of the United States.....	38
C. Jackson's War Against the Second Bank	39
D. The Free Banking Era	40
III. THE RISE OF NATIONAL BANKS (1863–1914).....	41
A. Uniform National Currency	42
B. The Dual Banking System	42
C. Unit Banks and Correspondent Banking	43
D. Interbank Deposits in the Reserve Structure	44
IV. THE CREATION OF THE FEDERAL RESERVE SYSTEM (1907–1933).....	46
A. The Panic of 1907.....	46
B. Functions of the Federal Reserve System	49
C. The Early Federal Reserve System	50

V.	THE NEW DEAL AND ITS LEGACY (1933–1960s).....	51
A.	Enhancing Transparency in Securities Markets and Separating Banking from Securities.....	52
1.	The Securities Act of 1933 and the Exchange Act of 1934	52
2.	The Banking Act of 1933.....	53
B.	Stabilizing the Banking System Through Deposit Insurance.....	53
C.	Dealing with Racial Injustice in Finance	55
VI.	A TREND TOWARDS DEREGULATION (1970S–2000S).....	56
A.	Deregulation of Depository Institutions.....	56
B.	Loosening of Geographic Restrictions	58
C.	Re-Regulation of Banks and Thrifts	59
D.	The Erosion of the Glass-Steagall Act	59
E.	Securitization and New Models of Intermediation	60
F.	The Commodity Futures Modernization Act.....	61
VII.	THE FINANCIAL CRISIS AND ITS AFTERMATH.....	61
A.	The Financial Crisis	61
B.	The Dodd-Frank Act	66
C.	Contending Visions of the Financial Crisis.....	67
D.	The Trump Administration	74
E.	The Pandemic	74
F.	The Biden Administration.....	77
1.3.	REGULATORY FRAMEWORKS.....	79
I.	INTRODUCTION	79
II.	THE MULTIPLE GOALS OF FINANCIAL REGULATION	79
A.	Protection of Public Claimants	80
1.	Collective Solution to Overcome Transaction Costs	80
2.	Absolute Protection of Terms of Investment.....	80
B.	Elimination of Externalities.....	81
1.	The Internalization of Social Losses.....	81
2.	Systemic Costs of Failures	81
C.	Other Considerations	81
1.	Redistributive Policies and Other Equitable Norms	81
2.	Adjunct to Law Enforcement	82
3.	Political Economy	82
III.	THE STRUCTURE OF FINANCIAL REGULATION	83
A.	Alternative Approaches.....	83
B.	The U.S. Financial Regulatory Architecture.....	85
C.	Issues in Organizational Design	94
IV.	THE INTERNATIONAL FINANCIAL ARCHITECTURE.....	100
A.	The Building Blocks.....	101
B.	Reform After the Financial Crisis	107
1.4.	THE REGULATORY PERIMETER	109
I.	INTRODUCTION	109
II.	SETTING JURISDICTIONAL BOUNDARIES.....	109
A.	The Texas Attorney General's Letter	110
B.	<i>Koch v. First Union Corp.</i>	112
C.	<i>United States v. Hom</i>	115
D.	<i>Morrison v. National Australia Bank</i>	118
III.	THE CLASSIFICATION PROBLEM	122
A.	Formal Versus Functional Definitions	122
B.	Classification Choices Under the Dodd-Frank Act	128
C.	The Challenges of Fintech.....	130

IV.	OVERLAPPING REGULATORY PERIMETERS.....	131
A.	The Regulation of Usury	131
B.	<i>Marquette</i> and Responses to It.....	135
1.	Legal Developments	135
2.	Developments in Credit Card Markets	137
1.5.	A TOUR OF FINANCIAL STATEMENTS.....	139
I.	INTRODUCTION	139
II.	AN INTRODUCTION TO FINANCIAL STATEMENTS.....	140
A.	The Balance Sheet	140
1.	Assets	141
2.	Liabilities (Including Debt).....	142
3.	Equity	143
4.	Elaborations	143
B.	Income Statement.....	144
C.	Financial Ratios.....	146
1.	Liquidity	146
2.	Solvency	147
3.	Profitability.....	147
III.	FINANCIAL STATEMENTS OF FINANCIAL INSTITUTIONS	148
A.	Depository Institutions.....	148
1.	Savings Bank.....	149
2.	Commercial Bank	152
B.	Insurance Companies	154
C.	Mutual Funds	156
D.	Broker-Dealers.....	158
E.	Alternative Lenders.....	160
F.	Financial Ratio Summary	162
G.	Market Place Lenders Compared	162
IV.	CONCLUDING THOUGHTS	164
PART II. INSURED DEPOSITORY INSTITUTIONS		165
2.1.	THE IMPACT OF CHARTER CHOICE	167
I.	THE BANK CHARTER.....	167
II.	DIFFERENT CHARTER TYPES.....	173
A.	National Bank Versus State Bank	175
B.	Thrifts and Savings and Loan Associations	177
C.	Credit Unions.....	178
D.	Industrial Loan Companies.....	179
III.	COMPETITIVE EQUALITY—FEDERAL AND STATE LAW	181
IV.	BANKING THE MARIJUANA SECTOR.....	184
V.	FINTECH	186
VI.	WHAT IS A BANK?	192
2.2.	ACTIVITIES RESTRICTIONS AND THE BUSINESS OF BANKING	193
I.	INTRODUCTION	193
A.	The Business of Banking.....	193
B.	Incidental Powers	196
II.	CORE BANKING POWERS.....	202
A.	Discounting—Credit Exchange.....	203
B.	Government and Corporate Debt.....	203
C.	Making Loans	204

D. Trust Fiduciary Powers and Financial Advice.....	205
E. Safekeeping and Custody—Including Digital Assets	205
F. Repo and Securities Lending	206
G. Payments Processing.....	206
H. Guarantees and Letters of Credit.....	206
I. Derivatives and Commodities	207
J. Mutual Funds	209
K. Commercial Paper	212
L. Mortgage Securitization.....	213
M. Brokerage.....	217
N. Equity Investments	219
O. Insurance.....	219
P. State Bank Powers	221
III. NARROW BANKING REPRISED SINCE THE FINANCIAL CRISIS.....	221
2.3. PORTFOLIO DIVERSIFICATION AND AFFILIATE TRANSACTIONS	225
I. INTRODUCTION	225
II. LENDING AND COUNTERPARTY LIMITS	226
III. CREDIT CONCENTRATIONS AND SOCIAL GOALS IN LENDING	230
IV. TRANSACTIONS WITH AFFILIATES.....	239
A. Section 23A	242
B. Section 23B	244
C. Waivers.....	244
V. LOANS TO INSIDERS	245
2.4. DEPOSIT INSURANCE	249
I. INTRODUCTION	249
II. THE ROLE OF DEPOSITS IN THE FINANCIAL SYSTEM.....	250
A. The Definition of Deposit	250
B. The Bank Balance Sheet Revisited.....	253
C. Causes of Bank Runs.....	255
D. The Role of Deposit Insurance	256
E. Reserve Requirements.....	257
III. FEDERAL DEPOSIT INSURANCE	258
A. Historical Context.....	258
B. The Deposit Insurance Fund.....	260
C. Funding	261
1. The Assessment Base	262
2. Assessment Rates	262
3. Premium Payments and the DIF Reserve Ratio.....	263
IV. DEPOSIT INSURANCE AND MORAL HAZARD	264
A. The Problem of Moral Hazard.....	264
B. Deposit Insurance Design Features	266
C. The Problem of Implicit Guarantees	267
1. Uninsured Deposits.....	267
2. Problems with Wholesale Funding.....	268
V. OTHER GOVERNMENT GUARANTEE PROGRAMS	268
A. Securities Investor Protection Corporation.....	269
B. Pension Benefit Guaranty Corporation.....	270
C. State Insurance Guarantee Funds	271
VI. INTERNATIONAL PERSPECTIVES	273
A. The Spread of Deposit Insurance.....	273
B. Cross-Border Deposit Taking: Who Pays?.....	274

2.5. CAPITAL REGULATION: AN INTRODUCTION	277
I. WHAT IS CAPITAL?.....	277
A. The Definition of Capital.....	277
B. The Fall and Rise of Capital Levels.....	279
C. U.S. Capital Requirements in the Basel I Era.....	290
D. Basic Leverage and Simple Risk-Based Capital Requirements.....	292
II. PROMPT CORRECTIVE ACTION.....	296
2.6. CAPITAL REGULATION: PRE-FINANCIAL CRISIS TO BASEL II	303
I. INTRODUCTION	303
II. BASEL I AND ITS SHORTCOMINGS	303
III. BASEL II OVERVIEW	308
IV. CAPITAL REGULATION AND THE FINANCIAL CRISIS	318
2.7. CAPITAL REGULATION: BASEL III AND BEYOND.....	325
I. INTRODUCTION	325
II. FINANCIAL CRISIS STRESS TESTING	326
III. BASEL III AND OTHER ELEMENTS OF THE U.S. CAPITAL REGULATION FRAMEWORK.....	329
A. Capital Requirements.....	330
1. Minimum Regulatory Capital Ratios	332
2. G-SIB Surcharge	332
3. Capital Conservation Buffer and Stress Capital Buffer.....	333
4. Countercyclical Buffer.....	334
5. Supplementary Leverage Ratio	335
6. Community Bank Leverage Ratio	335
B. Collins Amendment	337
C. Liquidity Requirements	338
1. Liquidity Coverage Ratio	339
2. Net Stable Funding Ratio	340
D. Stress Testing and Capital Planning.....	341
IV. CRITIQUES OF AND ALTERNATIVES TO BASEL III	344
V. CAPITAL, LIQUIDITY, AND THE PANDEMIC	347
PART III. INSURANCE	353
3.1. INTRODUCTION TO INSURANCE REGULATION	355
I. INTRODUCTION	355
II. AN OVERVIEW OF INSURANCE REGULATION.....	356
A. Sector Structure.....	356
B. A Brief History of U.S. Insurance Regulation.....	358
1. Colonial Times Through the Civil War: 1776–1865.....	358
2. Post-Civil War Developments: 1865–1944	359
3. The McCarran-Ferguson Act	363
4. Mutualization and Demutualization	366
C. The NAIC and State Insurance Regulation	366
D. Insurance Regulation Under the Dodd-Frank Act	369
III. DEFINING INSURANCE	380
A. The Regulatory Perimeter.....	380
B. Insurance Versus Other Financial Products.....	382
3.2. THE PROTECTION OF CONSUMERS IN INSURANCE REGULATION	387
I. INTRODUCTION	387

II.	THE INTERPRETATION OF INSURANCE CONTRACTS.....	387
A.	<i>Contra Proferentem</i>	388
B.	The Insurable Interest Doctrine	391
C.	Supervisory Oversight of Policy Terms	394
III.	THE REGULATION OF AUTOMOBILE RATES.....	397
A.	Overview of State Approaches	397
B.	Illustrative Cases: Massachusetts and California	399
IV.	THE REGULATION OF RISK CLASSIFICATIONS.....	402
A.	The Function of Risk Classifications	402
B.	Anti-Discrimination Norms in State Laws	405
V.	RESTRAINTS ON COLLABORATION IN RATE-SETTING.....	411
3.3.	THE ROLE OF FEDERAL GOVERNMENT IN INSURANCE REGULATION	417
I.	INTRODUCTION	417
II.	FEDERAL ENGAGEMENT IN INSURANCE REGULATION.....	417
A.	The Federal Reserve and Insurance Regulation.....	419
B.	Coordinating Capital Requirements.....	421
C.	Federal Coordination Regarding Reinsurance.....	425
1.	Credit for Reinsurance	426
2.	Covered Agreements	428
III.	NONTRADITIONAL AREAS OF FEDERAL DOMINANCE	430
A.	Social Insurance: Social Security and Medicare	430
B.	The Policies Underlying Social Insurance.....	435
C.	ERISA and Employee Benefit Plans.....	437
1.	ERISA's Preemption Provision	438
2.	Fiduciary Duties Under ERISA.....	442
D.	The Affordable Care Act of 2010.....	445
1.	<i>National Federation of Independent Business v. Sebelius</i>	446
2.	<i>King v. Burwell</i>	447
PART IV. SECURITIES FIRMS AND CAPITAL MARKETS.....		451
4.1.	INTRODUCTION TO THE REGULATION OF SECURITIES FIRMS	453
I.	OVERVIEW	453
II.	A BRIEF HISTORY OF SECURITIES REGULATION	454
A.	Early Regulation and State Blue Sky Laws.....	456
B.	Securities Regulation and the New Deal.....	457
1.	The Securities Act of 1933: Oversight of Public Offerings	458
2.	The Securities Exchange Act of 1934: Market Regulation	459
3.	The 1938 Amendments and the Creation of the NASD.....	460
C.	Further Refinements of the Modern Era.....	461
1.	Realignment of Federal-State Authority Over Broker-Dealers	462
2.	The Emergence of FINRA	463
a.	The National Association of Securities Dealers	463
b.	NYSE Regulation	463
III.	OVERVIEW OF THE SECURITIES SECTOR TODAY.....	464
A.	Sector Participants and Lines of Business.....	464
1.	Broker-Dealers	464
2.	Investment Advisers	465
B.	State-Federal Allocations of Authority and Self-Regulatory Organizations.....	466
IV.	THE REGULATORY PERIMETER.....	470
A.	What is a Security?.....	470

B. Broker-Dealers and Investment Advisers	477
C. Application of U.S. Requirements to Foreign Entities	481
V. CONSOLIDATED OVERSIGHT OF MAJOR SECURITIES FIRMS	483
A. Leading Up to the Financial Crisis.....	484
B. Under the Dodd-Frank Act	486
4.2. SECURITIES FIRMS AND THE RETAIL INVESTOR	487
I. INTRODUCTION	487
II. DEFINING THE DUTIES OF BROKER-DEALERS.....	487
A. Early Cases	488
B. The Advisory Relationship	493
C. Broker-Dealers as Market-Makers	502
III. BROKER-DEALERS VERSUS INVESTMENT ADVISERS	506
A. Illustrating the Differences.....	506
B. SEC Staff Study and its Aftermath.....	509
C. Regulation Best Interest and Associated Guidance	511
IV. THE RISE OF SECURITIES ARBITRATION	516
4.3. SECURITIES FIRMS IN CORPORATE TRANSACTIONS	521
I. INTRODUCTION	521
II. THE ROLE OF THE UNDERWRITER.....	522
A. Due Diligence Under the Securities Act of 1933.....	522
B. Deceptive Underwriters and Other Forms of Manipulation	527
C. Penny Stocks Versus Emerging Growth Companies.....	531
1. Penny Stock Rules.....	531
2. The Jumpstart Our Business Startups Act of 2012.....	532
D. Exemptions from the 1933 Act Contrasted	533
E. The Duty to Supervise	535
III. CONFLICTS OF INTEREST WITH CORPORATE CLIENTS	540
A. <i>El Paso</i> and Information Barriers	540
B. ABACUS Litigation	544
IV. THE EFFICIENT MARKETS HYPOTHESIS	547
4.4. EXCHANGES AND TRADING	551
I. INTRODUCTION	551
II. EXCHANGES AND OTHER TRADING MARKETS.....	551
A. Ending Fixed Commissions on the NYSE.....	551
B. The Rise of the National Market System	554
C. The Definition of Exchange.....	557
D. The Fragmentation of U.S. Equity Markets	560
III. DUTIES OF BROKER-DEALERS IN TRADING MARKETS	563
A. Duties with Respect to Limit Orders.....	563
B. Payment for Order Flow and Best Execution	567
IV. CHALLENGES IN TRADING MARKETS TODAY.....	572
PART V. CONSUMER PROTECTION AND THE CFPB.....	583
5.1. THE CONSUMER FINANCIAL PROTECTION BUREAU	585
I. INTRODUCTION	585
II. HISTORY OF CONSUMER FINANCIAL PROTECTION	586
A. State Usury Laws	587
B. Federal Consumer Protection Laws	587

III.	COMPARING NEOCLASSICAL AND BEHAVIORAL VIEWS.....	589
A.	The Neoclassical View of Consumer Protection.....	589
B.	The Behavioral View of Consumer Protection	590
IV.	EARLY CALLS FOR A CONSUMER PROTECTION AGENCY	592
V.	THE CONSUMER FINANCIAL PROTECTION BUREAU	597
A.	Structure and Powers of the CFPB	597
1.	Structure of the CFPB	598
2.	Rulemaking Authority	601
3.	Supervision Authority.....	606
4.	Enforcement Authority	609
5.	Exclusions from the CFPB's Authority	612
B.	Federal and State Authority After the Dodd-Frank Act	613
C.	Ongoing Policy Debates.....	614
5.2.	MORTGAGES.....	617
I.	INTRODUCTION	617
II.	MORTGAGE BASICS	618
A.	Mortgage Overview.....	618
B.	Dodd-Frank Act Mortgage Reforms.....	620
III.	MORTGAGE LENDING.....	621
A.	Ability-to-Repay Requirements.....	621
1.	Background.....	621
2.	Ability-to-Repay.....	624
3.	Qualified Mortgages	625
4.	Qualified Residential Mortgages and Risk Retention	628
B.	Integrated Disclosure	630
C.	Home Ownership and Equity Protection Act	633
D.	Yield Spread Premiums.....	634
E.	Discrimination in Mortgage Lending	637
IV.	FEDERAL PREEMPTION AND STATE MORTGAGE REGULATION.....	639
A.	Preemption Before the Dodd-Frank Act.....	639
B.	Preemption After the Dodd-Frank Act	641
5.3.	CONSUMER FINANCIAL PRODUCTS AND SERVICES	647
I.	INTRODUCTION	647
II.	STUDENT LOANS.....	648
A.	Student Loan Delinquencies and Defaults.....	650
B.	Discharge in Bankruptcy	652
C.	Student Loan Servicing.....	653
III.	AUTO LOANS.....	659
A.	Types of Auto Loans	659
B.	Criticism of Auto Lending Practices	660
C.	Supervision and Enforcement.....	662
IV.	CREDIT CARDS.....	664
A.	The Need for Consumer Protection	664
B.	The CARD Act of 2009.....	665
V.	SMALL-DOLLAR LOANS	668
A.	Payday Loans.....	668
B.	Overdraft Protection.....	671
VI.	PREPAID ACCOUNTS.....	673
VII.	DEBT COLLECTION AND CREDIT REPORTING	675
A.	Debt Collection.....	675
B.	Credit Reporting	676
VIII.	FINANCIAL PRIVACY	678

5.4. COMPARING CONSUMER PROTECTION MODELS ACROSS SECTORS	681
I. INTRODUCTION	681
II. DISCLOSURE	682
III. BEHAVIORALLY INFORMED FINANCIAL REGULATION.....	691
IV. DUTIES	694
A. The Community Reinvestment Act	695
B. The Investment Advisers Act and the Investment Company Act.....	701
V. PRODUCT REGULATION.....	705
VI. SUBSIDY AND TAX	707
PART VI. FINANCIAL CONGLOMERATES	713
6.1. REGULATION OF HOLDING COMPANIES	715
I. INTRODUCTION	715
II. TYPICAL HOLDING COMPANY STRUCTURES.....	716
III. THE BANK HOLDING COMPANY ACT	718
A. Company Under the BHCA.....	719
B. That Which We Call a Bank	720
C. Control and Controlling Influence	721
IV. ACTIVITIES OF BANK HOLDING COMPANIES: CLOSELY RELATED TO BANKING	723
V. THE GLASS-STEAGALL ACT.....	726
VI. SEPARATION OF INSURANCE AND BANKING ACTIVITIES.....	728
VII. ACTIVITIES OF FINANCIAL HOLDING COMPANIES	729
A. Becoming an FHC.....	729
B. Activities That are Financial in Nature	730
C. Merchant Banking	731
VIII. SAVINGS AND LOAN HOLDING COMPANIES.....	732
IX. THE VOLCKER RULE	734
A. Policy Behind the Volcker Rule	735
B. Application to Banking Entities	736
C. Proprietary Trading.....	736
D. Covered Funds	737
X. THE SEPARATION OF BANKING AND COMMERCE.....	740
6.2. REGULATION OF BANK MARKET STRUCTURE AND CONSOLIDATION	745
I. INTRODUCTION	745
II. UNIT, BRANCH, AND CHAIN BANKING	746
III. DEVELOPMENT OF BANK ANTITRUST.....	747
A. The Bank Holding Company and Bank Merger Acts	748
B. The Dual System of Bank M&A Antitrust Review	750
1. Traditional Antitrust Review.....	751
2. Bank Antitrust Review	752
C. Tying.....	756
IV. RIEGLE-NEAL AND THE ERA OF CONSOLIDATION.....	758
A. Consequences of the Riegle-Neal Act	758
B. Deposit Caps	760
V. FINANCIAL CRISIS CONSOLIDATION, DODD-FRANK, AND CONTEMPORARY BANK M&A	760
A. Limits on Consolidation Under Dodd-Frank.....	761
B. Contemporary Bank M&A Considerations	764
VI. CONTEMPORARY MARKET STRUCTURE.....	766

6.3. REGULATING SYSTEMIC RISK	769
I. INTRODUCTION	769
II. WHAT IS SYSTEMIC RISK?	770
A. Channels of Transmitting Systemic Risks to the Broader Economy ...	771
B. Regulatory Mechanism for Addressing Systemic Risks	774
1. Pure <i>Ex Ante</i> Interventions	774
2. <i>Ex Post</i> Interventions	776
3. <i>Ex Ante</i> Interventions to Facilitate <i>Ex Post</i> Interventions.....	777
III. DESIGNATING SYSTEMICALLY IMPORTANT INSTITUTIONS	778
A. Global Designations of Systemic Importance.....	778
B. Designations of Systemic Importance in the United States.....	780
IV. MITIGATING SYSTEMIC RISK IN THE U.S. BANKING SECTOR.....	786
A. BHCs with Assets Under \$10 Billion	788
B. BHCs with \$10–100 Billion in Assets.....	788
C. BHCs with \$100 Billion or More in Assets.....	788
D. G-SIBs	789
V. BREAKING UP THE BANKS	791
A. Hard Breakup and the Post-Financial Crisis Debate.....	791
B. Breakup Options Under the Dodd-Frank Act	793
C. Soft Breakup	794
D. Structural Alternatives	795
VI. CLIMATE CHANGE AS A SYSTEMIC RISK.....	798
6.4. FOREIGN BANKS IN THE UNITED STATES AND U.S. BANKS ABROAD	801
I. INTRODUCTION	801
II. FOREIGN BANKS IN THE UNITED STATES	802
A. Overview	802
B. Forms of Entry.....	804
C. The Branch and the Separate Entity Doctrine	806
D. National Treatment and the International Banking Act	811
E. The BCCI Scandal and Congressional Reaction	814
F. Foreign Banks and the Financial Crisis.....	817
G. The Intermediate Holding Company Requirement	819
III. U.S. BANKS ABROAD	827
A. Overview	827
B. Legal Forms for International Activities.....	829
C. The Decline in Correspondent Banking	830
PART VII. PAYMENT SYSTEMS	833
7.1. INTRODUCTION TO PAYMENT SYSTEMS	835
I. INTRODUCTION	835
II. TRACING THE HISTORY OF PAYMENT SYSTEMS.....	838
III. TRADITIONAL RETAIL PAYMENT SYSTEMS.....	841
A. Mechanics.....	842
1. Cash	842
2. Checks.....	843
3. Credit Cards	844
4. Debit Cards.....	845
B. Legal Frameworks	846
1. Cash	846
2. Checks.....	847
a. Insufficient Funds.....	847

b. Forgery	847
c. Unauthorized Issuance.....	848
3. Credit Cards	849
4. Debit Cards.....	850
IV. RETAIL INTERBANK FUNDS TRANSFERS	852
A. Overview of the ACH System.....	853
B. Legal and Regulatory Frameworks	854
V. THE UNBANKED AND UNDERBANKED.....	856
A. Prepaid Cards	857
B. Money Transmitters	858
C. Mobile Phone Financial Services.....	860
D. Postal Banking.....	861
VI. INNOVATIONS IN PAYMENT SYSTEMS.....	862
A. Digital Wallets	863
B. Data Portability and Consumer Autonomy.....	866
C. FedNow	868
7.2. EXAMINING CRITICAL ISSUES IN PAYMENT SYSTEMS.....	871
I. INTRODUCTION	871
II. RESPONDING TO INNOVATION: BITCOIN AND BEYOND	872
A. Bitcoin	872
B. Ripple	874
C. Ethereum and Other Blockchain-Based Systems.....	874
D. Diem	875
E. The Value of Decentralized Payment Systems	876
F. Approaches to Regulation	879
G. Central Bank Digital Currencies.....	881
III. REGULATING PAYMENT CARD INTERCHANGE FEES	883
A. Who Bears the Cost of Card Transactions?.....	883
B. Antitrust Litigation	885
C. The Durbin Amendment	888
D. Who Ends Up Paying?.....	891
IV. MANAGING RISK IN WHOLESALE INTERBANK CLEARING AND SETTLEMENT.....	892
A. Fedwire and CHIPS.....	893
B. Managing Risk	893
C. CLS Bank	895
D. Title VIII of the Dodd-Frank Act	896
V. PREVENTING ILLICIT USE OF PAYMENT SYSTEMS.....	897
A. Anti-Money Laundering and Related Laws	897
B. Issues in Compliance	898
PART VIII. CORPORATE GOVERNANCE, SUPERVISION, AND ENFORCEMENT	901
8.1. CORPORATE GOVERNANCE	903
I. INTRODUCTION	903
II. THE SPECIAL NATURE OF FINANCIAL INSTITUTION CORPORATE GOVERNANCE	904
A. Post-Financial Crisis Critique	905
B. Dodd-Frank Act Changes	906
III. THE EVOLUTION OF CORPORATE GOVERNANCE.....	907
A. FDIC—Liability for Bank Failure	907
B. OCC—Heightened Standards for Large National Banks.....	910
C. Federal Reserve—Board Effectiveness.....	912

IV.	EXTENDING DUTIES BEYOND DIRECTORS	920
A.	Dual-Liability of Shareholders.....	920
B.	Gatekeeper Liability.....	921
1.	Lawyers.....	921
2.	Consultants.....	924
V.	MODIFYING INCENTIVES THROUGH COMPENSATION	925
A.	The Situation Before the Financial Crisis.....	925
B.	Changes After the Financial Crisis	927
C.	Different Approach Taken in Europe	931
8.2.	SUPERVISION	935
I.	INTRODUCTION	935
II.	THE EVOLUTION OF EXTERNAL SUPERVISION	936
A.	The Traditional Bank Examination	937
B.	The APA and the Tradition of Bank Examinations.....	938
C.	The Link to Safety and Soundness	940
D.	The Expanding Scope of Supervision	941
E.	The First Female Bank Examiner.....	942
III.	EXTERNAL SUPERVISION TODAY: PRACTICES AND CHALLENGES.....	942
A.	Reporting, Examination, and Supervision by Federal Banking Regulators	943
1.	Administrative Law and Supervision.....	949
2.	Confidential Supervisory Information	952
3.	Coordination in Supervisory Practices.....	955
B.	SEC and FINRA Supervision Compared.....	960
IV.	INTERNAL SUPERVISION AND INVESTIGATIONS.....	962
A.	The Three Lines of Defense.....	962
B.	The Role of the General Counsel	963
C.	Climate Change and Supervision	964
D.	Investigations.....	965
1.	Independence and Ethics	966
2.	Cooperation Credit and Use of Internal Investigations	968
8.3.	ENFORCEMENT	971
I.	INTRODUCTION	971
II.	THE ENFORCEMENT PROCESS.....	972
III.	ENFORCEMENT POLICY AND TRENDS	976
A.	SEC and FINRA Enforcement	977
1.	SEC Enforcement.....	977
2.	FINRA Enforcement.....	981
B.	Enforcement of Federal Banking Regulators.....	982
1.	Federal Reserve Enforcement Policy and Trends	983
2.	OCC Enforcement Policy and Trends.....	983
3.	FDIC Enforcement Policy and Trends	983
C.	Enforcement of State Regulators.....	989
D.	Aggregating Enforcement Actions	990
E.	Foreign Enforcement Levels Contrasted.....	994
IV.	RECURRING ISSUES IN ENFORCEMENT POLICIES	996
A.	Public Versus Private Enforcement.....	996
B.	Large Firms Versus Small Firms	998
C.	Corporate Versus Individual Sanctions	999
D.	Settlements Without Admission of Wrongdoing.....	1001

PART IX. LENDER OF LAST RESORT AND RESOLUTION	1005
9.1. LENDER OF LAST RESORT	1007
I. INTRODUCTION	1007
II. HISTORY	1008
A. The Bank of England.....	1008
B. The United States Without a Lender of Last Resort.....	1010
C. Today's Federal Reserve.....	1011
III. LENDER OF LAST RESORT	1011
A. Changing Monetary Policy Tools	1012
B. The Discount Window.....	1015
C. The Problem of Stigma and the Early Financial Crisis	1018
IV. EMERGENCY LENDING: SECTION 13(3).....	1020
A. The History of Section 13(3).....	1021
B. The Federal Reserve's Uses of its Powers	1022
1. Saving Individual Firms: Bear Stearns and AIG	1022
2. Aftermath and Reform	1023
3. Emergency Lending Facilities with Broad-Based Eligibility	1025
C. The Lender of Last Resort Debate.....	1030
1. Central Bank Independence	1031
2. Criticisms of the Federal Reserve.....	1032
3. The Future of Lender of Last Resort.....	1036
V. THE FEDERAL RESERVE AS THE INTERNATIONAL LENDER OF LAST RESORT?.....	1038
9.2. TRADITIONAL TOOLKIT FOR BANK FAILURES	1041
I. INTRODUCTION	1041
II. HISTORICAL PERSPECTIVE	1042
III. THE EVOLUTION OF RESOLUTION TRANSACTIONS	1045
IV. PURCHASE AND ASSUMPTIONS	1046
V. TURMOIL AND INNOVATION IN THE 1980S	1048
VI. OPEN BANK ASSISTANCE AND THE TOO BIG TO FAIL PROBLEM	1050
VII. BRIDGE BANKS	1051
VIII. LEGAL REFORMS AND THE LEAST COST REQUIREMENT	1053
IX. THE FDIC'S BANK RESOLUTION AUTHORITY	1058
A. Initiation of Resolution Proceedings.....	1058
B. The Claims Process.....	1059
C. FDIC Superpowers	1060
X. THE FINANCIAL CRISIS AND THE SYSTEMIC RISK EXCEPTION.....	1063
9.3. AFTER THE CRISIS: FROM ORDERLY LIQUIDATION TO BAIL-IN	1065
I. INTRODUCTION	1065
II. LESSONS LEARNED FROM THE FINANCIAL CRISIS	1066
A. The Spread of Contagion from Lehman Brothers's Bankruptcy.....	1067
B. Expansion of the Regulatory Toolkit	1069
C. The EU Experience	1070
III. THE ORDERLY LIQUIDATION AUTHORITY	1072
A. The Bridge Financial Company	1072
B. The Orderly Liquidation Authority Receivership.....	1076
C. Living Wills.....	1077
IV. SINGLE POINT OF ENTRY	1079
V. TOTAL LOSS-ABSORBING CAPACITY	1081

VI.	POLICY DEBATES AND PROPOSALS FOR REFORM	1084
A.	Moral Hazard and Bailouts.....	1084
B.	Bankruptcy Reform and Chapter 14	1087
C.	EU Bank Recovery and Resolution Directive.....	1089
D.	Derivatives and Cross-Defaults	1090
PART X. MUTUAL FUNDS AND OTHER INVESTMENT VEHICLES		1093
10.1. INTRODUCTION TO ASSET MANAGEMENT AND ITS REGULATION		1095
I.	INTRODUCTION TO ASSET MANAGEMENT	1095
II.	BACKGROUND ON THE INVESTMENT COMPANY ACT OF 1940	1098
A.	Historical Overview	1099
1.	The Origin of Investment Companies	1099
2.	Abuses Preceding the Reforms of 1940	1101
a.	Misleading Disclosure.....	1101
b.	Self-Dealing.....	1101
c.	Capital Structure.....	1102
d.	Misappropriation of Funds.....	1102
3.	Passage of the Investment Company Act of 1940.....	1103
a.	Registration.....	1104
b.	Disclosure.....	1104
c.	Regulation of Activities and Operations	1105
d.	Shareholder Powers.....	1106
e.	Independent Directors.....	1106
f.	Interaction with the Investment Advisers Act.....	1107
g.	SEC's Power to Grant Exemption	1107
h.	Legal Developments Since the 1940s.....	1107
B.	Regulatory Perimeters	1108
III.	IS ASSET MANAGEMENT SYSTEMICALLY IMPORTANT?	1113
IV.	INSTITUTIONAL INVESTORS IN CORPORATE GOVERNANCE	1120
A.	The Rise of Institutional Activism	1121
B.	The Impact of Index Funds on Corporate Governance.....	1122
C.	ESG Disclosures for Institutional Investors	1123
10.2. MUTUAL FUNDS: FIDUCIARY DUTIES AND STRUCTURAL RESTRAINTS		1125
I.	INTRODUCTION	1125
A.	The Growth of Investment Companies and Principal Types	1125
B.	Plan Sponsors and Mutual Fund Complexes	1127
II.	THE CENTRALITY OF FUND DIRECTORS.....	1129
A.	Brokerage Allocation	1129
B.	Section 36(b) and the <i>Gartenberg</i> Test	1134
C.	Director Independence	1141
III.	STRUCTURAL RESTRAINTS ON INVESTMENT COMPANIES	1145
A.	Net Asset Value and Fair Valuation	1146
B.	The Adoption of Rule 2a-5.....	1147
C.	Derisking Investment Companies	1149
1.	The Use of Derivatives	1149
2.	Liquidity Regulation	1150
3.	Mutual Funds in the Pandemic	1151
D.	Developments in the Market for Exchange-Traded Funds	1152
10.3. MUTUAL FUNDS: DISCLOSURE AND ITS LIMITATIONS		1157
I.	INTRODUCTION	1157

II.	AN OVERVIEW OF MUTUAL FUND DISCLOSURES	1158
A.	Annotated Illustrations of Performance and Fee Disclosures.....	1159
1.	Performance Disclosures.....	1159
2.	Disclosures of Fees and Expenses	1161
B.	The Role of Third-Party Analysis	1163
C.	Fund-of-Fund Disclosures Versus Wrap Accounts	1165
III.	TWO CASE STUDIES	1168
A.	Quantitative Measures of Financial Risk	1168
B.	Target Date Funds.....	1172
IV.	THE LIMITS OF DISCLOSURE	1176
A.	Academic Studies on Investor Decision-Making.....	1176
B.	Testing the Efficacy of Disclosure.....	1179
	10.4. THE REGULATION OF RETIREMENT SAVINGS	1183
I.	INTRODUCTION TO THE REGULATION OF RETIREMENT SAVINGS	1183
II.	HISTORICAL OVERVIEW	1185
A.	The Studebaker Incident.....	1186
B.	ERISA: Key Features	1186
C.	The Regulatory Perimeter: The ERISA Agencies	1188
III.	DEFINED CONTRIBUTION PLANS AND THE CHALLENGES OF PARTICIPANT-DIRECTED INVESTING	1189
A.	Applying ERISA Fiduciary Duties to Defined Contribution Plans..	1192
1.	The Duty to Monitor.....	1193
2.	Ongoing Fiduciary Litigation Over Excessive Fees.....	1195
3.	ESOPs and the Duty to Diversify	1197
4.	ESG Investing and ERISA Accounts.....	1201
B.	Nudging and 401(k)s	1202
1.	Default Savings Rates.....	1203
2.	Distribution Options and Annuitization	1205
3.	Nudging Back to Defined Benefit Plans.....	1206
4.	Emergency Savings Accounts	1207
IV.	INTERNATIONAL COMPARISONS.....	1207
A.	Switzerland	1207
B.	Sweden	1208
V.	REACHING WORKERS WITHOUT EMPLOYER PLANS	1208
A.	The Rise and Fall of myRA	1208
B.	State-Run Auto-Enrollment IRAs.....	1209
	10.5. PRIVATE FUNDS	1211
I.	INTRODUCTION	1211
II.	OVERVIEW OF PRIVATE FUNDS POST-DODD-FRANK ACT	1212
III.	SIGNATURE EVENTS IN THE RISE OF HEDGE FUNDS.....	1213
A.	The Collapse of Long-Term Capital Management.....	1213
B.	Regulatory Responses Post Long-Term Capital Management.....	1218
1.	Adviser Regulation and <i>Goldstein v. SEC</i>	1218
2.	Sector Best Practices.....	1222
C.	The Madoff Scandal and Feeder Fund Litigation.....	1222
1.	Excerpts from the Report of the SEC Inspector General	1222
2.	<i>Anwar v. Fairfield Greenwich</i>	1227
IV.	PRIVATE FUNDS AFTER THE DODD-FRANK ACT.....	1233
A.	Key Dodd-Frank Act Changes	1233
B.	Provisional Assessments of Impact	1234
C.	Hedge Funds in the Pandemic.....	1235

D. EU Regulation Contrasted	1236
E. Expanding Retail Access to Private Equity Investments.....	1237
PART XI. DERIVATIVES AND RATE MARKETS.....	1241
11.1. OVERVIEW OF DERIVATIVES	1243
I. INTRODUCTION	1243
II. WHAT ARE DERIVATIVES AND WHO USES THEM?	1244
A. Overview of Derivative Contract Types	1244
1. Forwards.....	1244
2. Futures	1245
3. Options.....	1247
4. Swaps	1248
a. Interest Rate Swaps	1248
b. Foreign Exchange Swaps	1249
c. Commodity Swaps	1250
d. Credit Default Swaps	1250
B. Volume of Derivatives Contracts	1252
C. Debate Over the Value of Derivatives	1253
III. HISTORY OF U.S. DERIVATIVES REGULATION: CRISIS AND REFORM	1254
A. History of Derivatives Regulation	1254
B. The Fight Over OTC Derivatives Regulation	1257
C. The Pre-Financial Crisis OTC Derivatives Infrastructure	1260
IV. OTC DERIVATIVES AND THE FINANCIAL CRISIS.....	1262
A. The Role of Derivatives in the Financial Crisis	1262
B. Summary of Derivatives Regulation in the Dodd-Frank Act	1263
1. Overview of Dodd-Frank Act Derivatives Reforms.....	1263
2. Jurisdiction Over Derivatives Markets Post-Dodd-Frank Act	1265
C. A Coordinated International Response	1267
V. CLIMATE CHANGE AND DERIVATIVES	1269
11.2. DERIVATIVES: MARKET INFRASTRUCTURE	1271
I. INTRODUCTION	1271
II. MITIGATING CREDIT RISK: MARGIN AND CLEARING	1272
A. Initial and Variation Margin	1273
1. Initial Margin	1273
2. Variation Margin.....	1274
B. Use of Margin for Swaps Before the Dodd-Frank Act	1274
C. The Dodd-Frank Act's Margin Requirements for Uncleared Swaps	1275
D. Central Clearing	1276
1. What Does It Mean to Clear a Derivative?	1276
2. How Do Clearinghouses Mitigate Systemic Risk?	1278
a. Initial and Variation Margin for Cleared Swaps	1278
b. Clearinghouse Guaranty Fund and Assessments	1279
c. Regulation and Governance of Derivatives Clearinghouses....	1280
d. Multilateral Netting	1282
e. Portability	1283
3. Mandatory Clearing of Swaps	1284
a. The History of Clearing	1284
b. The Dodd-Frank Act's Mandatory Clearing Requirement.....	1284
c. Exceptions and Exemptions to Mandatory Clearing	1285
d. Criticisms of the Mandatory Clearing Requirement.....	1285
E. International Implementation	1286

III.	DEVELOPING A TRANSPARENT MARKETPLACE	1289
A.	Goals of Transparency	1289
B.	Pre-Trade Transparency: Mandatory Exchange Trading	1290
1.	Designated Contract Markets.....	1291
2.	Swap Execution Facilities.....	1291
3.	Made Available to Trade.....	1292
C.	Post-Trade Transparency: Trade Reporting	1293
1.	Providing the Regulators with Swap Data.....	1294
2.	Providing the Market with Swap Data	1294
3.	Block Trades	1295
4.	International Implementation	1295
11.3.	DERIVATIVES: BUSINESS CONDUCT AND MARKET INTEGRITY	1299
I.	INTRODUCTION	1300
II.	REGULATING THE KEY PARTICIPANTS	1301
A.	Swap Dealers and Security-Based Swap Dealers.....	1301
B.	Major Swap Participants and Major Security-Based Swap Participants.....	1303
C.	Regulatory Obligations of Key Market Participants	1303
1.	Fair Dealing.....	1304
2.	Swap Trading Relationship Documentation and Confirmations	1305
3.	Portfolio Reconciliation and Dispute Resolution	1305
4.	Capital Requirements	1305
5.	Risk Management, Portfolio Compression, and Conflicts Rules.....	1306
6.	Risk Exposure and Chief Compliance Officer Reports	1307
D.	Post-Dodd-Frank Act ISDA Protocols.....	1307
E.	Position Limits	1308
III.	MARKET INTEGRITY.....	1309
A.	London Interbank Offered Rate Manipulation	1309
1.	Background.....	1309
2.	LIBOR Misconduct	1310
3.	Reform.....	1313
B.	Foreign Exchange Rate-Rigging	1315
1.	Background.....	1315
2.	Alleged Manipulation	1316
3.	Private Litigation	1317
4.	Reform.....	1318
C.	Enforcement Under Title VII	1321
IV.	THE EXTRATERRITORIAL REACH OF TITLE VII	1322
A.	Why is Cross-Border Regulation Needed?.....	1322
B.	Cross-Border Application of Title VII	1323
1.	The CFTC's Cross-Border Approach	1323
2.	The SEC's Cross-Border Approach	1326
C.	Substituted Compliance	1326
PART XII.	SHADOW BANKING.....	1329
12.1.	SECURITIZATION	1331
I.	INTRODUCTION	1331
II.	SECURITIZATION'S RISE	1331
A.	The Growth of Securitization.....	1331
B.	Benefits and Logic	1334
C.	Legal Problems	1337

III.	PROBLEMS LEADING UP TO THE FINANCIAL CRISIS.....	1338
A.	Fragmentation of Functions.....	1338
1.	Yield Spread Premiums	1338
2.	Multiple Gatekeepers.....	1339
3.	Credit Rating Agencies	1340
4.	Troubled Mortgage Litigation.....	1342
B.	The Critique of Originate-to-Distribute	1348
IV.	KEY CHANGES IN THE DODD-FRANK ACT.....	1350
A.	Risk Retention Reforms.....	1350
B.	Loan-Level Disclosure Reforms	1352
C.	Consumer Protection Reforms	1354
D.	Credit Rating Agency Reforms	1355
V.	TRENDS IN SECURITIZATION AFTER THE DODD-FRANK ACT	1358
12.2.	MORTGAGE MARKETS AND THE GOVERNMENT-SPONSORED ENTERPRISES	1363
I.	INTRODUCTION	1363
II.	HISTORY OF THE U.S. MORTGAGE MARKET.....	1366
A.	The GSEs from the 1930s through the Financial Crisis	1366
B.	The GSEs and the U.S. Mortgage Market	1370
III.	CRITICISMS OF THE GSEs.....	1371
A.	Too Big To Fail Subsidy	1371
B.	Investment Portfolios and Other Prudential Concerns.....	1373
C.	Affordable Housing Goals.....	1376
IV.	THE GSEs IN CRISIS.....	1380
A.	The Housing and Economic Recovery Act	1380
B.	The GSEs and Shareholder Litigation	1383
C.	Government Conservatorship	1385
V.	THE FUTURE OF THE GSEs: PROPOSALS FOR REFORM	1387
A.	Conceptual Frameworks	1387
B.	Legislative Proposals.....	1391
VI.	COMPARATIVE APPROACHES TO HOUSING FINANCE	1392
12.3.	MONEY MARKET FUNDS	1395
I.	INTRODUCTION	1395
II.	THE EMERGENCE OF MONEY MARKET MUTUAL FUNDS	1396
A.	Historical Context.....	1396
B.	The Introduction of Rule 2a-7	1397
C.	Early Reactions.....	1398
1.	The Oregon Attorney General's Letter.....	1398
2.	Other Perspectives	1400
III.	THE GROWTH AND REFINEMENT OF MONEY MARKET MUTUAL FUNDS	1402
A.	Overview of Growth: 1980 to 2008.....	1402
B.	Evolution of SEC Oversight	1404
C.	Dealing with Investment Losses.....	1407
D.	Lehman Brothers's Failure and its Consequences	1408
IV.	MONEY MARKET MUTUAL FUNDS IN THE FINANCIAL CRISIS AND BEYOND.....	1409
A.	Policy Debates Over Reform	1409
1.	Floating the NAV	1409
2.	Imposing Liquidity Fees	1410
3.	Allowing Redemption Gates.....	1410
4.	Requiring a Loss-Absorption Capacity	1410
5.	Differentiating Between Types of Money Market Mutual Funds....	1411
B.	SEC Proposals and FSOC Interactions	1411

C. The 2014 Final Rule	1414
D. Developments Following the Financial Crisis	1417
E. Money Market Funds in the Pandemic	1418
12.4. SHORT-TERM WHOLESALE FUNDING	1423
I. INTRODUCTION	1424
A. Overview of Short-Term Wholesale Financing	1424
B. Mechanics of a Run.....	1425
C. The Financial Crisis	1426
II. SECURITIES FINANCING TRANSACTIONS.....	1427
A. Repurchase Agreements.....	1428
1. Repo Basics.....	1428
2. Bilateral Repo.....	1429
3. Tri-Party Repo.....	1430
4. General Collateral Finance Repo.....	1433
B. Securities Lending Transactions	1433
1. Transaction Basics	1434
2. Securities Lending During the Financial Crisis	1435
3. Post-Financial Crisis Landscape and Reform	1436
III. COMMERCIAL PAPER, PRIME BROKERAGE, AND DERIVATIVES	1437
A. Commercial Paper	1437
1. Basics of Commercial Paper	1437
2. Asset-Backed Commercial Paper Conduits.....	1438
3. Commercial Paper in the Financial Crisis.....	1439
4. Aftermath, Reforms, and the Pandemic	1440
B. Prime Brokerage.....	1441
1. Basics of Prime Brokerage.....	1441
2. Rehypothecation.....	1441
3. Prime Brokerage and the Financial Crisis.....	1442
4. Prime Brokerage Reforms and Remaining Risks	1443
C. Derivatives	1443
1. Loss of Derivatives Collateral.....	1443
2. Derivatives Runs as a Source of Contagion	1444
3. Accelerating Margin Calls	1444
4. Derivatives Reforms	1445
IV. ASSESSING THE REGULATORY RESPONSE	1445
A. Summary of Reforms Affecting Wholesale Funding Risk	1445
B. Mandatory Haircuts	1447
C. Title VIII of the Dodd-Frank Act	1448
D. Critiquing the Current Approach to Wholesale Funding.....	1448
E. Treasury and Repo Markets in the Pandemic	1450
GLOSSARY.....	1455
INDEX	1463