Chapter 9: Bank Regulation and Regulators

A. Introduction to Bank Regulation

Regulations are rules imposed by authorities that set standards for conduct. Regulations are established and enforced by government bodies and government-authorized entities. The primary purpose of banking regulation is to prevent market failure, the obviously undesirable situation in which a competitive market fails to function effectively. Prudential regulation , as we will discuss shortly, concerns regulating activities that promote banking stability. More specifically, banking regulation can seek to ensure the following, often conflicting and sometimes overlapping ends:

1. Safety, soundness and stability of financial institutions and markets
2. Efficient and competitive financial markets with integrity
3. Fairness, non-discrimination and transparency with enforceable contracts
4. Prevention of financial market fraud and theft
5. Prevention of criminal misuse of banks, including money laundering and tax evasion
6. Protection of consumers
7. Control of entry into banking markets
8. Appropriate allocation of credit and capital
9. Appropriate levels of real economic and financial market activities
10. Effectiveness of monetary and other government policies
11. Effective corporate governance, client confidentiality and maintenance of some degree of social responsibility

However, as we have discussed earlier, banks are often considered to be "special" relative to other economic organizations, and in need of special attention. Banks are tightly regulated because:

1. Banks are where the money is. It is simply easy for bankers to abscond with depositor funds or to otherwise defraud depositors and insurers.
2. Bank failures are costly to the financial and real sectors. Banking sector distress impairs spending in the real sector due to disruptions in credit provision and in the payments system. Bank clients and institutions with whom they transact cannot effectively conduct business and lose real wealth through asset value losses and illiquidity. Bank failures also disrupt or destroy long-standing credit relationships between distressed banks and their borrowers.
3. Banks and the banking industry are fragile by nature, due largely to high leverage, limited shareholder and managerial liability, risk of asset structure and interconnectedness.
4. Bank failures lead to hoarding of cash or other precious assets (e.g., gold), which diminishes productive activity.
5. Bailing out failed banks or otherwise mitigating the damages associated with bank failure is expensive.

Successful banking regulation prevents market failure, promotes macroeconomic stability, protects investors, depositors and other stakeholders, and mitigates the effects of financial failures on the real economy. Banking regulation can be used to improve market transparency. A good regulatory system will balance the needs for investors to be protected in a market with integrity against the restrictions, burdens, costs, and intrusions imposed by the regulation and regulators. Ultimately, the costs and burdens of regulatory systems are imposed on participants in the markets; investors and consumers ultimately bear most of these costs. Effective rule-makers will conduct cost-benefit analyses for their regulations and regulatory regimes.

Admati and Hellwig [2011] argue that the effectiveness of banking regulation is weakened and confounded by "the mixing of conflicting objectives. Concerns for the safety and soundness of the system are often diluted by attempts to mobilize bank funding for worthy purposes, concern for the global competitiveness of a nation's banks, and desire to use the industry's professional risk management. Such mixing has led to flawed regulation. There has also been a lack of clarity about what regulation is actually doing, and whether it is cost effective in addressing its objectives. Clearly, bank regulations objectives vary through time and around the world, and regulatory systems can be quite different."

The U.S. banking regulatory system evolved piecemeal over 225 years, suffered numerous crises and serves diverse objectives and constituencies. The system is fragmented, with multiple federal and state regulatory systems, distinct thrift and securities market regulators, etc. In the United States, as discussed in Chapter 2, the Federal Reserve System is the primary regulator for state-chartered member banks that are members of the Federal Reserve System, for bank and thrift holding companies, foreign subsidiaries, foreign banking organizations, operating in the U.S. and systemically important financial institutions. The OCC is the primary regulator of national banks and federal thrifts, federal branches of foreign banks and federally chartered thrift institutions. The FDIC is the primary regulator for state-chartered nonmember banks and state-chartered thrifts (GAO [2013]). The National Credit Union Administration (NCUA) is the primary regulator for federally insured credit unions. Nevertheless, there are many overlapping authorities.

Regulatory Approaches

Financial regulatory approaches around the world and across financial industries can be strikingly different despite the coordination efforts the BIS and other of global organizations. Regulatory authorities of most countries take some blend of the following two approaches to financial regulation:

- *Rules-based approach*, where authorities set forth specific and detailed prescriptive rules to which banking participants must adhere. Banking regulatory authorities taking this approach often focus on process and risk, where the authority considers whether there is a potential market failure or abuse that needs to be addressed and conducts an analysis to determine how to address the problem given the constraint of limited resources. Rules-based regulation is frequently implemented as a preventive mechanism, normally presuming that objective standards of sound banking behavior can be applied to achieve safety and efficiency. However, the rules-based is often associated with greater rigidity.
- *Principles-based approach*, where authorities set forth a small number of well-articulated regulatory objectives and principles, focusing on results and outcomes rather than processes, and granting regulatory authorities and business firm operating and compliance officers more judgment in ensuring that policy objectives are being fulfilled. However, principles-based regulation involves less certainty, lacking precise directives

about allowable activities, requiring more transparent, accessible, ongoing guidance from the regulatory authority.

While all regulatory authorities have used some mix of these two approaches, banking regulators often tend more towards the rules-based approach than other financial regulators such as in the brokerage or investment banking sectors. Even in the banking sector, approaches will differ, with capital requirements being more likely to be specified with very clear numerical standards whereas cyber-security or governance regulations are more likely to be principles-based.

Consider U.S. mortgage markets prior to 2008, when lending practices were largely constrained by high-level principles of engaging in safe and sound practices consistent with prudent underwriting standards. Mortgage underwriters at different banks maintained a wide variety of underwriters standards, many based on non-binding guidance from regulators or individual bank policy. Bank managers were granted substantial leeway in determining which underwriting practices were safe. Such flexibility of standards did make mortgage available to broaden homeownership, a government goal, and did allow for a more flexible and responsive mortgage market. But, in many respects, the U.S. mortgage market ultimately failed. Immediately after the financial crisis of 2008, U.S. regulators quickly began adding more rules-based regulation to the practice of mortgage underwriting, with very detailed requirements.

Among countries, the United States has tended to have more of a rules-based orientation while the United Kingdom, particularly with respect to its securities and investment banking regulation, has been the primary proponent of a principles-based orientation. Again, in the securities and investment banking sectors, Australia (Australia Securities and Investment Commission) and the Netherlands also employs a principles-based approach and has relatively few regulators. China employs a mix of both approaches in its securities sectors as it moves somewhat further away from a principles-based approach after its 2015 financial crisis.

Proponents of principles-based approaches argue that regulators waste less time on trivial rules-based minutiae and spend more time on meaningful deviations from appropriate practices. In addition, principles-based approaches can ease the compliance efforts of firms that engage in proper practices. On the other hand, some observers argue that principles based regulators (such as the U.K. Financial Conduct Authority) tend to find very few violations and respond to violations with a light touch. This raises the question of whether few violations actually occur under this approach or are simply not discovered. Principles based regulation might require more manpower and other regulatory resources to monitor and enforce, which might be in shortest supply when they are needed most. For example, such monitoring and enforcement problems might be most acute in a political environment where regulators are contemptuous of regulations or maintain close relationships with the firms that they monitor.

Market-Based Regulation

To this point, we have focused on government-based regulation of banking activities. However, at least to some extent, the market itself is capable of regulating banking activities and practices. The U.S. securities markets have always engaged in varying levels of self-regulation. In earlier chapters, we discussed banking coalitions and clearing houses that regulated their participants. The CFA Institute (2007) stated that "the overarching purpose of any self-regulatory group is to keep industry interests aligned with the public interest so as to avoid government intervention and the possibility of more-restrictive regulation." Major advantages to maintaining private regulatory bodies or self-regulation in financial markets might be as follows:

- Market participants have the most intimate knowledge of the markets to be regulated.
- The regulatory foci on developing best practices and effective monitoring and enforcement policies are based on economic and reputational self-interest.
- Governmental regulatory costs are reduced as they are passed on to the regulated market.

Nevertheless, self-regulation tends to be less common in banking industries than in securities industries.

Consider the problem of asymmetric information availability, arguably the most pressing issue in banking, which can be ameliorated with market-based measures such as reputation, monitoring, branding, bonding, independent certification, and various signaling mechanisms. While these market-based mechanisms are likely to be very important in a banking regulatory scheme, government-based regulation by mandating truthful information disclosure, enforcing antifraud regulations and working with a civil liability system can be at least a crucial supplement to market-based measures, particularly when dealing with criminal and unethical market participants. Truthful information disclosure confers significant social benefits to creditors, employees and consumers, adding to the significant private benefits taken by shareholders. Fraudulent disclosure distorts business practices, distorts competition, leads to contagion and inhibits economic learning (e.g., false information disclosures by one bank detract from investors' abilities to analyze another bank).

On the other hand, excessive or poorly implemented government-based banking regulation raises the cost of capital to business, drives capital and businesses to foreign markets and stymies economic growth.

Deregulatory Activity in the U.S.

Deregulatory activity since 1980 has been a significant effort of the U.S. Federal government, particularly in the periods 1981-1992, 2001-2007 and after 2016. These deregulatory episodes have been followed by credit booms then growing incidence of failure in the depository industries (e.g., the S&L crisis and the Financial Crisis of 2008-09).

Deregulation is not merely an elimination of existing regulations; it also takes the form of failure to vigorously enforce existing regulation. Presumably, regulatory agencies are created to serve the public good, to ensure that the interests of the diffuse general public are not overwhelmed by well-organized and financed financial institutions. But, sometimes, financial regulators are staffed with regulators who do not support the government's role in regulation. The Bush Administration has made special effort to appoint regulators that seem contemptuous of regulatory agencies. For example, the 2002 appointment of Paul Atkins to the 5-member SEC, which he criticized as "of, by, and for lawyers" should have been expected to be a blow to that regulator's ability to create effective regulations and to enforce them. Atkins, whose term expired in 2008, emphasized the markets can restore balance without undue regulatory involvement. Regardless of whether his beliefs are correct, he did not seem to have the mindset to be an effective proponent and innovator of regulations to serve the public good.

Similarly, Bush appointed James Gilleran to head the Office of Thrift Supervision in December 2001. At a press event in 2003, when four bank regulators held garden shears to represent their commitment to cut banking regulations, Mr. Gilleran brought a chain saw.[1] He cut 20% of the OTS staff through attrition by 2005, when he left to head the Federal Home Loan Bank of Seattle. His replacement at the end of 2005 had to go on a hiring spree to replace crucial enforcement staff that had departed. Gilleran argued that banks regulated by OTS do not have to comply with individual state lending laws. Since 2001, the Federal government has also inhibited the ability of states to regulate financial institution risk-taking and abusive lending practices. For example, in 2002 when Georgia passed a tough law restricting predatory lending, the OTS and the OCC (both in the U.S. Department of Treasury) argued that Georgia's law did not apply to their regulated institutions. Similar state measures and efforts were blocked by the federal government in North Carolina, New York and California.

Regulatory Capture

We might characterize the purpose of financial institutional regulation as to prevent market failure and to ensure safety and stability of and competition, fairness and transparency in markets, support real economic and financial market activities and ensure appropriate monetary policy. Thus, regulation is intended to ensure competition and transparency that serve the public good. However, effective regulation can be hampered by *regulatory capture*, the process by which regulation is implemented to unduly serve the interests of the regulated industry rather than that of the public good. More generally, regulatory capture arises when well-organized special interest groups exert undue influence in shaping public policy (e.g., see Stigler [1971]). For example, regulatory capture might occur if a banking association hires a former regulator who uses his influence to lobby regulators and even participate in the writing of banking regulations on behalf of banks that belong to the association. In fact, one might predict that a well-organized and concentrated smaller group with a larger per-member stake (e.g., a large corporation) will be more successful in effectively influencing regulatory outcomes than the far larger diffuse general public. Two important factors might support regulatory capture in financial regulatory institutions such as the Fed, FDIC, SEC or OCC: 1) the "revolving door" of employment by regulators and the private institutions that they regulate, and 2) the complexity of the regulations that they hand down, diluting popular understanding and dissent. For example, with regard to the first, the Project on Government Oversight [2013] found that “from 2001 through 2010, 419 former SEC employees filed at least 1,949 disclosure statements saying they planned to represent clients or new employers in matters pending at the S.E.C.”[2]

Costs of Regulation

Regulation is expensive. Consider the cost, for example, of Dodd-Frank, which has produced over 22,000 pages of law (about 2,300 for the law) and regulations. Grant (2012) estimated that regulatory compliance accounts for approximately 12% of bank operating expenses. However, some studies have found that find that costs ca. Good regulation is cost-effective. Banks incur costs from the imposition of regulations as do the regulators themselves.

[1] For a more substantive listing of regulatory relief, see the OTS Press Release for December 20, 2001 for an early round of Gilleran regulatory reductions:
http://www.ots.treas.gov/index.cfm?p=PressReleases&ContentRecord_id=9858ab4f-c947-469c-9a66-de557850f529&ContentType_id=4c12f337-b5b6-4c87-b45c-838958422bf3&YearDisplay=2001

[2] The number of filings probably understates the level of actual employment events by former S.E.C. employees because such disclosures are required only for the first two years after departing the S.E.C.

Regulatory systems need to be aware of cost-benefit tradeoffs of the various regulatory choices. Types of costs associated with regulation are:

1. *Direct costs*:
    - Costs of regulatory compliance: Interpreting and meeting reporting and disclosure requirements, meeting standards
    - Costs imposed on the regulator and supervisors
2. *Indirect Costs*:
    - Costs of distortions and sub-optimal changes in operations and of corporate structure (e.g., mergers) to reduce or spread costs of regulation
    - Opportunity costs associated with being precluded from engaging in profitable activities
    - Cost of competition reduction caused by barriers to bank entry
    - Costs associated with banks seeking the least burdensome regulators

These costs impair profitability of regulated firms, and many are ultimately passed on to the real economy. Even with the financial market crisis of 2008, the U.S. financial regulatory systems are often considered to be among the most highly developed, comprehensive, effective, and mimicked in the world. But these systems are far from perfect, and numerous studies have been conducted to more closely examine the deleterious effects of financial regulation. For example, consider the costs of capital requirements versus the costs of reserve requirements. Capital requirements necessitate shareholders, and perhaps subordinate and other creditors maintain investment with the bank, while many other prudential requirements are more costly. Cost-effectiveness considerations strongly favor capital requirements relative to other approaches. While reserve requirements help banks maintain liquidity, they impose opportunity costs that detract from more profitable uses of money such as profitable lending.

B. Prudential Regulation

Global and national banking systems are both essential to world and national economies. But, banking systems are fragile. Banking crises impose tremendous costs on society, far more than on the banking institutions themselves. Hence, prudential regulation is necessary to avoid such costly crises. Micro prudential regulation is concerned with stability of individual banks while macro-prudential regulation is concerned with the stability of the banking system as a whole.

The purpose of prudential regulation is to ensure the safety and soundness of the banking system and its individual banks. Prudential regulation is directed at risk management and risk mitigation. There are a variety of prudential actions that regulators can undertake to mitigate bank risk-taking and its effects. The following lists and categorizes types of prudential regulation that can be designed and implemented by government regulators, banking or clearing associations, or even the bank itself in some instances. That is, regulations that seek to accomplish the following might be considered prudential regulation:

<u>Prohibiting Banks from Taking Risks</u>

1. *Simply enact laws or write regulations to prohibit certain bank activities that are deemed to be risky:* For example, during most of the latter half of the 20th century, deposit banks were simply prohibited from engaging in investment banking operations. Usury regulations set

limits on borrowing and/or lending interest rates, and on whether banks can impose or pay interest rates at all.

Diminishing Bank Incentives to Take Risks

1. *Regulate bank licensing and encourage charter value enhancement*: Set and enforce standards for new banks and for continued bank operations. Limit bank charters to parties of substance and character. Increasing charter value makes banks more valuable, inhibiting their willingness to risk losing such value.

   Governments control entry into the banking industry through the granting of licenses, generally referred to as bank charters. For those fortunate to be granted them, charters provide profit-making (rent-taking) opportunities in a highly regulated monopolistic industry.

   Charter value is enhanced when fewer charters are granted. Nevertheless, charters are valuable assets, though this value is lost if the bank should fail. Charter value and its risk of loss provide a disincentive to bank risk-taking (Marcus (1984) and Keeley (1990)). Charter value is an intangible asset that enhances shareholder wealth, but only in the event that the bank remains solvent, providing an incentive to shareholders to avoid the risk of insolvency.

   Using Tobin's q ratio, generally defined as the market value of the firm divided by its replacement cost of assets (Brainard and Tobin (1968)) to proxy for monopoly rents, and ultimately for charter value, Keeley (1990) found that banks with greater monopoly power and higher charter value did engage in less risk-taking. Marcus (1984) argued that as deregulation increased competition in the 1980s, bank charter value declined and banks responded by increasing their risk-taking activity, causing them fail at higher rates. Furlong and Kwan (2006) argued that charter value in banks increased between the early 1990s and mid-2000s due to bank industry consolidation, growth in fee- and securitization-based revenues, increased efficiencies largely from new technologies and scope economies and a changing regulatory environment.[3]

2. *Impose capital requirements on banks*: Establish minimum equity to total asset ratios and maintenance of other capitalization ratios. For example, Rampini, Viswanathan and Vuillemey (2020) find that financial institutions with higher equity levels hedge more and control more diligently for risk, and that their willingness to do so declines or increases as their levels of equity capital declines or increases. Generally speaking, subordinate debt issues by banks may or may not play a role in capital ratio calculations, but do play a role in protecting depositors and the insurer if depositors have priority of claims in a bank resolution.

   Capital requirements (capital adequacy) are the regulator's key tool for maintaining bank safety. Capital ratios indicate the commitment of the bank's shareholders and other investors to bank safety and to fulfilling the bank's obligations; essentially, capital requirements force shareholders to "put skin in the game." Presumably, skin in the game forces risk-seeking shareholders to accept the consequences of unsuccessful risk-taking. In addition, capital adequacy protects banks from failure, provides protection from banking crises and associated economic distress, and protects other bank constituents, including customers, creditors and

[3] Saunders and Wilson [2001], also find that charter values vary over time, but in contrast with earlier studies, found that risk-taking by banks may increase charter values during business upswings while decreasing charter values during business downswings, suggesting that higher charter values reflect increased growth opportunities for banks, particularly during business cycle upswings.

government insurers. Banks are required under Basel III and domestic regulations to maintain minimum capital requirements. Capital requirements are normally expressed as ratios to *risk weighted assets*, which are assets multiplied by constants determined by a function of the perceived asset risk levels. Figure 1 depicts capital requirements as set forth by Basel III.

Capital is a costly resource to banks and their shareholders, leading them to want to minimize capital levels. Banks seek increased profits by minimizing their use of capital. On the other hand, bank capital is important to the safety all of the other bank constituents. Regulators permit banks to raise capital through a number of forms, treating each of these forms differently for regulatory purposes.

Tier 1 capital (CET1 = Common Equity/Risk Weighted Assets) is the core regulatory indicator of bank financial safety. The basic capital requirement for banks and investment companies is 8%, including a minimum of 4.5% Common Equity Capital Tier 1. The 8% minimum must include a sum of 6% CET1 plus Additional Tier 1 capital, where the additional Tier 1 capital can include derivative or hybrid instruments such as contingent convertibles or warrants that can be converted into CET1 capital. The remainder of the 8% basic requirement can be rounded out with Tier 2 capital, which includes revaluation reserves and subordinated debt, meaning unsecured non-deposit debt with call restrictions. In addition to the requirements depicted in Figure 1, banks are required to maintain a Tier 1 capital to average total assets ratio (Tier 1 leverage ratio) of 4%. In order to make dividend and managerial bonus payments, share repurchases along with other discretionary payments, banks are required to maintain capital buffers as depicted (though more complicated) in Figure 1. *Systemically important* banks (roughly speaking, "too big or too interconnected to fail") are subject to additional capital requirements, to be discussed later.

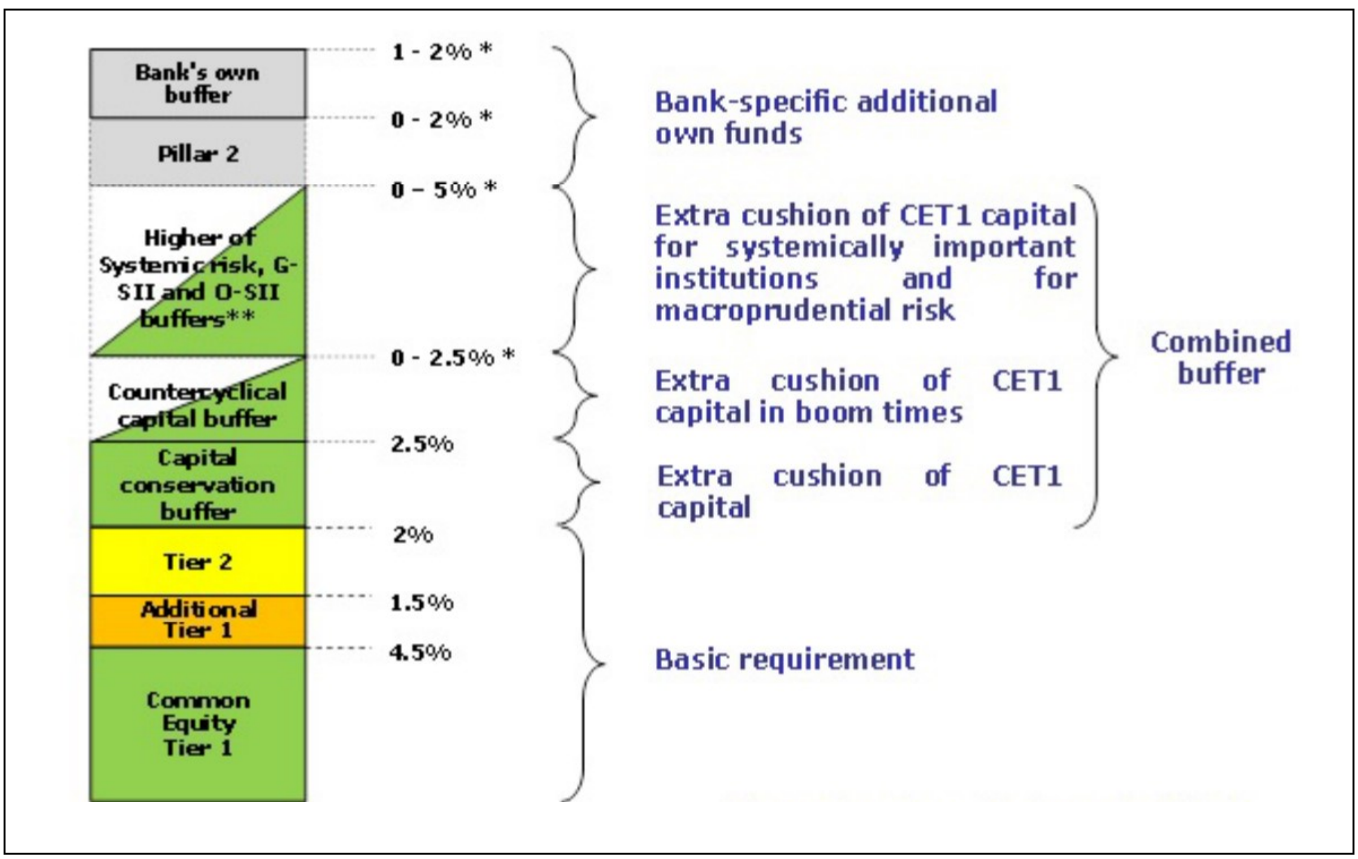

Figure 1: Basel III Capital Requirements
Source: European Commission Memo, Brussels, 16 July 2013: Capital Requirements - CRD IV/CRR – Frequently Asked Questions

3. *Extended liability*: Initiate or increase personal liability for bank officers, directors and even shareholders, or otherwise penalize them in the event of excess risk-taking.

   Moral hazard and bank failures and crises caused by excessive managerial risk-taking and exacerbated by government deposit insurance and "too-big-to-fail" policies have directed much anger at the banking system. It appears that banks and their managers have strong incentives to assume irresponsible risks to potentially benefit themselves while leaving creditors and taxpayers (providing government deposit insurance) left "holding the bag." Journalists, politicians and advocates for more responsible financial institutions have noted that that failing banks and their managers seem to receive more favorable treatment than taxpayers, consumers and bank clients, even, in some cases, calling for jail terms for managers of failed banks.

   What more can regulators do to mitigate the moral hazard problem inherent in banking? In several economies, some limited liability banks managers have faced more substantial consequences for their risk-taking, that is, forcing managers and shareholders to put "more skin in the game." For example, since 2015, bank managers in the U.K. have been potentially subject to bonus claw-backs in event of misconduct. Going further back in time, presidents of New England banks between 1867 and 1880 were substantial shareholders of shares subject to *double liability*; managers were liable for their personal stock investment plus an amount equal to the paid-in capital associated with their stock in order to satisfy bank obligations (See, for example, Macey and Miller (1992) and Anderson, Barth and Choi (2019)). Extended liability in the U.S. during 1867 to 1880 could lead to the seizure of additional assets by the U.S. Comptroller of the Currency from individual manager-shareholders. Such seizures to satisfy creditor obligations could be of an amount up to the value of the initially paid-in capital. Such seizures were essentially a form of double liability, which was intended to reduce the incentive for managers to take irresponsible risks.

   While limited shareholder liability and limited downside risk have long been hallmarks of the American corporate charter, banks and other companies through history have often been chartered differently. Obviously, this has been true for U.S. investment banks, which were generally partnerships through the end of the 20th century. In addition, between 1863 and 1933 (actually, as early as 1808 for certain states), shareholders of U.S. nationally chartered banks and state-chartered banks in certain states could be held liable beyond their equity shares. In the event of insolvency, a receiver or the U.S. Comptroller of the Currency had the power to assess the value of the bank's asset holdings and revalue outstanding shares. In this event, shareholders could be assessed an additional amount based on this assessed share value (technically, par value or paid-in capital), from which payments would be made to creditors. In this extended liability system, bank shareholders and managers may have had stronger incentives to monitor and manage bank risk more carefully and responsibly, as they were liable for not just their initial investment but additional losses as well. Shareholders also had an incentive to better monitor bank managers and the bank balance sheet. Grossman

(2001) found that banks were less likely to fail in states requiring bank shareholders to be subject to double liability.

Other countries have maintained alternative liability rules for shareholders of banks, particularly for those banks that issued their own currency. For example, when the City of Glasgow Bank failed in 1879, calls were levied on shareholders at £2750 for each £100 share. Brazil still maintains double liability for certain banks. As we mentioned above, certain states maintained different extended liability provisions between 1865 and 1933, with some maintaining single liability and others maintaining as much as triple or unlimited liability. Shareholder insolvency has the potential to limit the success of a double liability system in terms of amounts recovered by bank receiverships. For example, when Banco Kentucky failed in 1931, the receiver assessed shareholders, $350,000 but insolvency of many of shareholders resulted in a collection of less than $113,000.

Double liability, while still limited liability, has the potential to be a reasonably cost-effective means to expose shareholders to more of the downside risk associated with moral hazard. First, shareholders still face liability proportional to their investments, rendering it unnecessary for them to evaluate their shares based on the wealth levels of their fellow shareholders (See Chapters 2 and 3 concerning the rationale for limited liability shares). Should appropriate escrow measures be taken to ensure liability obligations are fulfilled, litigation costs associated with attaching shareholder personal assets can be mitigated. On the other hand, Anderson, Barth and Choi (2019) find evidence that extended liability has the potential to actually promote bank risk-taking if better-protected depositors respond by making less effort to monitor managers and their risk-taking activities.

4. *Impose deposit insurance caps, co-insurance and risk-based insurance premiums*: to ensure that depositors bear some risk and have incentives to monitor banking activities since deposit insurance tends to intensify the moral hazard problem. In addition, risk-based deposit insurance premiums will increase the cost of deposit insurance to higher-risk banks, perhaps diminishing the moral hazard problem.

   Deposit insurance is intended to ensure that banks maintain sufficient liquidity to avoid bank runs. The U.S. innovated government-administered insurance during the Great Depression through the Federal Deposit Insurance Corporation. Germany provides for both statutory and voluntary insurance coverage through four dour different agencies. Most countries that provide government-administered deposit insurance impose caps (limits) on account coverage. For example, the U.S. (FDIC) maintains a cap of $250,000, Germany (BVR) €100,000, Canada (CIDC) CAD100,000, Italy (FITD) €100,000, though Chile imposes no cap.

   While deposit insurance is among the most effective mechanisms protecting against bank runs and bank panics, it can have perverse effects on moral hazard incentives, in some cases, encouraging excess risk-taking. For example, depositors whose accounts are government-insured are likely to monitor their banks less carefully, increasing the temptation for the banks to engage in more risky behavior. This leaves the deposit insurer to play the essential monitor role. In addition, deposit insurance can further remove shareholders from the adverse consequences of risk-taking by propping up the bank when it should be closed. That is, deposit insurance can prevent competition from driving inefficient banks from the marketplace Nevertheless, once banks find themselves in financial distress, deposit insurance tends to reduce the prevalence of bank runs when depositors have faith in the insurer's willingness to make good on the bank's liabilities. Hence, voters and the government have the difficult job of deciding whether deposit insurance prevents bank crises by assuring depositors that they need not engage in a bank run or increases the risk of bank failure by encouraging risk-taking activity. This debate is still very active. Insurance limit mechanisms such as caps, co-insurance and risk-based premiums will tend to encourage depositors to bear some risk with their deposits and maintain incentives to monitor banking activities. Regardless, deposit insurance, regulation and careful supervision should be regarded as being complimentary activities.

Risk-based deposit insurance premiums will increase the cost of deposit insurance to higher-risk banks, seeking to diminish the scale of the moral hazard problem.

5. Encourage Bail-in, Discourage Bail-out: Bail-outs worsen the moral hazard problem, so they are to be avoided. On the other hand, a bail-in typically converts a creditor's obligation into equity, thereby decreasing debt and increasing capitalization ratios. We will discuss this issue in greater detail shortly.

Bank bail-ins and bail-outs are intended to prevent contagion, the scenario in which a failing bank reneges on its obligations to other banks, causing them to fail. Bail-ins and bail-outs prevent or delay the collapse of a distressed or failing bank. In a bail-out, the rescuer, normally other banks, a central bank or the government injects capital from its own resources to bail out the bank, often accepting an equity stake in return. Since taxpayer funds are often used in a government-financed bail-out, and because of the obvious potential for exacerbating the moral hazard problem, bail-outs tend to be extremely unpopular. Furthermore, bail-outs, or even the prospect of a bail-out distorts competition and undermines market discipline. In a bail-in, the bank deploys the capital of its unsecured creditors to rescue the failing bank, including subordinate bondholders and sometimes including depositors, and often converting their obligations to equity stakes to fulfill capital requirements. Bail-ins are normally associated with resolution and restructuring proceedings, and tend to be more popular in some respects because they use investor money rather than taxpayer funds.

In 2013, Cyprus initiated a well-known and controversial €7 billion bail-in by requiring large depositors (deposits greater than €100,000) and other creditors to accept write-offs on their obligations from the Bank of Cyprus. The bank was recapitalized, with 37.5% of uninsured deposits being converted into voting shares of the bank and remaining uninsured deposits were temporarily frozen to prevent them from leaving the bank, and then subjected to a hair-cut of 47.5%. At roughly the same time, the country's second largest bank, Cyprus Popular Bank, also failed, and was merged into the Bank of Cyprus. The Cypriot government also participated in a €1.5 billion bail-out, while becoming the major shareholder in the bank.

The Cyprus bail-in was not the first or the last of government-imposed bail-ins. In 2011, Denmark unsecured creditors bailed-in their obligations (depositor obligations exceeding €100,000) in order to restructure the failing Amagerbanken. Uninsured depositors and unsecured senior creditors took haircuts of approximately 41%. Even though the bank was rather small (€4.5 billion), this bail-in made it significantly more difficult for Danish banks to raise money in bond markets as ratings agencies downgraded Danish bank bonds and yields increased.

In 2014, the €85 billion failing family-owned Portuguese Banco Espirito Santo was split into Novo Banco, a "good" bridge bank with "good assets" and a "bad bank" with "bad assets" that remained with Banco Espirito. The healthy banking operations that were placed with Novo Banco were ultimately sold by the Bank of Portugal with its solid assets to Lone Star, a U.S. equity fund. The toxic assets that remained with Banco Espirito were funded with the bank's subordinate debt and a portion of its senior debt. Essentally, Banco Espirito junior creditors and, to a lesser extent, senior creditors bailed in the Banco Espirito in order to fund the successor banks. Market reactions to the Portuguese bail-in were somewhat muted relative to the Cyprus and Denmark bail-ins because the Portuguese bail-in did not impose losses on uninsured depositors or senior creditors (See Schäfer, Schnabel and di Mauro (2016)).

Improve Transparency and Information Flows

1. *Impose reporting and disclosure requirements*: Transparency tends to reduce the incidence of moral hazard. Audited financial statements, frequent and detailed disclosures to regulators, stress tests and living wills (all detailed in a later chapter) serve to mitigate moral hazard problems.

2. *Encourage market discipline*: Encourage markets that penalize moral hazard or opacity by devaluing bank securities. For example, regulators can require banks to issue subordinate debt (junior debt, which subordinate in priority in the event of failure) at market interest rates, which can be structured to absorb losses that would otherwise be suffered by depositors or the insurer. The process of actually using subordinate or other debt to restructure a failing bank's balance sheet is called a bail-in.

Regulate Banking Activities and Oversight

1. *Encourage loan and insurance covenants*: Restrictive covenants can be written and enforced to prevent the bank from paying excessive dividends, engaging in risk-taking or otherwise prevent the bank from transferring wealth from creditors to shareholders. Lenders and insurers regularly impose such restrictions.

   This asset substitution problem might be avoided or mitigated through the use of bond contract covenants prohibiting such risky activity. That is, bond contracts could be written to preclude banks from engaging in risky asset substitution and engaging in other moral hazard-related activities. As a matter of empirical evidence, we can observe that more highly regulated industries such as utilities (prior to deregulation) and depository institutions tend to be more highly leveraged, suggesting that regulations tend to mitigate the asset substitution effect. Similarly, firms generating large cash flows in more mature industries tend to be more leveraged, reducing the temptation for managers to use free cash flow for perquisite consumption as required payments to bondholders reduce the cash flows that otherwise might be available for managerial perquisite consumption (see Jensen [1989]). In addition, banks issuing subordinate debt (uninsured, normally at market rates of interest that reflect bank risk) tend to operate at lower risk levels due to the higher market interest rates imposed on banks with higher levels of operating risk.

   Bank loans tend to have more detailed covenants than publically traded bonds. Bonds are generally expected to monitor its borrowing clientele to enforce these covenants. Most corporations seeking to issue publically-traded bonds already have bank on their balance sheets, so success in marketing bonds to the general public normally is conditional on the firm having bank loans, which serve as a sort of certification or signal. When bank loans are not be sold by issuing banks, banks retain their incentives to monitor borrowing firms in order to produce the private information on borrower creditworthiness. On the other hand, when such privately issued loans are sold in significant quantities, as prior to the 2008 financial crisis involving the shadow banking system, monitoring and other private information-gathering ceases or is lost and the market is less able to gauge borrower creditworthiness.

2. *Impose exposure, activity and affiliation restrictions*: including lending restrictions, diversification requirements, prohibitions on non-bank financial activities such as proprietary investing, prohibitions on affiliating with stock brokerage firms and other higher-risk institutions.

3. *Impose governance requirements*: impose requirements on governance structures such as organizational structure and domicile, risk management committees, director requirements, lending officers, etc., can serve to limit moral hazard and the behavior of managers.

C. Essential U.S. Banking Legislation

The purpose of government regulation and its enforcement is to accomplish what the market on its own cannot or otherwise does not: the establishment of a set of rules intended to maintain competition, stability, efficiency and credibility in the banking system. American banking is highly regulated, despite the many misgivings towards regulation in the counrtry. The following list describes important banking legislation in the United States:

Pre-National Banking Era

To an extent, the history of banking is a history of prudential banking regulation, which in turn is a history of reactions to bank panics and crises (See Calomiris and Gorton (1991)). The United States evolved from a confederation of distinct colonies, then a confederation of states, with much suspicion towards a federal government. State governments played primary roles in the regulation of banks from the start and continued to do so through the Great Depression, after over a century of debilitating banking crises.

We discussed the roles and history of the Bank of the United States and its successor, the Second Bank of the United States earlier as an effort to play significant financial roles at the national level. When the Second Bank's charter lapsed in the 1930s, the “free banking” doctrine prevailed, leaving regulatory power to the individual states. As we discussed in Chapter 2, the states geographical areas of bank operation to state borders and many restricted branching. Thus, the U.S. was home to a very large number of very small banks, each close to its customer base, many of which that issued their own currencies whose values fluctuated against one another. Obvious problems that might arise in such a system were mitigated because the U.S. economy was highly segmented and localized (see Busch [2009]).

In addition, recall our Chapter 8 discussion of the Suffolk System of New England banks functioning from 1824-58 that established the first U.S. regulated banking system. Other regional regulatory and safety fund consortiums existed as well throughout the eastern U.S. such as New York and the Ohio River region during this era. Clearinghouse systems also regulated their members beginning with the New York Clearing House Association established in 1853 (See Chapters 1, 2 and 8), setting capital requirements, requiring audits of its member banks and penalizing members for violating rules, much as central banks and government insurers now do.

Pre-Depression Era Banking Legislation

The United States resumed its rapid industrialization after the Civil War ended in 1865, and banking operations grew considerably with improved communications and transportation technology. The National Currency Act of 1863 and the National Bank Act of 1864 set the stage for financing this growth, but for the numerous crises and panics that would accompany. After the crash of 1907, which required the efforts of J.P. Morgan to resolve, implementation of the The Federal Reserve Act of 1913 is often considered to be one of the important factors to help resolve or prevent crises and panics.

The National Currency Act of 1863 and the National Bank Act of 1864

The United States at present maintains a dual banking system, thanks to the National Bank Act of 1864. Banks can be chartered at both the state and federal levels. Today approximately two-thirds of commercial banks are state chartered; the remainder are federally chartered. However, prior to 1864, all U.S. banks (other than the two short-lived Banks of the United States) were state chartered. During the periods when the Banks of the United States were not operating, there was no national currency. Each bank issued its own currency, and in many instances, the currencies became worthless. It was impossible for consumers to determine from those issued by thousands of banks were still legitimate and would be acceptable as payment of debts. Counterfeiting was rife during this "Wildcat Banking" era.

In order to mitigate these currency and banking problems, to help fund the Union's conduct of the Civil War and to eliminate many of the state banks themselves, the National Currency Act of 1863 (and its revised version, the National Bank Act of 1864) established a federal banking system with its own uniform currency. The acts created the office of the Comptroller of the Currency (known then as the Administrator of National Banks) as a division of the U.S. Treasury Department. It also made it prohibitively expensive for state banks to issue their own currency by imposing a ten percent tax on state bank notes. As a result, the state chartered banks focused on the acceptance of demand deposits and flourished as the use of checks increased in the latter part of the nineteenth century. Although the National Currency Act solved the problem of having many illegitimate currencies, it set the stage for many battles between state and federal regulators as the U.S. moved from the Free Banking Era into the National Banking Era extending to 1913.

The Federal Reserve Act of 1913

The Federal Reserve Act was enacted in 1913 as the next major piece of banking legislation following the National Bank Act. Its passage was due to a series of bank runs and panics which persisted throughout the 19th and early 20th Centuries. The act provided that all federally chartered banks would be required to join the Federal Reserve System (which would also serve as the central bank for the U.S. and provide for a national network for check clearance) created by the act. State chartered banks had the option to join the system. Its two main purposes were to establish a single U.S. currency and to improve stability in the banking system. The act also authorized both the Federal Reserve System and the Comptroller of the Currency to monitor member banks. Members of the Federal Reserve System were charged high fees and subjected to strict reserve requirements. Because of these restrictions, many state banks opted not to join the Federal Reserve System.

Depression Era Banking Legislation

The Banking Acts of 1933 (Glass Steagall)

The Crash of 1929 and the Great Depression resulted in the failure of thousands of banks in the U.S. In order to restore faith in the banking system and prevent a similar crisis from occurring again, the Glass Steagall Act was passed in 1933. The Act also sought to redirect bank capital from stock market speculation towards building productive capacity. The repercussions of this act are still felt in the United States today, despite the fact that many of its provisions have been repealed. The law fundamentally altered the banking system in the U.S. This legislation, which was enacted in reaction to a crisis, had unforeseen consequences that would later haunt the banking system. There were three very important features of the legislation.

First, the Federal Deposit Insurance Corporation (FDIC) was created to provide federal insurance on bank deposits (subject to a $250,000 ceiling at present). All federally chartered and mutual savings banks were required to have FDIC insurance for their deposits. Also, state chartered banks were allowed to have FDIC insurance. Most state chartered banks took advantage of this provision. Separately, the Federal Home Loan Bank Board (FHLBB) and the Federal Savings and Loan Deposit Corporation (FSLIC) were created in 1932 and 1934 to regulate and insure the thrift industry. However, federal deposit insurance was not costless. Banks were required to both pay fees and fulfill certain requirements. Although, the FDIC successfully restored faith in the banking system, it was a major cause of the crisis in the U.S. banking system in the 1980s.

A second important provision of the Glass-Steagall Act was the imposition of restrictions on the activities of commercial banks. It prevented commercial banks from underwriting securities, to engage in proprietary trading (excepting certain U.S. government and municipal bonds and real estate loans) and owning risky securities such as corporate stocks and bonds. The prohibition against owning securities prevented universal banking in the U.S. This feature of Glass-Steagall in particular has had a profound and unforeseen impact not only on the banking industry, but U.S. corporate ownership in general. For example, in Germany, banks play an important role in controlling and monitoring activities of business firms in which they maintain equity investments. This does not occur with great frequency in the United States. These regulations separating financial functions were largely in response to the fact that many banks in 1933 had lost much of depositors' money security losses related to their securities underwriting services. Recently, many of the restricted activities have either been relaxed by legislation or circumvented by commercial banks. Presently, banks through holding companies, own mutual funds, brokerage services, and even underwrite securities.

The third important provision of the Glass-Steagall Act placed various regulations on the interest rates member banks were allowed to pay on demand deposits, implemented through what would be known as Regulation Q. The intent of the regulations was to reduce the perceived destructive competition for demand deposits among banks, increasing banks' need to seek higher-return, higher-risk investments, which many observers believed contributed to the bank crises. However, an unforeseen result was to place the U.S. banking industry at a competitive disadvantage relative to other types of financial institutions such as money market mutual funds and relative to banks outside of the United States. Reg Q also allowed for interest rate ceilings to be imposed on member bank time deposits and loans. These restrictions were gradually rescinded decades later, fully by 2011 due to the variety of market distortions that they caused.

Deregulation and Reregulation

The Depository Institutions Deregulation and Monetary Control Act of 1980

Interest rate ceilings applying to both commercial banks and thrifts were imposed by *Regulation Q*, a Federal Reserve regulation authorized by the Glass-Steagall Act of 1933 and the Banking Act of 1935. In addition to allowing the Federal Reserve system to impose capital restrictions, Regulation Q allowed for interest rate ceilings to be placed on bank and thrift deposits and loans. These Depression-era restrictions, originally imposed to limit destructive competition by banks competing for demand deposit accounts and to prevent small banks from holding deposits in large banks offering higher rates of interest. However, Reg Q reduced bank spreads and liquidity and caused a general flow of cash out of U.S. banks and thrifts to non-bank financial institutions and foreign banks. Reduced spreads and bank profit reductions worsened considerably in the inflationary periods of the 1960s, 70s and early 80s as interest rates rose to reflect and combat inflation rates.

To address these problems, two major deregulatory acts were signed into law by Presidents Carter and Reagan. First, the Depository Institutions Deregulation and Monetary Control Act of 1980 (DIDMCA) and the Garn-St.Germain Depository Institutions Act of 1982 were intended to establish a new regulatory framework for banks and thrift institutions and to address apparent causes of distress in the industries. It was clear that extensive regulation in the past had inhibited the ability of banks and thrifts to compete against non-bank financial institutions and against foreign banks. This new legislation was intended to create a "level playing field" facilitating improved competition for the banking industry.

The Depository Institutions Deregulation and Monetary Control Act of 1980 had a number of important provisions for the bank and thrift industries:

- Eliminated most of *Regulation Q*
- Allowed banks and thrifts to extend adjustable-rate mortgages
- Allowed banks to merge
- Raised deposit insurance caps from $40,000 to $100,000
- Allowed thrifts to offer interest bearing checking accounts
- Required the Fed to price its various financial services competitively against providers in private sectors
- Required the Fed to establish reserve requirements for all eligible financial institutions

By eliminating the Fed's pricing advantages in the provision of its banking services, this Act has been said to have ushered in the modern U.S. banking era.

The Garn-St. Germain Depository Institutions Act of 1982

Because long-term mortgages were financed primarily with short term deposits, interest rate increases in the 1970's and early 1980's caused the bank and thrift industries to experience significant difficulties with maturity gaps. In 1982, the Garn-St. Germain Depository Institutions Act reduced capital requirements and allowed banks and thrifts to make higher risk loans and investments than previously allowed, including mortgages to less credit-worthy borrowers and for commercial real estate ventures.

Unfortunately, DIDMCA and Garn-St. Germain, geared towards deregulation had important unforeseen consequences, particularly with respect to the thrift industry. This deregulatory legislation enabled thrift institutions to raise and invest funds in manners that were previously not allowed. Clearly, opportunities for thrifts to increase risk-taking behavior had arisen as a result of this deregulatory activity in the early 1980's. These two acts, by allowing thrifts and banks few restrictions on risk-taking help set the stage for the crisis in the thrift and banking industries in the late 1980's.

The Financial Institutions Reform, Recovery and Enforcement Act of 1989

During the 1980's thrifts failed at a rate unprecedented since the Great Depression of the 1930's. Two landmark pieces of legislation were passed to deal with the crisis. The first piece, the Financial Institutions, Reform, and Recovery of 1989 (FIRREA) was geared primarily towards the thrift industry which faced the greatest peril. The major provisions of the legislation were to:

1. Increase funding to either sell-off or close down bankrupt thrifts
2. Rearrange the regulatory and insurance structure of thrifts
3. Restrict the asset structure of thrifts:
   a. 70% of thrift assets must be in residential mortgages and mortgage-backed securities
   b. Severe restrictions on commercial real estate lending
   c. Speculative grade bond investment was significantly curtailed
   d. Place limitations on lending to a single borrower
4. Provide for higher Capitalization Ratios
5. Significant penalties for managers who engage in prohibited activities which put FDIC at risk
6. The ability for regulators react quickly to "significant" rather than "substantial" dissipation of assets.

The Federal Deposit Insurance Corporation Improvement Act of 1991

The Federal Deposit Insurance Corporation Improvement Act (FDICIA) was passed to prevent a repeat of the 1980's thrift industry failure in the commercial banking industry. FDICIA was of a nature similar to FIRREA, though tailored to the commercial banking industry as FIRREA was to the thrift industry. FDICIA was concerned primarily with linking FDIC insurance premiums to institution risk as well as linking capital ratio requirements of banks to risk. In particular, capital standards were redefined to include core capital (shareholder equity) and supplemental capital (subordinated debt and loan loss reserves). Capital requirements were also increased based on a formula based on the riskiness of bank assets. Assets were to be weighted by risk for purposes of computing a required risk-adjusted ratio (8%) of total capital to assets. For example, cash, U.S. Treasury securities and GNMA mortgage-backed securities were regarded as riskless for purposes of the risk-weighting scheme. In addition, the Act requires FDIC to resolve failed institutions using the least costly method to the Deposit Insurance Fund (DIF).

The Financial Modernization Act of 1999

The Financial Modernization Act of 1999 (also known as the Gramm-Leach-Bliley Act) further contributed to consolidation of the financial services industries. This act formally permitted commercial banks, investment banks and insurance companies to consolidate, repealing the most important provisions of Glass-Steagall. While many combinations had already occurred before passage of this act, their legality was questionable. The pending combination of Citigroup (commercial banking) and Travelers (insurance, investment banking and stock brokerage) accelerated and contributed to passage of this Act. In addition, the Gramm-Leach-Bliley Act authorizes the Federal Reserve has the authority to regulate financial holding companies.

<u>Post-"Great Recession" Regulation</u>

The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010

Intended to "promote the financial stability of the United States by improving accountability and transparency in the financial system, to end "too-big-to-fail," to protect the American taxpayer by ending bailouts, to protect consumers from abusive financial services practices." We summarize a few of Dodd-Frank's more important and relevant provisions here.

While this Act applies largely to Wall Street firms rather than to depository institutions, it still has many important banking provisions. First, the Act defined a "too-big-to-fail" cut-off at $50 billion (raised in 2018 to $250 billion) for banks. A "too-big-to-fail" bank is more formally known as systemically important financial institution (SIFI), an institution whose failure has the potential to trigger a financial crisis. Dodd-Frank requires all such large banks to submit detailed resolution plans, called “living wills,” which describe how they would unwind their balance sheets should they become insolvent.

Second, Dodd-Frank imposed a weakened version of the so-called *Volcker Rule*, regulating and limiting banks with respect to proprietary trading, investment in and sponsorship of hedge funds and private equity funds. Dodd-Frank requires financial institutions with more than a billion dollars in assets to disclose the structures of all incentive-based compensation arrangements in order to determine whether compensation structures encourage inappropriate risk-taking. The Act made permanent the increase to $250,000 for FDIC deposit insurance coverage and eliminated the Office of Thrift Supervision. In addition, larger banks were subject to limitations on payment processing fees and fees on debit cards (The Durbin Amendment).

Dodd-Frank established the Consumer Financial Protection Bureau (CFPB) that supervises the provision of consumer financial products and services. Finally, the Act created two Department of Treasury units, Financial Stability Oversight Council and the Office of Financial Research, which would monitor systemic risk. The Financial Stability Oversight Council is responsible for identifying and responding to threats to U.S. financial stability and for promoting market discipline. The Office of Financial Research provides research support to the Council, the Treasury and to other financial regulators.

Critics of Dodd-Frank object that major components of the law are complicated and costly to banks, adversely affects the competitiveness of U.S. banks, and, particularly due to the Volcker Rule, imperils liquidity in financial markets. For example, required stress tests were very costly, with large banks required to conduct them spending a combined $29 billion in 2015 on consultants alone (Citigroup alone spent $180 million on consultants during the second half of 2014) to conduct and react to them (Tracy 2016). Many bank managers complained that they cannot add any new products, services or lines of business because of burdens imposed by Dodd-Frank (See Peirce, Robinson and Stratmann (2014)). As of early 2020, major provisions of this Act will continue to be under fire as U.S. political ground has shifted towards a significant deregulation of the U.S. banking system. However, it remains difficult to predict the actual outcomes of likely changes brought on by future deregulatory efforts.

D. Bank Regulators

Banking regulations seek to satisfy a number of conflicting objectives, including supporting the real economy through banking payments and credit facilities, maintaining economic stability, protecting consumers, managing failure, supporting monetary objectives, strengthening deposit insurance, etc. We discussed banking regulation objectives earlier in this chapter.

International cooperation in regulation is essential due to the globalization and interconnectedness of banking industries. We discussed earlier the important roles played by Basel and the BIS in this respect. Here, we discuss regulatory systems in individual countries. Banking regulators normally oversee bank licensing (e.g., in which activities and localities the bank may function), chartering (recognition by authorities as an entity), bank requirements (e.g., capital requirements, financial reporting, governance) and supervision.

U.S. Regulators

The regulatory system in the U.S. is complicated by the existence of both individual state and federal regulators, with federal regulation enforced by three separate federal entities, the FRS, FDIC and OCC. A fourth, the Consumer Financial Protection Bureau (CFPB), was created in the aftermath of the financial crisis of 2007-8, but under attack more recently by the Trump administration. Most U.S. banks are regulated by more than one of these government regulators. At the federal level, thrifts are regulated by the National Credit Union Association and the Office of Thrift Supervision.

The Federal Reserve System (FRS)

As we discussed earlier, the 12 Federal Reserve Banks in the United States operate check clearing facilities, route wire transfers, conduct bank examinations, provide discount loans to member banks and perform research activities and other services. The Federal Reserve system regulates state-chartered member banks, bank holding companies (most larger banks are held by BHC's), foreign branches of U.S. national and state member banks, Edge Act Corporations and state-chartered U.S. branches and agencies of foreign banks.

FDIC

The Federal Deposit Corporation (FDIC) was established in 1933 to insure deposits of member banks. Since passage of the Financial Institutions Reform and Recovery Act of 1989, bank and thrift deposits have been insured through the Deposit Insurance Fund (DIF) and its merged predecessors, the Bank Insurance Fund (BIF) and the Savings Account Insurance Fund (SAIF). FDIC was intended to create security for depositors maintaining accounts in banks, and to prevent the instability that arises when depositors react to a crisis by withdrawing their deposits, restricting money supply needed for economic activity. Currently, member bank depositors' accounts are insured by FDIC for up to $250,000. As the deposit insurer, and the bearer of costs due to illiquidity and insolvency, FDIC is empowered to monitor the activities of member banks through examinations and other mechanisms, to recommend closure of the institution to the OCC and to take other remedial action where needed.

OCC

The Office of the Comptroller of the Currency (OCC), established by the National Currency Act of 1863 as the first of the U.S. federal regulators, is a sub-agency of the U.S. Treasury Department. Its primary functions are to charter, regulate, supervise and close national banks. Although all national banks in the U.S. must be members of the Federal Reserve System, the OCC regulates all banks that have "National" or "N.A." in its name. The OCC maintains a nationwide staff of bank examiners that conducts on-site reviews of national banks and federal savings associations. The OCC can take supervisory actions against those institutions that fail to comply with relevant laws and regulations or that otherwise engage in unsound practices (OCC [2013]). The OCC can also remove officers and directors, negotiate agreements to change banking practices, and issue cease and desist orders as well as civil money penalties.

CFPB

The Consumer Financial Protection Bureau (CFPB) was created by the Dodd–Frank Wall Street Reform and Consumer Protection Act of 2010 to focus on consumer protection in the financial sector. The "brainchild" of now U.S. Senator Elizabeth Warren, the Bureau's priorities were mortgages, credit cards and student loans, and more generally, pursuing actions against predatory lenders, securities brokers and debt collectors running afoul of regulations since July 2011. The bureau functions as an independent entity within the Federal Reserve System, and seeks to provide information to consumers to facilitate financial decision-making. The burau has drawn much controversy, with many officials seeking to weaken or eliminate it. After Donald Trump became president, he nominated as acting director (a disputed presidential power in this instance) former congressman Mick Mulvaney, who had earlier referred to the Bureau as a "sad, sick joke." Mulvaney, who professes to seek to end "regulation by enforcement," requested an operating budget of zero for the Bureau.

State Regulators

In the U.S., FDIC regulates state-chartered banks that do not belong to the Federal Reserve System. However, each of the 50 states maintains one or more banking regulators. For example, California's banking regulatory authority is its Department of Business Oversight and Massachusetts maintains its Division of Banks. With recent weakening of consumer protections at the U.S. federal level, state regulations are likely to play an enhanced role in protecting consumers.

E.U. Regulators

As discussed earlier, the E.U. also maintains multiple regulatory authorities, both at the European Economic Area (E.E.A.) and national levels within each member country. In some respects, this duplication is analogous to the dual system of regulation in the U.S. The European Banking Authority (EBA) is the umbrella banking regulatory agency of the E.U. The EBA was established in 2011, at which time it inherited all of the tasks and responsibilities of the Committee of European Banking Supervisors (CEBS). Again, most EU member countries have retained roles in banking supervision. For example, The Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht, or BaFin) is the German financial regulatory authority. It operates under the supervision of the German Federal Ministry of Finance and supervises banks, insurance companies and the securities industry in Germany.

The U.K., Japan and China

The U.K. currently maintains two primary financial regulators over financial service firms, known as the *Financial Conduct Authority* (FCA) and the *Prudential Regulation Authority* (PRA). Funded by the institutions that it regulates, the FCA seeks to proactively ensure that consumers are protected in the marketplace and that markets maintain integrity and function well. The FCA is an independent regulator, funded by the financial institutions that it regulates, supervised by the Treasury, which oversees the U.K. financial system. We will discuss the FCA again later as a regulatory of U.K. investment banks and IPOs. The PRA, an arm of the Bank of England, seeks to proactively ensure the safety and soundness of financial institutions. Both regulators regulate and supervise commercial banks, securities firms and insurance companies, and, since 2012, have served to replace the failed *Financial Services Authority* (FSA).

The *Financial Services Agency* (FSA) is the Japanese primary regulatory authority of financial institutions, including banks. The Bank of Japan (Japan's central bank) facilitates the regulatory process by conducting bank examinations. The *China Banking Regulatory Commission* (CBRC) regulates the banking system of the People's Republic of China except for the special administrative regions of Hong Kong and Macau.

<u>The BIS and Basel Committee</u>

The primary regulators for banking systems within individual countries are the central banks of those countries. We will discuss additional economy-wide regulators in a later chapter. Unfortunately, as world banking markets have become more integrated, cooperation among individual governments and central banks have lagged. Hence, a number of international organizations have been created to deal with such problems. For example, the Bank for International Settlements (BIS, founded in 1930 as a stock corporation) is the oldest international organization existing to promote international monetary and financial cooperation among central banks. The BIS is owned by central banks and acts as a bank for these central banks (it performs no services for individuals or corporations). The BIS plays an important role in promoting safety in the international banking arena. The primary functions of the BIS are to act as a center to perform and promote international economic, monetary and bank research, to provide a forum for discussion and cooperation among central banks and to act as a counterparty (intermediary) for central bank financial transactions.

The *Basel Committee*, founded in 1974 by central bank governors of Group of Ten countries, meets regularly (four times per year plus task force meetings) at the BIS in Basel, Switzerland to form and disseminate recommendations on bank supervision activities and standards for best practices in banking.[4] The two basic objectives of the Committee are to ensure that bank supervision activities are effective and that no international banks evade appropriate supervision. The Committee's policy initiatives are not sanctioned by any legal authority, but its recommendations are given serious consideration by individual country central banks. The Committee reports to the central banks of its member countries, seeks and generally receives endorsements of its initiatives.

One of the more important concerns of the Basel Committee has been *capital adequacy standards.* The Basle Accord of 1988 (*Basel I*) enacted by the Group of Ten countries was intended to provide for capital and credit risk measurement systems and to set minimum capital standards for banks operating in the international arena. As adopted by participating countries,

[4]The "Group of Ten Countries" have been expanded to include Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, the Netherlands, Spain, Sweden, Switzerland, the United Kingdom and the United States. Countries are represented by officials from their central banks and/or others with authority and responsibility for the prudent supervision of banking business in that country.

the 1988 Basle Accord provided that banks engaging in cross-border transactions are required to maintain a minimum capital standard of 8%. In addition, such banks are expected to maintain a core capital ratio of 4% (shareholder equity and reserves divided by a risk-based weighted total of assets where riskier assets receive a higher weight) that may be accompanied by a supplemental capital ratio of 4% (subordinated debt such as market-traded bonds divided by a risk-based weighted total of assets). Most individual nations have adopted these standards for banks with international activities as well as for those with only domestic activities. These standards were to be in effect by the end of 1992.

The focus of the 1988 Accord was credit risk. However, many international banks were maintaining substantial exposure in currencies, equities, derivative securities, traded debt instruments and commodities. The Accord was amended in 1996 to require banks to implement internal portfolio models appropriate to the wider array of banking activities to compute capital requirements. Among the most commonly implemented of these models is the *Value-at-Risk* (*VaR*) model described below.

In 1999, the Committee began a series of meetings leading to the implementation of a new set of capital adequacy standards. The new directives are centered around "Three Pillars" of an effective capital framework:

1. Minimum capital requirements, expanding on the standards set forth in 1988,
2. Effective supervision, and
3. Market discipline to improve disclosure and encourage sound bank practices

The primary intent of the new Accord (*Basel II*) first published in 2004 was to acknowledge the significant changes in banking practices, financial markets and supervisory practices undergone since 1988 and to adopt more flexible and risk-sensitive measures and regulatory frameworks. The new Accord focuses on banks' internal risk measurement systems rather than a single "one size fits all" system. The new Accord also provides new supervisory guidelines and allows for financial markets to play an enhanced role in bank discipline through the pricing of bank securities.

Basel III (or the Third Basel Accord), agreed to in 2010-11 and to be phased in from 2013 to 2019, seeks to:[5]

- improve the banking sector's ability to absorb shocks arising from financial and economic stress, whatever the source,
- improve risk management and governance, and
- strengthen banks' transparency and disclosures.

Basel III focuses on bank capital adequacy (i.e., equity capital relative to risk-weighted assets), stress testing (discussed shortly), and market liquidity risk. Capital requirements were set at 4.5% to risk-weighted assets in 2011, plus a discretionary up-to 2.5% counter-cyclical buffer (during periods of high credit growth), which exempts the bank from certain supervisory mandates. Furthermore, the Accord intends to reform target:

[5] See the Bank for International Settlements, http://www.bis.org/bcbs/basel3.htm.

- bank-level, or micro-prudential, regulation, which will help raise the resilience of individual banking institutions to periods of stress.
- macro-prudential, system wide risks that can build up across the banking sector as well as the pro-cyclical amplification of these risks over time.

The two approaches to supervision are intended to be complementary, as greater resilience at the individual bank level reduces the risk of system-wide shocks and micro-prudential regulation hedges against banking system risk.

Exercises

1. The United States has maintained a "rules-based" approach to securities regulation while the UK has been progressing to a "principles-based" system of securities regulation. Both countries, particularly the U.S. bend more towards a rules-based approach to banking regulation.
   a. Consider the rules-based and principles-based regulatory approaches to traffic speed limits. How might speed limit regulations be phrased in either case?
   b. Why might rules-based speed limit regulations be more difficult to implement?
   c. Why might principles-based speed limit regulations be more difficult to enforce?

2. Chapter 8 and this chapter have discussed several scenarios in which non-government regulatory bodies (e.g., clearinghouses, safety fund consortiums) maintain systems to regulate their member banks. We also discussed market-based regulation. What might be some of the disadvantages to privatization of banking regulation?

3. Subordinated bank debt (bonds), unsecured (uncollaterized), uninsured debt without repayment rights until after depositors are paid in the event of bank failure, is used in some measures of bank capitalization and a potential contributor to market-based discipline (see, for example, Gorton and Santomero [1990]). Describe how the use subordinate debt by banks to raise capital can play an important role in reducing bank moral hazard problems.

4. Why might the prospect of bail-ins as a means to rescue failing banks tend to discourage bank deposits and drive up CD rates and the cost of capital to banks?

5. Exercise 7.2 directed the reader to determine whether a bank's stakeholders would prefer a safe residential real estate mortgage portfolio or a risky portfolio commercial real estate positions. Suppose that the bank in Exercise 2 has a charter value of $100 million, which could be carried on the balance sheet as an intangible asset, but is available to shareholders only if the bank remains solvent. Do each of the parts of Exercise 2 again assuming that the bank has $100 million in charter value, which disappears if the bank fails. Be certain to add charter value to total bank value in each outcome during which the bank remains solvent.

6. What are the primary objectives of government deposit insurance in a banking system?

7. Since 1863, bank organizers have a choice as to whether to obtain a state or federal charter to operate a new bank. Some observers complain that this choice increases the risk of banks and the banking system. How might you support this argument?

8. Why was the banking sector so stable during the three decades after World War II?

Solutions

1.a. Rules based: Do not exceed 55 miles per hour. Principles based: Do not drive faster than is necessary to maintain safety and fuel economy.

b. In setting speed limits, rules-based regulations might need to specifically distinguish between driving conditions, road conditions, light conditions, vehicle type, driver experience, visibility, road surface conditions, traffic, and so on. Such conditions complicate the rule-setting process, and lead to more complicated sets of rules.

c. Enforcement officers and traffic-court judges will need to interpret vague rules contingent on situations and conditions, and likely leave it to case law or drivers themselves to determine speed levels that are safe.

2. Regulations can apply only to banking members who voluntarily join the regulated body. Regulations will normally not help non-banks (e.g., the general public) damaged by violations of a bank since they are not participants of the regulated body unless the regulatory bodies explicitly provide for compensation systems. Harmed members of the consortium will have no recourse against outside parties. Private banking regulators might be subject to more conflicts of interest than their government counterparts. Self-regulation can easily be created to serve as barriers to entry in the market, reducing competition in banking, just as in a government dominated regulatory system. Private regulators do not have as much power to enforce regulations as does a government. For example, private regulators cannot imprison their members or enforce subpoena power.

3. Subordinate debt, unsecured and, more importantly, not covered by deposit insurance, subjects the issuing bank to submit itself to analysis by the investing community, including rating agencies. This market-based research reduces information asymmetries between the bank and the investing public. Since the debt is uninsured, the bank will be forced to pay risk-adjusted market rates of interest to issue subordinated debt. Thus, as the bank increases its risk-taking activity, it is forced to pay higher interest rates on its capital, thereby reducing the moral hazard problem. An interesting outcome of regular subordinate debt issuance is that higher interest rates will be associated with higher-risk banks.

4. Bail-ins imply that unsecured creditor obligations in failing banks are at risk. Depositors are unsecured creditors. This means that the depositor's claims, including CD holders might find their claims being converted to equity and being used to prop up or rescue the failing bank.

5. First, construct appropriate pro-forma balance sheets for each of the two investing scenarios under each of the two outcomes. An appropriate set of balance sheets is given below in the table. Now, from calculations in the table, we find the expected values as in the following:

a. $E[A_A] = (.98 \times 1{,}160) + (.02 \times 1020)$ million = 1,157.2 million
b. $E[A_B] = (.5 \times 1{,}300) + (.5 \times 900)$ million = 1,100 million
c. \$950 million × (1+.04) = 988 million
d. Shareholders stand to gain under the safer investment scheme, \$169.2 million versus \$156 million under the safer investment scheme, or a net of \$13,300,000.
e. Uninsured depositors also stand to gain \$44 million more under the safe investment scheme, as expected deposit value increases from \$944 million under the riskier

investment strategy to $988 million under the safe investment strategy. Add to this $44 million the shareholder gains which is $13,200,000 = ($169,200,000-$156,000,000) in order to obtain is $57,200,000, which is the total gain to bank asset value associated with the safer investment scheme. Thus, charter value can reduce the moral hazard problem, induce shareholders to prefer less risk and to be less costly to a deposit insurer. The following table illustrates this exercise:

Pro-Forma Balance Sheets: Investment in Safe Mortgage Portfolio (Scenario A)

$millions

	Outcome 1:			Outcome 2:	
	Assets	Capital		Assets	Capital
		Debt	988.0		Debt 988
		Equity	172.0		Equity 32
Totals	1,160.0		1,160.0	1,020.0	1,020

$$E[A_A] = (.98 \times 1,160) + (.02 \times 1020) = 1,157.2$$
$$E[D_A] = (.98 \times 988) + (.02 \times 988) = 988$$
$$E[E_A] = (.98 \times 172) + (.02 \times 32) = 169.2$$

Pro-Forma Balance Sheets: Investment in Risky Equity Portfolio (Scenario B)

$millions

		Outcome 1:		Outcome 2:	
	Assets	Capital		Assets	Capital
		Debt	988.0		Debt 900
		Equity	312.0		Equity 0
Totals	1,300.0		1,300.0	900	900

$$E[A_B] = (.5 \times 1,300) + (.5 \times 900) = 1,100$$
$$E[D_B] = (.5 \times 988) + (.5 \times 900) = 944$$
$$E[E_B] = (.5 \times 312) + (.5 \times 0) = 156$$

Table 1: Bank Investment Alternatives and the Asset Substitution Problem

6. First, to protect the stability of the banking system. Second, to protect depositors, sometimes with an emphasis on protecting small depositors.

7. By extending a choice of state or federal charter applications, prospective bankers have a choice of state or federal regulators. This choice might lead to a competition among regulators to have more banks under their own regulatory control. One way for regulatory agencies to compete for banks under their purview is to offer lax regulations so that the regulatory system that imposes the least regulatory burden attracts the largest number of banks. As a side note, most countries do not offer competing regulatory systems.

8. The banking environment was quite stable for the first three decades after World War II, characterized by intense regulation, especially in the U.S., localized banks facing limited

competition in both the U.S. and Europe, limited growth in innovation and technology, and fixed interest and exchange rates.

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Appendix A: Additional U.S. Banking Legislation

The most essential U.S. banking legislation is introduced in Section 9.C. Here, we introduce additional U.S. banking legislation.

Pre-Depression Era Banking Legislation

The McFadden Act of 1927

The McFadden Act (1927) required all banks to obey the restrictions of the states in which they operated and prevented banks from branching across state lines without approval from the involved states. Most states placed restrictions on both the number of and geographical location of bank branches. The intent of the law was to prevent national banks from having substantial competitive advantage over state banks. Many states allowed a bank to have only one branch. And those that were allowed multiple branches were rarely allowed to operate in more than one state. This type of state regulation explains the existence of the many thousands of separately operated banks in the U.S. through much of the 20th Century. The state regulations on S&Ls have traditionally been less restrictive. The McFadden Act was largely successful in preventing any competitive advantage for national banks over state banks. In fact, it served to substantially eliminate most competition faced by members of the banking system. Recently, many of these restrictions have been relaxed in order to promote more competition among banks and S&Ls and to U.S. banks to compete more effectively in global markets.

Depression Era Banking Legislation

The Federal Credit Union Act of 1934

The Federal Credit Union Act of 1914 authorized federally chartered credit unions to grant secured and unsecured loans to its members, invest in U.S. government and agency debt issues, FDIC, FSLIC and NCUA insured accounts.

The Banking Act of 1935

This Act formally established the Federal Open Market Committee (FOMC) as an independent entity to buy and sell debt instruments on behalf of the Treasury to aid in regulating the economy. In addition, this Act removed the U.S. Treasury Secretary and the Comptroller of the Currency from the Board of Governors of the Federal Reserve System.

Post-Depression Regulation

The Federal Deposit Insurance Act of 1950

The Federal Deposit Insurance Act (FDIA), following up on Glass-Steagall, set forth a comprehensive system to insure deposits. The Act set standards for qualifying banks to insure their deposits and for resolving distressed banks. It also established the Bank Insurance Fund (BIF) and the Savings Association Insurance Fund (SAIF) (merged in 2006 into the Deposit Insurance Fund (DIF)), determined insurance assessments to be paid by insured banks and set standards for termination of deposit insurance.

The Bank Holding Company Act of 1956

This act required that all bank holding companies seek approval from the Federal Reserve Board before purchasing either banks or non-bank businesses. In related legislation, the Bank Merger Act of 1960 provided that nationally chartered banks must seek approval from the Comptroller of the Currency to engage in a merger and member state chartered banks must seek similar approval from the Federal Reserve Board. An amendment to this act was passed in 1966 to permit the Fed to approve mergers which reduced competition in the industry if such a merger would produce benefits to the public which outweighed the costs of reduced competition. The act was further amended in 1970 to reduce the abilities of to compete in non-banking industries. Banks had been diversifying into new areas of business to improve their profitability, breaking down the separation between banking and other areas of commerce.

The Savings and Loan Holding Company Act of 1967

This act authorized the Federal Reserve to monitor businesses of savings and loan companies even if they were unrelated to depository or banking activities.

The Consumer Credit Protection Act of 1968

The purpose of this bill, also known as the Truth in Lending Act was to require that banks clearly specify the rights and responsibilities of their borrowers. This act was later amended by the Fair Credit Reporting Act of 1970 and the Fair Credit Billing Act of 1974 to allow access by borrowers to credit records and to provide a mechanism for billing disputes.

The Community Reinvestment Act of 1974

This act, along with the Equal Credit Opportunity Act of 1974, was intended to prevent discrimination on the basis of age, race or national origin. It required that banks not discriminate on the basis of neighborhoods in which prospective borrowers lived.

The Electronic Funds Transfer Act of 1974

The Electronic Funds Transfer Act of 1974 was intended to organize action to deal with the increasingly expensive payments system. The major provisions of this act were to establish a national commission on Electronic Funds Transfer, to authorize the Federal Reserve banks, FDIC, the Federal Home Loan Bank Board, the Comptroller of the Currency and NCUA to institute and enforce regulations for electronic funds transfers. For example, Regulation E requires that customers using EFTS must receive statements, prescribes limits to customer liability and institutes measures intended to ensure customer privacy, etc.

Equal Credit Opportunity Act of 1976

This act prohibits loan discrimination on the basis of race, color, religion, sex, marital status, and age.

Community Reinvestment Act of 1977

This act requires banks and other lenders to offer loans in markets they otherwise might avoid, in particular, in all segments of the communities in which they are chartered, including low- and moderate-income neighborhoods. The act also prohibited discriminatory lending practices such as redlining.

The International Banking Act of 1978

The International Banking Act of 1978 requires that domestic agencies, branches and commercial lending facilities of foreign-owned banks be federally supervised and subject to various Fed requirements such as maintenance of required reserves. Such institutions must carry FDIC insurance, and register with the U.S. Department of Treasury.

The Humphrey-Hawkins Act of 1978

This act requires the Chairman of the Board of Governors of the Federal Reserve to report twice annually to Congress on the progress of the Fed, its monetary policies and its objectives.

The Monetary Control Act of 1980

The Monetary Control Act of 1980 required the Fed to price its various financial services competitively against providers in private sectors and to establish reserve requirements for all eligible financial institutions. By eliminating the Fed's pricing advantages in the provision of many banking services, this act ushered in the modern banking era.

The Depository Institutions Deregulation and Monetary Control Act of 1980 (DIDMCA)

In addition to easing various restrictions on thrift institutions, DIDMCA phased out deposit interest rate ceilings, eliminated state usury ceilings on mortgages and for business and agricultural loans over $25,000. The Act subjected both non-member and member banks to Fed reserve requirements. All depository institutions would be provided access to the Fed’s discount window. DIDMCA also required the Fed to establish a system of fees for various services provided to depository institutions.

<u>Deregulation and Reregulation</u>

The National Depositor Preference Amendment of 1993

This amendment to the FDI Act of 1950 provides statutory priority to domestic deposit liabilities over other general creditors of a failed bank.

The Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994

This act repealed the ban on U.S. interstate banking.

The Financial Modernization Act of 1999

The Financial Modernization Act of 1999 (also known as the Gramm-Leach-Bliley Act) further contributed to consolidation of the financial services industries. This act formally permitted commercial banks, investment banks and insurance companies to consolidate, repealing the most important provisions of Glass-Steagall. While many combinations had already occurred before passage of this act, their legality was questionable. The pending combination of Citigroup (commercial banking) and Travelers (insurance, investment banking and stock brokerage) accelerated and contributed to passage of this Act. In addition, the Gramm-Leach-Bliley Act authorizes the Federal Reserve has the authority to regulate financial holding companies.

<u>Post-"Great Recession" Regulation</u>

The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010

Intended to "promote the financial stability of the United States by improving accountability and transparency in the financial system, to end "too-big-to-fail," to protect the American taxpayer by ending bailouts, to protect consumers from abusive financial services practices."

While this Act applies largely to Wall Street firms rather than to depository institutions, it still has important banking provisions. First, the Act defined a "too-big-to-fail" cut-off at $50 billion for banks. A "too-big-to-fail" bank is more formally known as systemically important financial institution (SIFI), an institution whose failure has the potential to trigger a financial crisis. The 2018 Economic Growth, Regulatory Relief, and Consumer Protection Act raised this limit to $250 billion, reducing the number of systemically important banks from 38 to 12. Second, the Act imposed a weakened version of the so-called *Volcker Rule*, regulating and limiting banks, their affiliates and non-bank financial institutions supervised by the Fed with respect to proprietary trading, investment in and sponsorship of hedge funds and private equity funds. In addition, larger banks were subject to limitations on payment processing fees and fees on debit cards. The Act created the Financial Stability Oversight Council and the Office of Financial Research, which would monitor systemic risk.

Critics of Dodd-Frank object that major components of the law are complicated and costly to banks, adversely affects the competitiveness of U.S. banks, and, particularly due to the Volcker Rule, imperils liquidity in financial markets. As of early 2018, major provisions of this Act are likely to be under fire as U.S. political ground has shifted towards a significant deregulation of the U.S. banking system. However, it remains difficult to predict the actual outcomes of likely changes brought on by deregulatory efforts.

The JOBS Act of 2012

As lawmakers attempted to hasten improvement of the U.S. economy following the "Great Recession," regulatory progress after Dodd Frank included efforts intended to reduce the substantial costs on raising capital. For example, President Obama signed into law the Jumpstart Our Business Startups (JOBS) Act in 2012. The JOBS Act was intended to facilitate the so-called emerging-growth companies (capitalizations less than $1 billion) by creating a “mini-registration” process, and allowing for crowd-funding offerings (less than $1 million) with eased reporting requirements. The SEC followed with amendments to Rule 506 of Regulation D and Rule 144A, to permit small investors to participate in such “unregistered offerings” along with the previously allowed accredited investors (investors with income levels exceeding $200,000 or net wealth exceeding $1,000,000) and qualified institutional buyers. Such investments by non-accredited investors would be limited to the smaller of $2000 or 5% of annual income of net worth.

The Economic Growth, Regulatory Relief, and Consumer Protection Act of 2018

Following up on Trump's campaign promise to repeal and replace Dodd-Frank, this Act was intended to provide for regulatory relief, particularly for small banks, and for certain consumer disclosure provisions. The Act redefined the "too-big-to-fail" cut-off at $250 billion for banks, reducing the number of systemically important banks from 38 to 12, and subjecting only the larger banks to stress testing requirements. It also eliminated the Volker Rule for banks with less than $10 billion in assets.