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Understanding the Effects of Certain Deposit Regulations on Financial Institutions’ Operations

Findings on Relative Costs for Systems, Personnel, and Processes at Seven Institutions

Consumer Financial Protection Bureau

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Executive Summary

Consumer financial markets do not always operate efficiently and fairly. Well-designed regulations can help enhance market efficiency and fairness without imposing undue burdens. Such regulations benefit consumers, responsible firms, and society more broadly. This report, "*Understanding the Effects of Certain Deposit Regulations on Financial Institutions' Operations: Findings on Relative Costs for Systems, Personnel, and Processes at Seven Institutions*," is a step by the Consumer Financial Protection Bureau ("CFPB" or the "Bureau") in an effort to collect and evaluate information on the benefits, costs, and impacts of regulations.

A critical part of the Bureau's mission is to make regulation more effective without imposing undue costs.[1] To that end, the Bureau seeks to deepen its – and the public's – understanding of how markets work and how regulations affect markets. These effects can be very difficult to trace and discern since market outcomes are determined by many influences other than regulation. In this foundational study (the "Study"), we concentrate on a subset of the direct and immediate effects of regulation – the operational cost of compliance at financial institutions. Regulations also have significant benefits for consumers, financial institutions, and markets – but those benefits are not the subject of this Study.

By improving our and the public's capacities to describe and measure immediate effects of regulations on institutional operations, we seek to strengthen our ability to avoid imposing unnecessary operational costs. Moreover, since regulations' immediate operational effects are

[1] The Bureau's mission statement reads in full: "The CFPB is a 21st century agency that helps consumer finance markets work by making rules more effective, by consistently and fairly enforcing those rules, and by empowering consumers to take more control over their economic lives." In addition, Section 1021(b)(3) of the Dodd-Frank Act (DFA) assigns to the Bureau five objectives, including ensuring that "outdated, unnecessary, or unduly burdensome regulations are regularly identified and addressed in order to reduce unwarranted regulatory burdens."

deeply intertwined with regulations' broader impacts on consumers, financial institutions, and markets, we also hope to improve our ability to maximize beneficial impacts on consumers and markets through this Study.

We sought to make progress on three goals with the Study:

- **Build knowledge** about the extent and sources of compliance costs that may be associated with regulations that the Bureau inherited;
- **Improve** the Bureau's and the public's abilities to describe and measure costs to comply with existing or potential new regulations; and
- **Refine** the Bureau's and the public's abilities to identify meaningful opportunities to reduce or avoid imposing unnecessary operational costs.

The report proceeds in three major sections: Methodology (Section 2), Key Findings (Section 3), and Potential Implications (Section 4).

Methodology

Section 2 of the report details the methodology we developed to collect and analyze data on compliance operations and costs. Gathering data on compliance costs is challenging. Banks generally do not track their full costs of compliance, and the relevant information is often scattered across several departments and many employees. Past studies have highlighted major challenges in producing reliable data on compliance costs for many different regulations or large numbers of institutions.

To try to address these challenges, we narrowed the scope of the Study to particular regulations and products, adopted a case study method rather than a broad survey, and conducted the case studies through in-depth, on-site interviews at each participant institution. Within the scope, we sought to achieve three objectives: distinguish incremental operating costs of regulation from baseline costs (i.e., costs that institutions would incur in the absence of regulations), cover all major sources of compliance cost, and measure those costs consistently within each institution and across institutions.

STUDY SCOPE

The Study focused on the costs banks incur to comply with the regulations that the Bureau inherited and that govern consumer deposit-related products and services. Specifically, we studied the compliance costs associated with **checking accounts, traditional savings accounts** (e.g., statement/passbook savings)**, debit cards, and overdraft programs** (e.g., overdraft coverage for ATM and debit card transactions). We focused on the operational activities and costs to administer these products and services in compliance with **Regulations DD** (implementing the **Truth in Savings Act**)**, E** (**Electronic Fund Transfer Act**)**, P** (**Gramm-Leach-Bliley Act financial privacy requirements**), **V**, and certain sections of the **Fair Credit Reporting Act** (or, as a whole, the "in-scope regulations").[2] The Study did not cover compliance costs associated with laws outside the scope of the Study (such as mortgage lending laws or Bank Secrecy Act).

KEY CONCEPTS

We define key concepts used in the Study as follows:

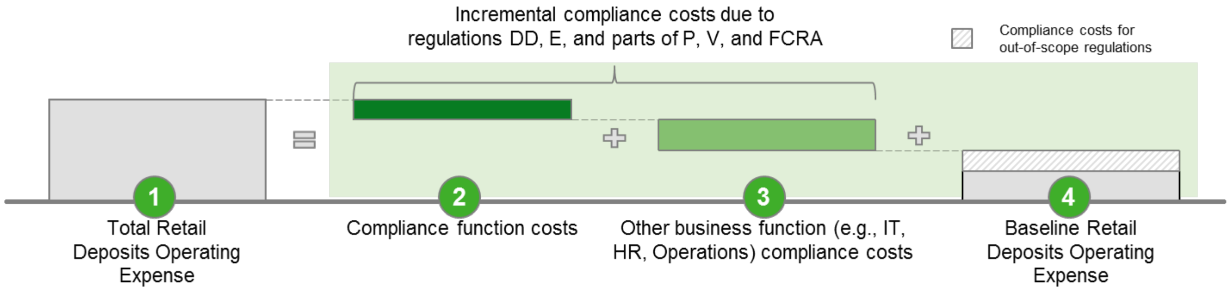
- **Compliance costs** – *the operating costs incurred in performing the activities that are reasonably necessary to comply and demonstrate compliance with the deposit-related regulations the Bureau inherited*. These are costs related to the incremental activities that would not have been performed if these regulations did not exist.[3] Compliance costs are therefore **incremental costs** because they are the costs of those incremental activities. In Figure A below, the incremental costs of compliance with the in-scope regulations are divided between those costs incurred by the Compliance function of a bank (labeled "2" in Figure A) and those incurred in other business functions (3).
- **Baseline costs** – *the total operating costs exclusive of those that are reasonably necessary for complying or demonstrating compliance with the deposit-related regulations the Bureau inherited*. In Figure A, baseline costs (4) equal the business-as-

[2] These regulations were initially adopted by the Board of Governors of the Federal Reserve System. The Bureau inherited these regulations and now has rulemaking, supervisory, and enforcement authority over them.

[3] The Study does not draw conclusions on the costs or activities the Bureau considers "reasonably necessary" for compliance with the Bureau's deposit-related regulations. It is not clear that aggregate examination costs will increase because of a new rule going into effect. In addition, although the cost of demonstrating compliance in the course of an examination is not necessarily a cost of complying with specific provisions of the in-scope regulations, we have included this cost in our estimates because staff we interviewed uniformly regarded examination activities for the in-scope regulations as routine for compliance.

usual cost of providing deposits products and any compliance costs related to regulations outside the scope of the Study.

FIGURE A: NOTIONAL RETAIL DEPOSIT BUSINESS EXPENDITURES, BY INCREMENTAL AND BASELINE COMPONENTS



Note: Figure not drawn to scale

The Study focused on the **ongoing costs**, or *recurring operating costs*, of the Bureau's deposit-related regulations. While we were also able to capture limited information on **one-time** or **implementation costs** (or the *operating costs of coming into compliance with new regulations*) for implementing 2009 regulations on overdraft programs, these costs were not the focus of the Study.

We also did not estimate **opportunity costs** in the Study, which we defined as *the profits foregone from business opportunities not pursued because of regulation*. While opportunity costs represent a cost to the bank, such lost profits do not necessarily reflect a loss to society. For example, it may be true that consumer benefits from avoiding those transactions are equal or greater than the loss in bank profits.

An important premise of separating incremental costs from baseline costs is that not every requirement in a regulation necessarily results in a cost. Some of a bank's regulatory activities are deeply intertwined with its "business-as-usual" procedures. As a result, it is necessary to avoid double-counting any particular activity or cost as both incremental *and* baseline. We made a series of informed judgments that were intended to be conservative and err on the side of treating arguably baseline costs as regulatory costs rather than vice-versa. Thus, the cost figures in this report may represent an upper bound estimate for the regulations and products studied in the seven participants studied.

THE CASE STUDY APPROACH

The Study proceeded in three phases. In **Phase 1,** we designed the methodology and prepared for the on-site visits. We systematically identified each functional area of a bank affected by the in-scope regulations. We also identified the specific processes, systems, and personnel that we would inquire about and whose cost we would seek to measure. Preparation in Phase 1 yielded an interview guide that was distributed in advance to the institutions to facilitate discussions.

In **Phase 2,** we interviewed about 200 executives and employees at seven participant banks ranging in asset size from under $1 billion to over $100 billion.[4] Interviews focused on the time that bank personnel spent on related compliance activities, other internal non-labor compliance expenses, as well as the costs of third-party vendors for compliance services.

Phase 3 included analyzing and validating the data collected in Phase 2, corroborating and adjusting as needed the data with other sources, and following up with the participants on missing or inconsistent information.

Key Findings

In Section 3, we report analyses of compliance costs from three different perspectives. To deepen understanding of the sources of compliance costs, we analyze costs in two ways – by business function and by type of regulation – and examine how these breakdowns vary across the seven participating institutions we studied. We also compare compliance costs for the regulations we studied across the seven institutions.

[4] We categorized participant banks into four different asset tiers: “Tier 1” banks have assets of over $100 billion; “Tier 2” banks have between $10 billion and $100 billion; “Tier 3 banks” have between $1 billion and $10 billion in assets; and “Tier 4” banks have less than $1 billion in assets. There are seven total participant banks in the Study – one is a Tier 1-designated bank, and there are two participant banks each in Tiers 2, 3, and 4.

COMPLIANCE COST BY BUSINESS FUNCTION

First, we examine compliance costs by business function.[5] Among the Study's seven participant banks, compliance costs appear to be concentrated in **Operations**, **Information Technology (IT)**, **Human Resources (HR)** (as it relates to employee training), **Compliance**, and **Retail** functions. We describe the regulation-induced activities that each function engages in and identify activities that entailed higher relative costs. Table A provides an overview of median functional cost (as percentage of institutional compliance cost) across different cost types.[6] This overview shows that the median shares of total compliance costs for the Operations and IT functions were 23% and 22%, respectively, each more than the median 13% share for the Compliance function itself.

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[5] We recorded compliance costs by business function, which we define as a set of responsibilities and corresponding activities. These responsibilities and activities might be housed in a distinct department of the bank or divided among several departments. In a smaller bank, several functions might be housed in one department or even attributed to one individual. A function-level analysis allows us to compare breakdowns of costs across institutions in a way that controls for differences in the ways institutions organize themselves.

[6] In general, at least one of the following three different statistics is used to summarize data: mode, average (mean), and median. In the Study, given that no two data points are the same, using mode would be unhelpful. With only seven observations, using average would give excessive weight to any outliers – even one outlier observation can significantly affect an average across seven participating institutions. The median value summarizing the data from the seven participant institutions is unlikely to change because of any outliers. Median is therefore preferable for expressing the Study's findings.

TABLE A: SUMMARY OF MEDIAN COMPLIANCE COSTS BY FUNCTION AND COST TYPE ACROSS SEVEN STUDY PARTICIPANTS (AS % OF TOTAL COMPLIANCE COSTS)[7]

	Type of Cost			
	In-house Labor	In-house Non-labor	Third-party	Overall
Operations	14.0%	9.0%	2.3%	22.6%
IT	0.2%	0.0%	21.4%	22.0%
HR	12.4%	0.0%	0.3%	15.7%
Compliance	12.6%	0.0%	0.0%	13.0%
Retail	9.5%	0.5%	0.0%	9.5%
Marketing	2.3%	0.0%	0.0%	2.3%
Audit	1.9%	0.0%	0.0%	1.9%
Legal	0.0%	0.0%	0.0%	0.5%
Overall	66.0%	14.3%	30.3%	

Across most of the Study's seven participating institutions, the **Operations** function contained the largest share of compliance costs, ranging from 15% to 29% (median = 23%) of the total costs of compliance. Within Operations, four sub-functions emerged as most relevant to the

[7] Shading denotes overall high, medium, and low relative shares of compliance costs, where red = high, yellow = medium, and green = low. All costs of compliance are given in median percentages of the seven participating institutions and for individual sub-components of in-house labor, in-house non-labor, and third-party costs (include outsourced labor and non-labor costs). Please note that because numbers are reported as medians, individual sub-components of cost across the seven institutions will not necessarily sum to total overall median. Similarly, "Overall" median components will not necessarily sum to 100%.

Study's scope: fulfillment of disclosures, back office support for customer activities, call centers, and error resolution.

Given the importance of technology in banking, it is unsurprising that **Information Technology (IT)** costs comprise 10% to 43% of total compliance costs (median = 22%) across the seven institutions interviewed. Banks implement their general IT needs through any number of in-house and third-party options, which can make the task of estimating compliance-related IT costs more difficult. Tier 4 participants in the Study relied exclusively on third-party providers. The largest of the Study participants typically design and maintain much of their IT systems in-house, as was the case with the Tier 1 bank in the Study. The Tier 2 and Tier 3 banks combined elements of both models.

As the function primarily responsible for the development and deployment of employee training across an organization, **Human Resources (HR)** costs represent 9% to 24% (median = 16%) of total compliance costs identified. This cost primarily originates from two activities: the design and development of compliance-related trainings and the deployment and monitoring of those trainings across a broad employee base. Employee training hours associated with the in-scope regulations comprise the majority of identified HR compliance costs, and – for the purposes of the Study – are captured as part of the deployment cost. As a result, the majority of HR-related compliance costs are internal labor costs; however, there are some non-labor and third-party costs associated with the production of customized training material and/or the purchase of off-the-shelf training materials and administrative software.

Across participating institutions, **Compliance** function costs represent 5% to 31% (median = 13%) of total in-scope regulatory compliance costs identified.

Among the seven case study banks, the **Retail** function accounts for a material and sometimes considerable share of compliance cost because it bears a substantial share of a bank's responsibility to inform consumers about products, features, and services. Across participating institutions, Retail function costs represent 3% to 35% of total compliance costs (median = 10%), almost all of which are internal labor costs. The bulk of these labor costs are associated with front-line management and in-branch customer service (e.g., review of disclosures at account opening, explanation of adverse action disclosures if relevant). The remaining costs (median = 2% of total compliance cost) come primarily from personnel involved with product development and design, who spend incremental time interacting with Compliance function staff throughout the product development process.

The business functions related to **Marketing**, **Audit**, and **Legal** account for relatively small fractions of the overall ongoing compliance costs. Across participating institutions, Marketing function costs comprise anywhere from less than 1% to 8% of total compliance costs identified (median = 2%), Audit function costs comprise anywhere from less than 1% to 7% of total compliance costs (median = 2%), and Legal function costs comprise 0% to 3% of total compliance costs (median = 1%).

COMPLIANCE COST BY REGULATORY REQUIREMENT

We also examine activities and associated costs for the types of regulatory requirements that have the highest relative shares of cost among Study participants. The four types of requirements we analyze are: **authorization rights** (which include opt-in for overdraft protection under Regulation E and opt-out for sharing information with third parties and affiliates under Regulations P), **error resolution requirements**, **disclosure mandates**, and **advertising standards**. We describe the activities conducted by banks to comply with these requirements and explain how these activities generate costs across different business functions. The discussion of costs by regulatory requirement is qualitative, as our data collection did not enable us to estimate accurately the cost of each type of regulation we studied.

Authorization rights require a bank to obtain a consumer's consent (opt-in) or give a consumer the opportunity to decline (opt-out) before engaging in a specified activity. In the Study, we focus on customer choices at the participant banks to opt-in to overdraft coverage that charges fees and to opt-out of sharing certain customer information with third parties and affiliates (if applicable). Significant cross-functional coordination is required to build opt-in/opt-out functionality (IT, Operations), inform customers about their options (Retail, Operations), and oversee adherence to their preferences (Compliance, Audit). The cross-functional coordination and the resulting interdependencies are partially responsible for the relatively higher compliance costs likely attributable to this type of requirement.[8]

The major **error resolution** requirement the Study addresses is the process for handling disputes regarding electronic fund transfers (Regulation E). All of the banks participating in the Study indicated that, regardless of any regulation or payment network rules, addressing

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[8] Institutions may choose to enact more costly compliance processes for a number of reasons. For the example of overdraft opt-in, banks may have chosen their course of compliance in order to maintain their revenue from overdraft coverage or simply to continue offering a service so that customers could have the benefit of choice.

customer disputes was a business-as-usual activity. However, the need to meet prescribed timetables contributes to incremental compliance cost. Several participants indicated that their incremental cost to comply with the mandated error resolution timetable included additional staffing or overtime hours of existing staff.

Compliance costs associated with **mandated disclosures** can be split into two components: design costs and production and delivery costs. These costs vary across the Study participants, depending on the extent of modifications to disclosures, the means of delivery (e.g., in mailings with other unrelated materials, in an independent mailing, in-person, or electronically), and the nature/timing of disclosures (e.g., prompted by an irregular event or occurring at periodic intervals).

Advertising standards govern the kind of language or content that can be used to advertise for banks' products or services. The interpretation and application of open-ended regulations require negotiation and coordination between Marketing and Compliance functions during campaign design.

COMPLIANCE COST BY PARTICIPANT BANK

Finally, we compare aggregate costs across the seven institutions we studied. To draw a valid comparison we assess the banks' costs against a common metric of total retail deposit operating expense, which we estimated from a proprietary model. We observe that the two smallest participants in the Study incur higher costs (as a relative share of their estimated total retail deposit operating expenses) than the five larger banks. Specifically, the two smallest institutions had in-scope compliance costs of about 4% and 6%, respectively, of their estimated total retail deposit operating expense. The five largest Study participants incurred costs to comply with these regulations roughly equal to 1% to 2% of their estimated total retail deposit operating expenses. A similar pattern holds when we measured costs against other denominators that proxy the scale of deposit operations.

The observations from the Study's seven participants provide limited evidence for scale efficiencies in compliance. The scale findings are particularly tentative because we studied just two of over 6,000 institutions with assets under $1 billion, and our comparisons across institutions could not control for factors other than size. It is possible that other differences besides size explain some or all of the cost differences we observed. The Study discusses reasons that compliance might involve scale efficiencies and explores evidence we observed in the seven participant banks of factors that may contribute to possible scale efficiencies.

Interpretation of the findings requires important caveats both methodological and practical. Readers should not take the numbers in this report as definitive or as representative generally of institutions or regulations.

That said, the Bureau believes that the business models of the seven participants are within the mainstream of retail deposits business models for banks within their respective asset tiers. While the estimates of compliance cost for the seven banks are not generalizable, the quality and depth of information shared by the bank participants was far richer than could have been collected via a survey.

Potential Implications

In Section 4, we discuss the potential implications of the Study in four broad categories.

First, the Study advances research on compliance operations and costs by producing some of the most rigorous information currently available on those subjects, refining research methods, and helping interested parties identify potential areas for further research. Reliable, publicly available data on the operating costs of complying with consumer financial regulations are relatively sparse. The Bureau hopes that this report provides a more solid factual basis, as well as a more systematic framework of analysis, to inform and elevate discussions about compliance operations and cost.

Seven case studies do not justify broad generalizations – especially about scale effects – so we are careful not to draw any. This is not a flaw of the methodology; rather, it is a necessary trade-off of careful research. In practice, interviews of case study institutions' employees to assess how they spend their time can take significant effort on the part of researchers and participants and still produce only a rough approximation of costs. At the very least, the methods we employed should help set guideposts for producing and evaluating estimates of compliance costs. The Study also suggests fruitful areas for further research, including economies of scale in compliance and the ways that smaller firms might navigate the market for compliance technology.

Second, the Study of compliance operations and costs for individual firms is most valuable as part of a broader effort to understand how regulations affect consumers and markets. Better understanding of compliance costs allows policy-makers and researchers to better understand overall regulatory impact. Policy-makers and researchers still face major challenges to measuring the effects of regulation on consumers and markets, especially the benefits of regulation. As a result, progress will come in small increments rather than major breakthroughs. Research on regulations is a long-term priority for the Bureau, and we welcome opportunities to work with interested parties to enrich the body of available evidence.

Third, the Study will inform and help the Bureau refine its ongoing efforts to reduce or avoid unnecessary compliance costs, without sacrificing the benefits of regulation. These steps include the collection of information about costs, the design of regulations to minimize costs without sacrificing significant benefits, and the effective communication of regulations to entities that must comply with them. The Study will also inform future reviews that the Bureau will conduct on the effectiveness of significant regulations adopted.

Fourth, stakeholders such as industry participants and consumer advocates may find that this Study helps them improve their participation in the regulatory process – during rulemakings, implementation, and in anticipation of reviews of existing regulations. The traditional notice and comment process has often fallen short of producing concrete and reliable information about compliance costs (or, for that matter, about costs more broadly). The Bureau has a number of suggestions stakeholders may wish to consider when providing the Bureau information about compliance costs or responding to such information. These suggestions are purely voluntary and at the discretion of stakeholders.

Conclusion

The effects on institutions' operations are but one of the wide range of effects of consumer financial regulation on consumers, firms, and markets that matter to policy-makers. Operational effects are among the most direct and immediate effects. Alone, however, estimates of these effects have limited value to policymaking. Operational effects matter more to the extent they suggest how a specific regulation might affect product pricing and availability or market structure and competition. Moreover, these types of effects on a market can be understood properly only in the context of the fundamental benefits of regulation to consumers and the marketplace.

The ultimate benefits and costs of a regulation are difficult to measure, and progress in their measurement is likely to come in small increments rather than major breakthroughs. Research on the effects of regulations is an ongoing priority for the Bureau, and we welcome opportunities to work with interested parties to enrich the body of evidence. Meanwhile, we will continue to address problems that we see in the marketplace and evaluate potential responses to those problems on the basis of the evidence that is reasonably available – mindful that, whatever the costs of regulation, the costs of not regulating adequately can be even larger.

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1. Introduction

Consumer financial markets do not always operate efficiently and fairly. Well-designed regulations can help to enhance market efficiency and fairness without imposing undue costs. Such regulations benefit consumers, responsible firms, and society more broadly. This report, "*Understanding the Effects of Certain Deposit Regulations on Financial Institutions' Operations: Findings on Relative Costs for Systems, Personnel, and Processes at Seven Institutions*," is a step by the Consumer Financial Protection Bureau ("CFPB" or the "Bureau") in an effort to collect and evaluate information on the benefits, costs, and impacts of regulations.

A critical part of the Bureau's mission is to make regulation more effective without imposing undue costs.[9] To that end, the Bureau seeks to deepen its – and the public's – understanding of how markets work and how regulations affect markets. These effects can be very difficult to trace and discern since market outcomes are determined by many influences other than regulation. In this foundational study (the "Study"), we concentrate on a subset of the direct and immediate effects of regulation – the operational cost of compliance at financial institutions. Regulations also have significant benefits for consumers, financial institutions, and markets – but those benefits are not the subject of this Study.

By improving our and the public's capacities to describe and measure immediate effects of regulations on institutional operations, we seek to strengthen our ability to avoid imposing unnecessary operational costs. Moreover, since regulations' immediate operational effects are deeply intertwined with regulations' broader impacts on consumers, financial institutions, and

[9] The Bureau's mission statement reads in full: "The CFPB is a 21st century agency that helps consumer finance markets work by making rules more effective, by consistently and fairly enforcing those rules, and by empowering consumers to take more control over their economic lives." In addition, Section 1021(b)(3) of the Dodd-Frank Act (DFA) assigns to the Bureau five objectives, including ensuring that "outdated, unnecessary, or unduly burdensome regulations are regularly identified and addressed in order to reduce unwarranted regulatory burdens."

markets, we also hope to improve our ability to maximize beneficial impacts on consumers and markets through this Study.

1.1 The Need for Consumer Financial Regulations

When many firms provide a product and consumers are well-informed about and able to choose the product, firms have a financial incentive to compete on quality, variety, price, and other features. In addition, firms that focus on long-term success have a financial incentive to make sure consumers are well-informed about and benefit from the products, as well as to keep their promises about the products and services they provide. In a marketplace that is operating optimally, firms will succeed by building customer loyalty, winning additional business from existing customers, and developing strong reputations in order to attract new customers. If all of these conditions hold, firms generally will produce products and services that consumers understand and willingly choose for their perceived value, at prices that provide firms with a competitive rate of return.

Consumer financial markets generally have at least some of these characteristics. There are many providers of almost every type of consumer financial product. Many providers focus on serving the long-term interests of their customers and seek to build and maintain strong reputations. Firms compete on quality, variety, price, or other features, and often treat their customers well. These firms must also comply with a range of consumer financial protection regulations. This raises the question of how and to what extent the regulations contribute to these positive outcomes for consumers, or whether these outcomes would occur without regard to the incentives that flow from regulations backed by credible oversight mechanisms. As the following discussion describes, regulations indeed provide important benefits to consumers overall.

If all firms were focused on building a strong business reputation and achieving sustainable, long-term success, they would have strong incentives to avoid misrepresenting their products and misleading consumers. Unfortunately, firms can sometimes earn significant profits very quickly by employing undesirable practices. This type of behavior, if unchecked, can cause significant injury both to consumers and to competitors that eschew these practices. Consumers who choose products about which they are misinformed or under-informed can experience a variety of negative outcomes. They may pay more than is necessary for products and services, incur unexpected fees and charges, and risk lowering their credit scores and ability to borrow. Other consumers may avoid markets in which some providers are known to mislead consumers, out of concern that they could not distinguish legitimate from illegitimate providers and might obtain riskier, higher-priced, or lower quality products than expected. Firms pursuing long-term success would have a difficult time competing against providers that charge less for products that can be made to appear comparable but are not. Regulations that deter these practices therefore prevent particular consumers from being harmed by the products they select. The regulations also benefit both consumers and responsible firms by facilitating the development of a legitimate market that can function properly and generate justifiable consumer confidence and more robust participation.

Apart from preventing false or misleading statements, regulations also require firms to provide consumers with disclosures that distill the most critical product feature information out of the underlying contract documents, mandate product features and services, and set general standards for quality and service. These regulations also provide overall benefits to consumers that the market would not provide. Many consumer financial protection regulations require disclosures that facilitate informed product choice and comparison shopping and that reduce consumer search costs. Disclosures that allow consumers to compare more effectively the key characteristics provide information on a fixed set of characteristics using standardized terminology and measures. An individual firm would not have a strong incentive to develop such comprehensive disclosures on its own, and competing firms are not likely to agree on the precise characteristics and measures. Regulations define these characteristics and standardized terminology and measures (e.g., the Annual Percentage Rate or Annual Percentage Yield), mandate disclosures of these measures, and provide formatting requirements based on consumer research. These approaches help overcome the weak incentives that firms would otherwise have to develop disclosures that facilitate comparison shopping.

Even with good disclosures and honest and accurate representations from providers, consumers may not be able to detect, understand, and protect themselves against certain risks. For example, consumers unfamiliar with consumer financial products may not fully consider the probabilities associated with poor outcomes or the value of services that could help them manage those outcomes. Consumer financial products are often complex – even experienced consumers may have difficulty evaluating the likelihood of paying certain fees and charges, ascertaining whether these costs are justified, and seeking assistance in managing them. While leaving certain risks unregulated might induce some shopping around by consumers for product features that reduce the chances and severity of adverse events, it is not clear how well people perceive and manage such situations, especially if the chances are small. Consumers who are unable or unprepared to perceive and manage these risks well will choose the wrong product, misuse the product, or avoid the market entirely. Further, competition might lead providers to fail to mitigate risks to consumers or to erode protections that were once offered. As just one example, lenders originating mortgages without consideration of the borrower’s ability to repay created risks to consumers that were realized quite profoundly in the recent financial crisis.

To respond to the difficulties many consumers have in managing these risks and the weak incentives providers may have in helping consumers manage them, consumer financial regulations may mandate standards for service and restrict potentially harmful product features. For example, certain regulations require providers to respond to consumer requests for information, provide error resolution procedures, and retain records that can be made available for future examination. Regulations may also limit the consequences for consumers from missing a payment (e.g., no pyramiding of late fees), exceeding a credit limit, or failing to meet other obligations. Recent regulations require mortgage loan originators and credit card issuers to take into account the ability to repay before making a loan.

Consumer financial regulation also imposes standards on services that are used by lenders, such as credit reporting, loan servicing, and debt collection for which lenders transact and the consumer is a third party. Consumers generally have no influence over the selection of these service providers, and consumers have no avenues (absent regulation) through which to impose costs on these agents for inaccurate credit reports, poor loan servicing and incorrect or harassing debt collection. The interests of the lender do not fully capture the interests of consumers in preventing these problems. The financial crisis highlighted risks to consumers from the ability of mortgage loan servicers to acquire loans without the obligation or incentive to provide certain services that are important to consumers. Recent regulations have addressed these risks.

The Bureau also implements federal laws, such as the Equal Credit Opportunity Act and the Home Mortgage Disclosure Act, intended to ensure fair, equitable and non-discriminatory access to credit. Access to financial services and products is critical to helping individuals and families manage their money; providing for educational expenses, transportation and housing needs; and build wealth and strong communities. However, throughout history some providers have discriminated through “red-lining” and other practices that are biased against segments of the market based on race, gender, marital or familial status, disability, or other characteristics having no bearing on credit worthiness. The results of such discrimination are felt not only by individuals and families who are arbitrarily and unjustly barred from achieving their financial goals, but also by their communities. The Bureau is mandated both to study and monitor consumer access to credit and to implement and enforce federal laws to ensure that markets provide fair access to credit.

1.2 Purpose and Goals of the Study

By enhancing market efficiency and fairness, financial regulation can improve markets. However, regulations can also result in costs to consumers and financial institutions. For example, regulations can raise the cost of operating a business if institutions must invest in additional labor or technology resources to comply with a rule that they would not invest in absent the rule. Conversely, regulations may also offset some other firm costs that they would not otherwise incur, as when mandatory disclosures reduce the costs associated with handling consumer complaints. Regulation may also expand business and profit opportunities by helping to create a market, but impose costs on particular institutions in the form of foregone profits from business opportunities not pursued because of regulation. Regulation can potentially increase prices and/or reduce availability of products and services to consumers, at least in the short-term.

A critical part of the Bureau's mission is to make regulations more effective without imposing undue costs. To that end, the Bureau consistently seeks to deepen its – and the public's – understanding of how markets work and how regulations affect markets. However, the benefits and costs of regulation can be quite difficult to ascertain since market outcomes are determined by many influences other than regulation, and data are often inadequate to capture all of these influences. The benefits of regulation are diverse, such as allowing for easier shopping and reducing risks of both unexpected fees and charges, and the avoidance of foreclosure, bankruptcy, reduced access to financial products and services and other negative market outcomes. Quantifying the magnitude of these effects and assigning a monetary value to them are widely recognized as highly challenging.

Given the challenges of measuring the ultimate effects of regulation, research must proceed in increments. In this Study, we have concentrated on one of the direct effects of consumer financial protection regulations – their effects on the operations of financial institutions. As challenging as the operational effects are to measure, they may be easier to measure than other benefits and costs of regulations.

Accordingly, we sought to make progress on three goals with the Study:

- **Learn more** about the extent and sources of compliance costs associated with regulations that the Bureau inherited;
- **Improve** the Bureau's and the public's abilities to describe and measure costs to comply with existing or potential new regulations; and
- **Refine** the Bureau's and the public's abilities to identify meaningful opportunities to reduce or avoid imposing unnecessary operational costs.

Improving methods for evaluating direct effects of regulations on institutions – as this Study sets out to do – can strengthen our ability to detect or predict effects on consumers and markets, and therefore to maximize benefits for consumers and markets.

1.3 Approach of the Study

Evaluating compliance costs is inherently challenging. The personnel, processes, and systems required to comply with a particular regulation are frequently intertwined with the operations of the business itself or with operations to comply with other regulations or standards. Moreover, financial institutions generally do not track consistently or comprehensively the compliance costs associated with particular regulations. One cannot determine compliance costs for a regulation by looking at an institution's financial statements and regulatory filings.

To help address these challenges, we narrowed the scope of the products and regulations we studied and the number of case study institutions. We limited the Study to ongoing costs to comply with the Bureau's inherited regulations that apply to retail checking accounts, savings accounts, debit cards, and overdraft programs (the "in-scope regulations"). The inherited regulations that govern these products have not changed for several years, making them a good candidate for a study of ongoing costs – as opposed to the one-time cost of implementing new regulatory requirements.[10]

A narrower scope allowed us to be more rigorous in three key dimensions: first, distinguishing incremental operating costs of regulation from baseline costs (i.e., costs that institutions would incur even in the absence of regulations); second, covering all major sources of compliance cost; and third, measuring those costs consistently within each participating institution and across all the Study participants.

To capture compliance costs consistently and comprehensively, we conducted interviews with about 200 employees and executives from seven participant banks ranging in asset size from under $1 billion to over $100 billion. These interviews focused on the operational activities and processes required to implement compliance. The focus on a small number of institutions gave us multiple opportunities to scrutinize and validate information we received from participant employees. The

[10] There is one major exception: Regulation E recently was amended to implement new statutory protections for remittance transactions. These amendments are outside the scope of the Study.

accuracy of information likely depended on the extent to which bank staff could check their intuition against corroborating or conflicting information. Also, institutions voluntarily provided additional information and documentation that corroborated information from some interviews.

This report analyzes compliance operations and associated costs at the seven participants we studied by functional area (department or business function) of each bank – the way an institution might look at its own operations. We report qualitative findings on bank operations, as well as estimates of relative costs for the different functions within the seven participating institutions. These estimates should be interpreted with care. They are not estimates of the cost of compliance for institutions in general. Moreover, a cost figure cannot be evaluated meaningfully without more information than we could produce in the Study – especially an estimate of the benefits of the regulations, which was outside the scope of the Study. A large compliance cost might produce even greater benefits for consumers and the marketplace; conversely, even a very small compliance cost might be questioned if the benefit was not apparent.

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The following sections of this report describe in detail the methodology of the Study (Section 2), its key findings (Section 3), and the potential implications for research and for the policy-making process (Section 4).

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2. Methodology

There are no standard ways to collect and analyze information on compliance costs, since banks generally do not track their full costs of compliance. Therefore, we endeavored to develop a methodology that was comprehensive and well-defined, and yielded consistent estimates.

First, we review existing research on compliance costs, highlighting some strengths and weaknesses of previous efforts to characterize and measure compliance costs. We use the best practices identified in previous studies to help define the scope of the Study and to build a robust methodology.

We proceed to outline the parameters of the Study, defining the regulatory and product scope and the ongoing compliance costs related to deposit-related regulations the Bureau inherited. We define the difference between incremental compliance costs and baseline costs. We then offer an overview of the case study methodology and the criteria we used to select participants. We also describe in detail the process to design the data collection, conduct on-site information collections, and analyze and validate the information. Finally, we discuss some challenges involved in this type of research and the steps we took to mitigate them.

Other researchers may be interested in following or adapting the methodology described in this report. *Appendix H: General Techniques* also summarizes the key considerations when using the methodology described in this section.

2.1 Existing Research

Published research on compliance costs with respect to financial regulation is limited, but nevertheless offers a helpful starting point to develop our methodology. Our review of the limited available research on compliance costs offers some insights on methodology and approach to researching this topic.[11]

Elliehausen (1998) reviewed some of the empirical studies of regulatory burden and compliance costs, assessing the strengths and weaknesses of their methodologies (e.g., case studies, surveys, and econometric analyses). Elliehausen suggested a number of advantages of case studies, which permit researchers to work closely with a limited number of financial institutions. For example, Elliehausen indicated that the case study approach allows researchers to "exercise considerable control over the quality of the data" by directly questioning bank staff that perform specific compliance activities. Elliehausen also provided a taxonomy of regulatory costs, such as operating costs and opportunity costs.[12]

Elliehausen found that researchers were able to obtain more reliable estimates when they provided detailed guidance to study participants by:

- Identifying regulations and the specific regulatory requirements covered in the study;
- Suggesting activities that may have been undertaken to satisfy those requirements;
- Defining the types of costs that are being measured (e.g., ongoing costs versus start-up costs); and
- Providing specific instructions for estimating components of those costs.

Elliehausen suggested that studies attempting to estimate the aggregate cost of financial regulation for the entire banking industry produced less reliable data and less informative insights. Also, studies that did not guide respondents through information collections by specifying in-scope regulations or identifying compliance activities were less likely to produce meaningful information.

[11] For a more comprehensive discussion of the literature reviewed as part of the Study, see *Appendix A: Review of Existing Research*.

[12] For definitions of types of costs related to regulation, see sub-section *2.2.1: Study Scope and Key Concepts – Defining Compliance Costs and Other Key Concepts*.

Grant Thornton (1993) was a three-phase study that involved a hybrid survey-case study methodology. [13] This approach attempted to determine the total cost of compliance and the total full-time employee hours required for 13 regulatory areas across the entire community bank industry. Barefoot, Marrinan & Associates, Inc., Thakor, and Beltz (1993) also used two surveys to examine the compliance costs at commercial banks and thrifts related to Federal consumer laws and regulations, with a particular focus on the Bank Secrecy Act, the Community Reinvestment Act, and the Real Estate Settlement Procedures Act.

A more recent study of community banks by the Federal Deposit Insurance Corporation (FDIC) in 2012 offered some observations about collecting information on compliance costs. Researchers in FDIC (2012) conducted structured interviews with community bankers to identify specific regulations or supervisory practices that were significant drivers of compliance costs. FDIC (2012) reported that tracking compliance costs was not regularly done, since costs are "so interwoven into [the banks'] operations." However, participant banks said they could estimate the direct costs associated with regulatory compliance, while recognizing that indirect costs were more difficult to identify.

Some of these studies and others reviewed in Elliehausen (1998) found evidence of economies of scale in compliance costs. Both Grant Thornton (1993) and Barefoot, Marrinan & Associates, Inc., Thakor, and Beltz (1993) found that compliance costs, when measured against factors such as total assets or net income, were greater for smaller institutions than for larger institutions.

2.2 In-Depth Review of Methodology

Previous study methodologies and interviews with banks, trade associations, and researchers informed our choice of a case study approach using on-site structured interviews to collect information directly from employees at a small number of institutions. The ability to capture granular data on compliance costs depended on clear communication with participants about the costs being measured and direct contact with bank personnel. From our review of the literature and consultation with banks, trade associations, and researchers, we identified several best practices for producing reliable findings, including:

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[13] The Grant Thornton study was prepared for the Independent Bankers Association of America (now Independent Community Bankers of America).

- Narrowing the **scope** of regulations in the Study;
- Specifying the **regulatory requirements** and possible related **compliance activities** in scope;
- Identifying the **specific costs** that need to be estimated (i.e., specifying the activity and the component of cost being measured, such as **internal labor**, **internal non-labor**, and **third-party resources**); and
- Separating operating **costs incurred only as a result of a regulation (incremental costs)** from operating **costs incurred absent regulation (baseline costs)**.

Separating costs of regulation from other costs requires judgment. In this sub-section, we describe our assumptions for the Study about the types of costs that are reasonably necessary to comply with the Bureau's deposit-related regulations. These assumptions were generally conservative, so the compliance cost estimates in this report should be considered an upper bound.[14]

The methodology was separated into three phases, which involved preparing structured interviews, executing on-site information collections, and analyzing and validating data.

Our approach sought to mitigate some of the inherent challenges in studying the costs of regulatory compliance. Banks' business models and compliance management programs differ. In addition, banks generally do not track compliance costs. Therefore, identifying the costs that are uniquely attributable to a regulation and reporting them accurately and consistently across participants requires significant effort and judgment on the part of researchers. Researchers encounter a number of the difficulties in gathering information and calculating costs, including:

- **Identifying all resources involved in compliance activities** – Have all personnel, systems, and vendors been accounted for?
- **Quantifying compliance activities** – How much time or what share of a bank's system or departmental resources is used for compliance?
- **Monetizing compliance activities** – How much money is spent on compliance activities?

[14] For a discussion on the assumptions made to estimate incremental compliance costs, see sub-section *2.2.1: Key Assumptions and Judgments* and *Appendix C: Incremental Cost Assumptions.*

- **Containing the Study's burden on participants and researchers** – How can researchers maximize efficiency of information collections?
- **Standardizing data and analysis** – What guidance do we need to provide to limit variation in the information that banks provide on compliance costs? How do we ensure that calculations are consistent across different institutions?

Given these general challenges, our methodology needed to be relatively simple for researchers to execute, easy for participating institutions to understand and follow, and still rigorous and comprehensive.

2.2.1 Study Scope and Key Concepts

The Study focused on the costs that participants incurred to comply with regulations the Bureau inherited that govern consumer deposit-related products and services.[15] Specifically, we studied compliance costs associated with **checking accounts, traditional savings accounts** (e.g., statement/passbook savings), **debit cards**, and **overdraft programs** (e.g., overdraft coverage for ATM and debit card transactions). While the Bureau's inherited deposit-related regulations affect other products such as payroll cards, gift cards, and remittance transfers, these products and services were not in-scope for the Study.

The decision to study deposit products and services was partially attributed to logistical considerations. On-site bank visits and field work in spring 2013 coincided with the early stages of the 12-month implementation period for seven mortgage rules finalized in January 2013. Given the mortgage industry's concurrent efforts to implement new rules under Title XIV of the Dodd-Frank Act, it would have been difficult to assess ongoing compliance costs for this particular line of business. In addition, research focused on deposit products and services would be relevant for banks of various sizes, whereas some other products of potential interest, such as credit cards, are not offered by all institutions across the banking industry.

With respect to regulations, the Study focuses on **Regulations DD** (implementing the **Truth in Savings Act**)**, E** (**Electronic Fund Transfer Act**), and, as they relate to deposit products and

[15] The Study does not comment upon the appropriate method and scope of analysis with respect to particular rules. The Bureau has discretion in any rulemaking to choose an appropriate scope of analysis with respect to potential benefits and costs.

services, parts of **P** (**Gramm-Leach-Bliley financial privacy requirements**), **V**, and certain sections in the **Fair Credit Reporting Act** (or, as a whole, the "in-scope regulations").[16] These regulations implement statutes that affect common retail deposit business practices. For this report, we refer to the regulations as the "deposit-related regulations that the Bureau inherited" or "in-scope regulations." Table 1 outlines some of the major provisions that are within the scope of the Study.[17]

With respect to deposit-related products and services, the in-scope regulations have not been amended substantively since 2010. This allowed for more informative inquiries into ongoing costs without the potentially skewing effects of significant rule changes or amendments. In light of changes to Regulations DD and E in 2009 concerning overdraft programs, we were also able to collect information on some related one-time implementation processes and costs.[18] However, such costs were not the focus of the Study.

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[16] The CFPB inherited these regulations upon the founding of the Bureau, and now has rulemaking, supervisory, and enforcement authority over them. The Bureau considered certain provisions of the FCRA related to adverse action notices that are not implemented by Regulation V and included these provisions among the in-scope regulations. Respondents at participant banks indicated that they did consider activities and costs for adverse action notices to be relevant for the Study's in-scope regulations.

[17] A broader list of the in-scope regulatory provisions can be found in Table 1 in *Appendix B: Taxonomies*.

[18] For more information, see *Appendix G*: *Insights on One-time Implementation Costs*. The Study does not take into consideration recent amendments to Regulation E governing remittance products and services, as these amendments did not go into effect until October 2013 and were not in scope for the Study.

TABLE 1. OVERVIEW OF THE IN-SCOPE REGULATORY REQUIREMENTS

Regulation/Law	Overview of In-Scope Provisions[19]
Regulation DD (implements the Truth in Savings Act (TISA))	• Prohibits inaccurate or misleading information in advertisements • Requires account disclosures be provided with interest rate and other key account features at account opening and on consumer request • For institutions that provide periodic statements, requires them to include certain information, such as annual percentage yield, interest earned, fees imposed (including fees for overdraft or returned items), and length of statement period
Regulation E (implements the Electronic Fund Transfer Act (EFTA))	• Prohibits assessing fees for overdraft payments for ATM and point-of-sale transactions unless the consumer “opts in” • Limits consumer liability for unauthorized electronic fund transfers based on timing of consumer notice to financial institution • Enumerates procedures for responding to and resolving consumers’ error claims about electronic fund transfers, including a timeframe of 10 business days for providing provisional re-credit • Requires initial disclosures of terms and conditions of electronic fund transfer services • Requires disclosures explaining changes in account terms at least 21 days prior to a change • Requires receipts at electronic terminals for transactions above $15 • Requires monthly periodic statements • Requires information on ATM fees be provided at the ATM
Regulation P (implements privacy provisions of the Gramm-Leach-Bliley Act)	• Enumerates conditions under which a financial institution may disclose a consumer’s non-public personal information to non-affiliated third parties • Requires giving consumers, with certain exceptions, the right to opt out of having a financial institution disclose their non-public personal information to a non-affiliated third party • Requires initial disclosures explaining the financial institution’s privacy policies to a consumer before initiating a business relationship • Requires annual disclosure to customers describing the financial institution’s privacy policies

[19] The provisions in this table are not a complete list of the provisions within each regulation. For these and other provisions of the in-scope regulations that were studied, see Table 1 in *Appendix B: Taxonomies*.

Regulation/Law	Overview of In-Scope Provisions[19]
Regulation V (implements parts of the Fair Credit Reporting Act)	• Includes requirements that institutions: develop reasonable policies and procedures to apply when they receive a notice of address discrepancy from a CRA; respond to direct disputes from consumers regarding information the institution reported to a CRA; and establish and implement reasonable written policies and procedures regarding the accuracy and integrity of information that they furnish to CRAs.
Fair Credit Reporting Act (provisions not implemented by regulation)[20]	• Includes requirement that an institution provide a disclosure to a consumer if the institution takes any action deemed to be an "adverse action" with respect to the consumer (i.e., denial of account approval) based in part on information obtained from a CRA.[21]

The Study does not cover compliance costs related to all federal deposits-related regulations. For example, the Study omits Regulation CC (implementing the Expedited Funds Availability Act), which contains sections pertaining to funds availability and the disclosure of funds availability policies.[22] The Study also does not cover compliance costs related to statutory prohibitions of unfair, deceptive, or abusive practices (UDAAP). Nor did we investigate possible impacts from supervisory guidance issued by other regulators, such as those affecting depository institutions' overdraft practices.[23] Also outside the scope of the Study are federal statutes, regulations, and guidance intended to prevent crimes or threats to national security, such as the Bank Secrecy Act (BSA), "know your customer" requirements, and controls established by the Office of Foreign Assets

[20] Some of the provisions in the Fair Credit Reporting Act (FCRA) are not implemented by a regulation. For the purposes of the Study, only the adverse action notice provision from FCRA was within the scope of the Study. Other FCRA provisions were not included in the Study, even if they may be applicable to deposit operations, because they were less likely to generate material costs with respect to the in-scope products.

[21] Other disclosure requirements apply if institutions take an adverse action based on information obtained from another third party.

[22] The Bureau does not have sole rulemaking authority for the funds-availability provisions of Regulation CC; the Bureau has joint rulemaking authority with the Federal Reserve Board.

[23] For example, see *Joint Guidance on Overdraft Protection Programs*, 70 Fed. Reg. 9127 (Feb. 24, 2005) (FDIC, OCC, Federal Reserve Board, and NCUA); see *Overdraft Payment Programs and Consumer Protection, Final Overdraft Payment Supervisory Guidance*, FIL-81-2010 (Nov. 24, 2010) (FDIC).

Control. These laws and standards are outside the Bureau's jurisdiction. Thus, the Study does not capture all of compliance costs affecting an institution's retail deposit business.[24]

The Study's focus on a well-defined set of products and consumer financial regulations was intended to allow us to conduct a large number of in-depth, on-site interviews with employees of several different departments (or **business functions,** such as Operations and Information Technology) at each participant bank.

[24] The Bureau also recognizes that the Study methodology for segregating costs attributable to the in-scope regulations results in the inclusion of these out-of-scope compliance costs in the baseline costs.

Benefits of the In-Scope Deposit-Related Regulations

Each of the regulations in the Study provides certain protections to consumers who are shopping for deposit-related products and services. These regulations are meant generally to encourage participation in the banking system by promoting transparency and limiting the risks associated with such products and services. While the Study does not attempt to quantify the benefits associated with the in-scope regulations, it is important to note the types of benefits and protections these regulations afford consumers.

Regulations DD and E each have disclosure provisions that help consumers compare and understand deposit and transaction products and services, including the costs associated with them. These two regulations also allow consumers to track fees, electronic fund transfer (EFT) activity, and other information about their accounts by requiring financial institutions to include certain information when providing periodic statements. Advertising provisions in Regulation DD further promote consumers' ability to comparison shop by requiring certain account features to be disclosed and by prohibiting misleading or inaccurate representations of a deposit contract. Regulation E supports the growth of electronic payments and commerce, by reducing the risk of consumer loss associated with EFTs (e.g., through an unauthorized EFT). Regulation E establishes standards for investigation processes and timelines to ensure financial institutions meet a minimum level of responsiveness when consumers dispute certain EFT transactions to and from their deposit accounts. Regulation E also limits the liability of consumers from unauthorized EFTs, and outlines standards for re-crediting consumer funds when the financial institution has been notified of an EFT error.

Recent changes to Regulation E extend consumer protections around ATM and point-of-sale (POS) transactions. Beginning in 2010, financial institutions were required to obtain affirmative consent from consumers for overdraft coverage on ATM and POS transactions before the institutions charge fees on these transactions. This "opt-in" requirement helps ensure that consumers are aware that they might incur fees for overdrafts on ATM and POS transactions and gives consumers a clear opportunity to avoid such fees if they prefer not to elect coverage.

Under **Regulation P**, a financial institution must provide consumers a notice of privacy policies and practices. For institutions that disclose non-public personal information about customers (and even consumers who are not customers) to non-affiliated third parties, with certain exceptions, customers must be afforded a notice and an opportunity to "opt out" of this disclosure practice. The regulation affords consumers an opportunity to identify financial institutions with privacy policies that match their preferences. The ability to limit disclosure of non-public personal information to non-affiliated third parties allows individual consumers to balance the possible benefits of such disclosures against the chances of negative outcomes from such disclosures in light of their own personal preferences with respect to privacy.

Regulation V outlines the steps that furnishers and users (including banks) of consumer report information must take, in part to ensure information that is provided and appears on consumer reports is accurate. This regulation helps facilitate corrections of inaccurate or incomplete information in consumer reports through furnishers, which benefits consumers while also increasing reliability in the overall consumer reporting system. Under the **Fair Credit Reporting Act**, consumers who are denied the ability to open a checking account or get overdraft protection based on information from a Credit Reporting Agency (CRA) must be given an adverse action notice, which contains information about the right to dispute the accuracy or completeness of the information with a CRA.

DEFINING COMPLIANCE COSTS AND OTHER KEY CONCEPTS

A key element of the Study was distinguishing costs uniquely attributed to regulation from a participant's business-as-usual costs. **Compliance costs** are defined as *operating costs incurred in performing the activities that are reasonably necessary to comply with and to demonstrate compliance with the deposit-related regulations that the Bureau inherited*. These are the costs related to the *incremental activities that would not have been performed if these regulations did not exist*.[25] Compliance costs are therefore **incremental costs** because they are the costs of these incremental activities. **Baseline costs** are *total operating costs exclusive of those that are reasonably necessary for complying with or demonstrating compliance with the deposit-related regulations that the Bureau inherited*. That is to say, baseline costs plus incremental compliance costs equal total operating costs.

Activities undertaken to comply or demonstrate compliance with a particular set of regulations may be difficult to distinguish from a participant's standard baseline practices. Some activities that a bank conducts to comply or demonstrate compliance with regulation may also not be "reasonably necessary," which further complicates measurement of incremental costs. For the purposes of the Study, we did not generally judge what costs or activities are reasonably necessary for compliance, since operational efficiency and risk appetite both vary across institutions. We based our analysis on the costs and activities that each participant bank reported as related to compliance with the in-scope regulations. As a result, some costs and activities that may not be considered reasonably necessary may be included in our estimates (or, for that matter, some activities that may be considered reasonably necessary may not be included in our estimates).

The Study focused on the **ongoing costs**, or *recurring operating costs*, of the Bureau's deposit-related regulations. We were also able to capture limited information on **one-time** or **implementation costs** (or the *operating costs of coming into compliance with new regulations*), as they related to regulatory changes in 2009 governing overdraft programs, but these costs were not the focus of the Study.[26] Implementation costs can be different in nature from ongoing costs. For example, labor costs, particularly costs for staff-level, non-supervisory labor, may represent a

[25] Elliehausen (1998).

[26] In 2009, the Board of Governors of the Federal Reserve System amended regulations DD and E, which included new requirements for banks' overdraft policies and practices. For more information, see *Appendix G*: *Insights on One-time Implementation Costs*.

larger share of costs for ongoing compliance activities than they do for implementation compliance activities.[27]

Apart from implementation costs, there are other costs related to regulation that were out of scope for the Study.

The Study does not estimate the **opportunity costs** associated with the in-scope regulations. Similar to Elliehausen (1998), we considered opportunity costs to the institution as *the profits foregone from business opportunities not pursued because of regulation*. Opportunity costs may include profit foregone as a result of avoiding products perceived to have significant regulatory risk. Opportunity costs may also arise from foregone profits due to regulatory restrictions (e.g., prohibiting banks from charging overdraft fees if a customer has not opted-in to overdraft coverage for ATM and point-of-sale debit transactions under Regulation E). While opportunity costs represent a cost to the bank, such lost profits do not necessarily reflect a loss to society. For example, it may be true that consumer benefits from avoiding those transactions are equal to or greater than the loss in bank profits.

The Study also did not measure the full scope of litigation costs, which can be incurred in response to public or private litigation or threats of such. Institutions may set aside funds to cover any potential litigation costs based on their assessments of their litigation and regulatory risks. Litigation costs can include costs an institution incurs to defend against accusations of non-compliance (e.g., fees for external counsel). They can also be costs from paying fines, penalties, damages, or settlements associated with such accusations or required by verdict. For the purposes of the Study, the latter form of litigation costs were out of scope since we only sought to characterize and measure the costs related to performing the activities required by the in-scope regulations. This approach is consistent with that in prior research. In addition, the frequency of cases based on the in-scope regulations has been limited. To the extent a participant bank performed activities to mitigate litigation risk for the in-scope regulations (e.g., establishing compliance management systems), the associated costs were considered incremental compliance costs and were accounted for as such.

Finally, our compliance cost estimates did not take into account the savings on operating costs that may offset other compliance costs. For example, mandatory disclosures may reduce the costs

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[27] Elliehausen (1998).

associated with handling consumer inquiries, while error resolution procedures may reduce the costs associated with handling consumer complaints. The cost of complying with the error resolution requirement in Regulation E may not take into account the reductions in other operating costs, but those reductions would offset some of the increase in total operating costs due to the regulation. In addition, regulation may create large-scale demand for the mandated products or services that provide benefits to consumers. This is especially apparent for mandated disclosures, where a vendor can develop a disclosure (and the software for accessing data that need to be disclosed) and offer it to multiple potential users. The large-scale demand can drive down the unit costs of providing information about deposit accounts to consumers. Firms that wanted to provide these benefits in the absence of regulation would face higher costs if their competitors were not also required to provide the benefits.

MEASURING INCREMENTAL AND BASELINE COSTS

The Study's cost estimates rely primarily on employees' estimates of the portions of in-house labor, in-house non-labor, and third-party vendor costs that are reasonably necessary to comply with and demonstrate compliance with the in-scope regulations. Where possible, we validated estimates with certain cost accounting documentation (e.g., vendor invoices for compliance-related products and services, budgets from the Compliance function). However, since none of the participant banks track compliance costs as defined in the Study, cost accounting documents alone were insufficient to identify incremental compliance costs.

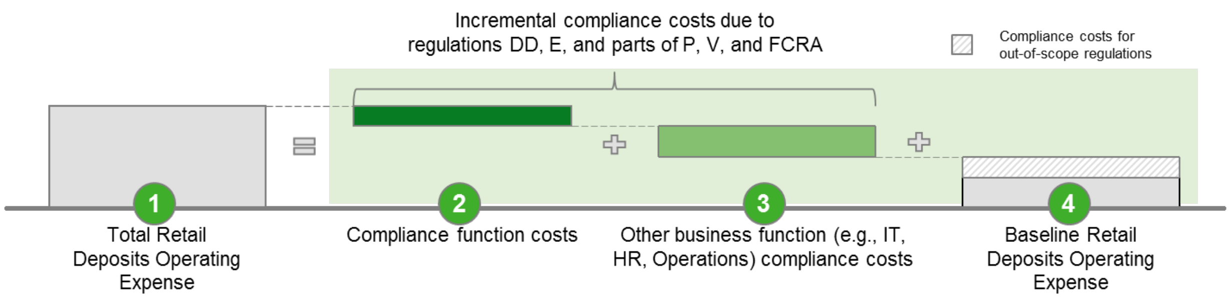
Estimates of incremental costs were also dependent on our decisions of what activities and costs should be designated as a baseline cost (as opposed to a fully incremental cost that is separate from baseline). Such decisions have implications for the size of the compliance costs that are measured. Furthermore, we had to choose an available measure of operating cost to calculate a baseline cost for the Study.

As Figure 1 below demonstrates, we estimated each participant's **total retail deposit operating expense** (labeled "1" in Figure 1).[28] This is the total operating expenditure in the retail line of business that is reasonably attributable to deposit products and services. **Incremental costs** (2 and 3 in Figure 1) are the costs incurred by the different departments of a participant bank to

[28] The Study calculated the retail deposit operating expense for each of the seven participant banks using publicly available information on total deposits at each bank and internal research conducted by McKinsey Global Concepts Institute. The model was most recently updated in 2012 and the data set includes all U.S. banks and credit unions.

perform activities required by the in-scope regulations. We measured the incremental compliance costs incurred by the **Compliance function** (2), as well as the compliance costs incurred by other individual **business functions** (3) (e.g., Information Technology, Human Resources). To determine the **baseline costs** (4) for each participant, we subtracted the total incremental compliance costs (2 and 3) from the total retail deposit operating expenses at each participating institution. This remaining amount is an estimate of potential baseline cost at the participant. The baseline costs include compliance costs of regulations that are beyond the scope of this Study, as well as other costs for activities performed as a result of regulation but not required by the regulation.

FIGURE 1: NOTIONAL RETAIL DEPOSIT BUSINESS EXPENDITURES, BY INCREMENTAL AND BASELINE COMPONENTS



Note: Figure not drawn to scale

We chose to estimate a baseline using this method because attempting to construct an item-by-item baseline cost would have been a more challenging and time-consuming exercise. This would have required inquiries about the entirety of a participant bank's operating expenses and perhaps the entirety of a branch's operations, rather than targeting our questions on incremental compliance costs.

We generally report total incremental compliance costs as a percentage of total retail deposit operating expenses. Total retail deposit operating expenses is one possible **denominator** with which to compare compliance costs across banks. We also measured total compliance costs for the in-scope regulations against other potential denominators, such as operating expenses for the entire retail line of business (including residential mortgages and other consumer lending business lines) and profit for the retail deposit line of business. [29] But we report our data using a denominator of retail deposit operating expenses to avoid bringing in operating expenses of other retail product lines. We also wanted to reduce potential error attributed to measuring compliance costs against denominators derived from multiple numbers (e.g., retail deposit profit). [30]

KEY ASSUMPTIONS AND JUDGMENTS

Calculating incremental compliance costs required judgment to distinguish incremental activities from baseline activities that a participant would undertake regardless of regulatory requirements. A complete statement of our assumptions can be found in *Appendix C*: *Incremental Cost Assumptions*. Some of the incremental costs we identified that relate to the in-scope regulations were associated with:

- Interactions between the Compliance function and other functions when designing new products, marketing campaigns and trainings, or when providing compliance advice within the institution;
- Preparing for related supervisory examinations;
- Producing, administering, and tracking compliance-related trainings for employees;
- Providing disclosures;
- Portion(s) of software and systems with some level of compliance-related functionality; and
- Back office operations support for Retail function’s front office compliance activities (e.g., imaging and storing signature cards, customer declarations of overdraft opt-in, and other records required to be retained to demonstrate compliance) and for the error resolution process (as defined by Regulation E).

An important premise of separating incremental costs from baseline costs is that not every requirement in a regulation results in costs. For any given regulation, the costs related to performing all activities that satisfy the requirements of the regulation may include both baseline

[29] We do not report the data underlying specific denominators and only express compliance costs relative to a denominator in part to preserve anonymity of participant banks. Further, since some denominators were estimates, such as total retail deposit operating expense, we reviewed these figures with the participant banks.

[30] See sub-section 3.4: *Compliance Cost by Participant Bank* for discussion of compliance costs compared to other denominators and on scale effects on compliance.

costs and incremental costs.[31] It is necessary to avoid double-counting any particular activity or cost as both incremental and baseline. For example, Regulation E requires a periodic statement. However, we did not treat the entire cost of a periodic statement as a cost of regulation, because banks would likely provide their customers periodic statements for business reasons (perhaps in lower-cost formats and in different delivery frequencies) regardless of the regulatory requirement to provide a periodic statement. Instead, we treated just the additional pages that the participant bank might mail only because of the regulation as the incremental cost of compliance. Similarly, Regulation E also requires claims and disputes to be resolved within specific timelines. However, as a matter of standard business practice, banks are likely to have processes to resolve customer disputes related to electronic fund transfer transactions even without the regulation. Therefore, we assume as incremental only a portion of the staff hours spent on resolving Regulation E claims and disputes as a result of the mandated timelines.[32]

We exercised judgment in determining which costs are considered to be incremental. Arguably, some incremental compliance costs could be considered baseline costs and vice versa. For example, in assessing whether a particular regulation imposed incremental cost, we did not explicitly exclude state law from the baseline. State law may impose overlapping requirements and, in some instances, would likely impose more requirements if federal regulations did not exist. We also did not consider as incremental the costs associated with private standard setters, such as the National Automated Clearing House Association (NACHA)[33] or debit card networks, although some of these standards may also overlap with federal regulations. If these standards would exist independent of federal regulation, our estimates may overstate the incremental compliance costs related to the in-scope regulations.

We also made judgments about how to attribute the cost of certain activities to specific regulatory requirements. For example, we counted the entire time a branch employee explains the overdraft opt-in disclosure to a customer as an incremental cost of regulation. This may include baseline

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[31] Elliehausen (1998).

[32] For full description of assumptions made to distinguish incremental costs from baseline costs, see *Appendix C: Incremental Cost Assumptions*.

[33] NACHA – The Electronic Payments Association is responsible for the management of “the development, administration, and governance of the ACH network.” Financial institutions using the ACH network are required to follow the *NACHA Operating Rules*, which governs activity over the ACH network. https://www.nacha.org/intronacha.

costs, as some banks may take extra time to explain an opt-in disclosure to help the customer understand and perhaps sign up for available overdraft alternatives at the bank, such as linked account overdraft protection. Such extra time is not necessarily required by the regulation and may be considered a business-as-usual practice, but is included in the calculation of incremental cost.

In general, our judgments are intended to be conservative and tend to err on the side of treating arguably baseline costs as regulatory costs rather than vice versa. We endeavored to be systematic in our judgments so that estimates of compliance costs were calculated consistently across the participant institutions. With conservative judgments, like those described above, we recognize that the incremental costs reported in the Study may represent an upper bound of possible compliance-related costs for the in-scope regulations and products at the participating institutions.

2.2.2 The Case Study Approach

The case study methodology that this Study employed involved in-depth, structured interviews and data follow-ups with personnel from across each participant bank. We believed a case study approach was more appropriate than a survey for this foundational study for a number of reasons.

First, it was important to capture compliance activities performed throughout the participant bank, not just activities within the Compliance function. For employees outside the Compliance function of a bank, compliance activities may comprise only a small portion of their work. Only certain managers in the organization may recognize that they play a role in compliance, despite not being employees of the Compliance function. Since banks generally do not account fully for all costs of compliance, we needed to identify and conduct interviews with staff that could provide granular insight into the everyday tasks and activities performed to comply with the in-scope regulations.

Second, the Study required engagement with participants throughout the entire research process, not just during the information collection phase. We engaged with participant banks prior to our arrival to help participants prepare for structured interviews. We also kept in touch with participants after the on-site visits when following-up on additional information and data quality issues. The on-site interviews were important for identifying specific compliance activities performed by individual functions. A small number of case studies also allowed us to perform thorough reviews of a multiple bank functions and the roles of various personnel within those functions. Other data collection methods, or even a larger number of case studies, would have been less likely to capture such information.

Finally, the case study method allowed us to explain to participant bank staff what we defined as compliance activities within each function, and this ensured more consistency in measurement across participants and functions. This opportunity to work closely with the Study participants separates the case study methodology from other approaches used in previous studies, such as surveys. While surveys could cover more firms and potentially produce representative results, they also pose major challenges in capturing reliable and granular information that the Study sought to collect. Ensuring that appropriate personnel are responding to applicable survey questions can be difficult.[34] Survey methodologies for compliance costs require extensive effort on the part of respondents and researchers to ensure that they consistently capture all compliance activities. Surveys also limit a researcher's ability to pose many specific questions. Since some of the concepts and definitions introduced in the Study are open to interpretation, the participants could have defined those parameters for themselves in ways that were inconsistent. Therefore, we needed to be able to set clear and consistent parameters by which specific costs and activities were to be considered incremental or baseline.

BANK SELECTION

The methodology developed for the Study was intended for use with participant institutions of all sizes and types. Given the resource demands of the case study methodology, we approached a small number of institutions for participation in the Study. Seven banks voluntarily agreed to participate.

We believed that focusing on a small number of institutions increased data reliability. Limiting the number of banks in the Study also afforded us multiple opportunities to scrutinize and validate the information we collected. However, the Study does not have enough case studies to generalize our findings across the broader banking industry. The findings therefore represent hypotheses of compliance costs rather than evidence for any particular industry-wide conclusion.[35]

We used several standards to select participants in the Study. We segmented the industry by a number of variables including asset size, size of branch network, geographic distribution (i.e., location of branches), prudential regulator, and size of an institution's consumer banking business (which we proxied by size of its residential lending portfolio).

The participant banks are divided among four different asset tiers, as described in Table 2.

[34] Elliehausen (1998).

[35] Elliehausen (1998), "Relationships suggested by the results of case studies, therefore, should be regarded as hypotheses rather than definitive evidence."

TABLE 2. PARTICIPANT INSTITUTIONS BY ASSET SIZE CATEGORIZATION

Tier[36]	Asset Size	# of Banks in Study
1	> $100 billion	1
2	$10 billion - $100 billion	2
3	$1 billion - $10 billion	2
4 [37]	< $1 billion	2

The selection criteria allowed us to study a group of participant institutions that could offer insight into the different ways banks manage compliance. However, we are mindful that banks that are willing to volunteer for research of this type may differ in business or compliance practices from those would not be willing to volunteer. A study of institutions outside of the participant group of seven banks may have yielded different findings.

Even among the seven participant banks, there were differences in business models. To avoid adding complicating variables, the Study focused on commercial banks and did not include other types of institutions. Credit unions and thrift institutions were excluded from the Study since key differences, such as ownership structure, might have contributed to these institutions having different compliance spending patterns from banks. Differences amongst institution types could also have further compounded errors in calculations.

2.2.3 Information Collection Design, Execution, and Analysis

The methodology we outline in this report was developed to capture ongoing compliance activities and costs, as well as those activities and costs that can be measured retrospectively. By design, the

[36] The seven banks in the Study are designated as follows, in order of decreasing asset size: Tier 1, Tier 2A, Tier 2B, Tier 3A, Tier 3B, Tier 4A, and Tier 4B.

[37] As of the fourth quarter of 2012, of the more than 6,000 FDIC-insured commercial banks, approximately 90 percent had assets of $1 billion or less. The median asset size of banks in this broader population was approximately $168 million. The two Tier 4 banks in the Study had asset sizes above the median for the population. Source: FDIC, *Institution Directory*, online at http://www2.fdic.gov/IDASP/main.asp.

methodology is not informative about ongoing compliance costs in years with significant regulatory change or unusual levels of product change. In these atypical years, the compliance costs might be higher or lower, and other business functions might have a bigger or smaller share of costs.[38]

We developed a case study methodology that consisted of three phases. Phase 1 designed the information collection and focused on preparation for the on-site visits. Phase 2 consisted of on-site interviews at the seven participating institutions. Phase 3 included analyzing and validating the data, as well as conducting additional quality control tasks, such as follow-ups with participants on any missing or inconsistent information.

PHASE 1: DESIGNING THE INFORMATION COLLECTION

The first phase of the Study focused on determining which bank personnel to interview and developing targeted interview questions. We constructed three broad taxonomies: one for types of regulatory requirements, a second for various activities in the customer lifecycle of deposits-related products and services, and a third for business functions at participant banks.[39] Identifying the more salient intersections of the three different taxonomies allowed us to identify potential compliance responsibilities of different business functions. This made it easier to propose a list of bank personnel to interview.

The **regulation taxonomy** categorizes the particular requirements of the in-scope regulations. For example, one type of requirement was disclosures. Required disclosures could be either prompted by consumer action (e.g., overdraft opt-in disclosure at account opening) or unprompted (e.g., privacy notice sent out every year). Some of the other types of requirements focused on error and dispute resolution, as well as authorization rights (e.g., consenting to paid transactions that overdraw an account). In total, we created nine different categories of the types of regulation in the scope of the Study, as summarized in Table 3. The categories were comprised of 38 specific provisions from the in-scope regulations.

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[38] Atypical years may experience one-time compliance costs due to the implementation of new regulations and/or amendments. While these one-time implementation costs were outside the scope of the Study, we were able to collect some information from participant banks about the steps they took to implement regulatory changes. Such information provided some insight into the size and nature of one-time implementation costs for the 2009 amendments to Regulations DD and E on overdraft programs. See *Appendix G: Insights on One-time Implementation Costs.*

[39] Three tables presented in *Appendix B: Taxonomies* provide details on each of the taxonomies.

TABLE 3. REGULATION TAXONOMY

REGULATION REQUIREMENT CATEGORY	DESCRIPTION
Advertising	Requirements or limitations on the form or content of information disseminated for the purposes of advertising products
Authorization Rights	Requirements to provide consumers with the option of accepting or declining participation in a given service
Calculation Methodologies	Requirements regarding methods for calculating rates, charges, fees, or other quantitative metrics
Contracting and Outsourcing	Requirements or limitations regarding the contracting or outsourcing of bank operations that affect consumers
Error and Dispute Resolution	Requirements or limitations regarding the manner in which consumer disputes can be resolved
Information Exchange	Requirements or limitations regarding the provision or receipt of non-public consumer information to or from a third-party agent
Information Retention	Requirements or limitations regarding the retention and storage of consumer information
Prompted Disclosures	Requirements to provide information to the consumer prompted by an exogenous bank- or consumer-initiated event
Unprompted Disclosures	Requirements to provide information to the consumer on a recurring and/or ongoing basis

The **customer lifecycle taxonomy** details the activities and sub-activities across different stages of a customer's interaction with a participating institution around its deposit products and services. The customer lifecycle has four stages: **customer acquisition**, **account opening**, **account maintenance**, and **account closing**. Each stage is comprised of a number of major activities and sub-activities that personnel perform to support the higher-level activity. For example, sub-activities involved in "providing account information" during account maintenance include sending consumers monthly account statements and providing online access to account information. Within the four stages of the customer lifecycle, we identified 37 categories of customer lifecycle activity and 119 corresponding categories of sub-activity.

The **business function taxonomy** consists of the major functional areas ("functions") and associated activities ("sub-functions") within banks that support regulatory compliance for the retail deposit line of business. Such functions include Compliance, Operations, and Information Technology (IT). Within each function are sub-functions that have specific responsibilities related to compliance with the in-scope regulations. For example, the IT function generally houses sub-functions such as application development, quality assurance, and infrastructure management.[40]

A function is not necessarily equivalent to a separate office or team in a bank. Functions may differ based on the way that an institution organizes its business. Many financial institutions are too small to create a separate staff for each function. At the smallest banks, a single employee might perform two or more functions. While we structured our interviews to gather information from various business functions, we ultimately collected and recorded cost information for individual compliance-related activities. As a result, similar functions at participants may not perform the same set of compliance-related activities. For example, the two Tier 4 banks in the Study do not take in customer calls through call centers, a sub-function we categorized under the Operations business function. Rather, the front-line staff in the Retail function handles customer phone inquiries and any disputes reported by phone. In those two cases, we captured compliance costs associated with the intake of disputes in the Retail function.

By categorizing tasks and personnel to more detailed sub-function levels, we were also able to categorize costs into different components, such as internal labor costs, internal non-labor costs, and external third-party costs. In total, we identified eight general business functions with 35 corresponding sub-functions. Details on the functions and the sub-functions are provided in Table 4.

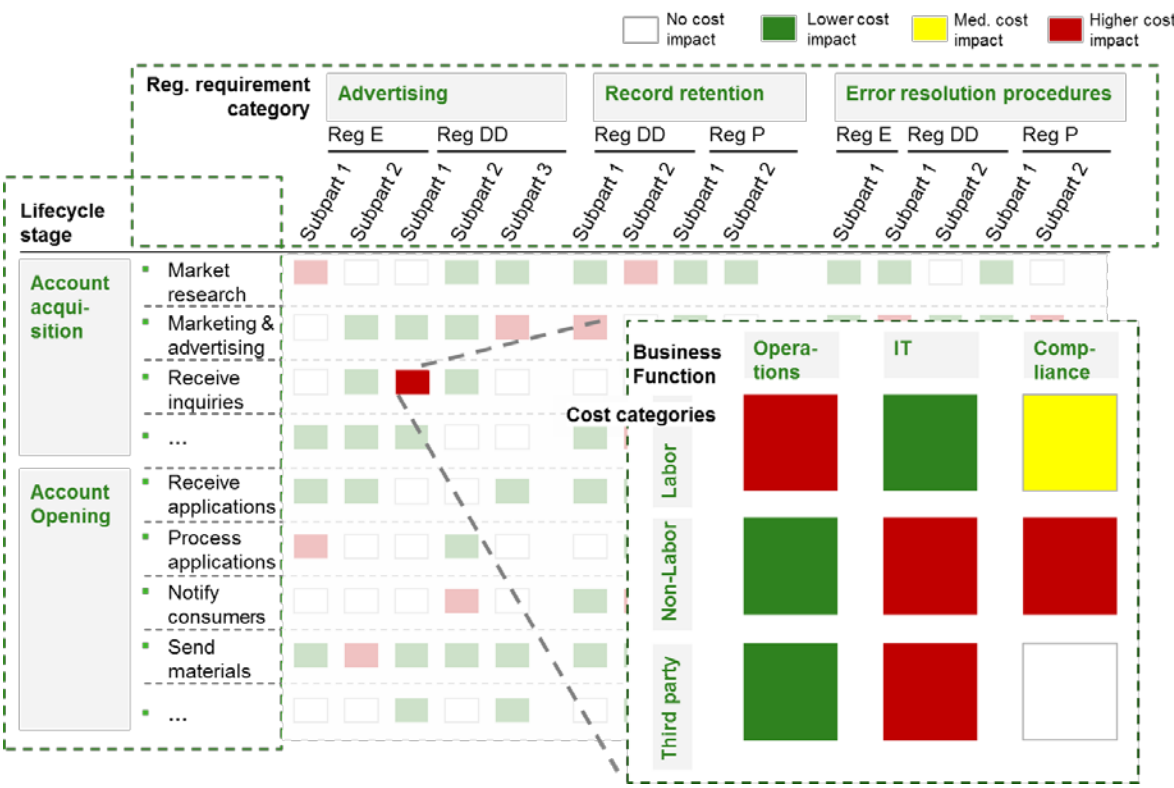
[40] Throughout the report and for distinction from general terms, business functions as described in the Study taxonomy are capitalized (e.g., the “Compliance” function, as opposed to general “compliance” activities). The taxonomy’s sub-functions are also referenced frequently in the report, but are not capitalized.

TABLE 4. BUSINESS FUNCTION TAXONOMY

FUNCTION	SUB-FUNCTIONS	OVERVIEW OF RESPONSIBILITIES
Operations	• Call Centers • Fulfillment • Back Officer Support • Fraud Mitigation/ Error Resolution	The Operations function oversees production and distribution of statements and forms, branch support, researching and resolving disputes in relation to error resolution processes, and consumer interactions in Call Centers.
Information Technology (IT)	• Application Development and Maintenance • Infrastructure Management	The IT function is responsible for the development and maintenance of systems and software that provide some degree of compliance functionality. Some systems and software may be uniquely dedicated to supporting a compliance activity, while others support other business functions and activities (e.g., a core processor), but may include additional compliance activities.
Retail	• Distribution • Front-line Management/Platform FTEs • Product Development and Management	The Retail function is the consumer-facing function responsible for managing the bank's ATM and branch network, interfacing with customers to open/update account or resolve disputes/concerns, and developing and designing new products and services.
Corporate Oversight (Risk/Audit)	• Enterprise-wide Standard Design • Internal Exams	Corporate Oversight consolidates the Risk and Audit functions. Responsibilities include conducting enterprise risk monitoring and preparing, designing, and performing internal audits of various bank functions.
Legal	• Research • Product and Policy Review • Advice and Counsel	Legal reviews and assesses regulatory requirement to help guide compliance, provides advice for product/policy reviews, and defends the business against lawsuits or complaints.
Human Resources (HR)	• Training Design and Development • Training Deployment and Monitoring	HR is responsible for the continuous development, deployment, and monitoring of annual employee compliance-related trainings.
Marketing	• Marketing Design and Implementation	Marketing staff are typically responsible for conducting market research, developing marketing strategy for new products and services and for the bank as a whole, and advertising.
Compliance	• Regulatory Research and Gap Analysis • Policy and Procedure Design • Monitoring and Reporting • Business Advice and Counsel • External Exams	Compliance staff perform regulatory research, designing policies and procedures to ensure compliance, monitoring compliance processes, providing advice and responses to other functions, and facilitating external supervisory activity.

After constructing the taxonomies, we mapped each regulatory requirement to a corresponding activity on the customer lifecycle and identified the various functions that would likely perform each activity. This exercise yielded thousands of intersections among the different regulatory requirements, customer lifecycle activities, and business functions. Each of these intersections represented a hypothesis of potential compliance costs. After conducting internal analysis and consulting subject matter experts familiar with retail banking and bank operations, we determined that the vast majority of these intersections had insignificant costs and worked to identify the intersections that plausibly could contain a cost greater than zero. Figure 2 demonstrates an example where, for a given bank, there could be internal non-labor costs in the Compliance function (**business function**) associated with marketing to potential new customers (**customer lifecycle** – *[customer] account acquisition*) while complying with advertising standards (**regulation** – *Regulation DD*).

FIGURE 2: DEMONSTRATION OF SYNTHESIZED COMPLIANCE COST STUDY TAXONOMIES



Testing all of the hypotheses would be challenging in any reasonable amount of time, and most of them were too granular to elicit useful information from an employee. Thus, we used guidance from our industry and regulator consultations to narrow our list of intersections into a list of about 500 hypotheses. Each hypothesis indicated whether the potential cost would have a comparatively higher, medium, or lower impact. For each interview, we focused our questioning on gaining insight where there appeared to be a high or medium cost impact. These characterizations of impact are relative to the total cost of compliance at a participating institution. They do not represent a judgment that any particular cost would be "high" or "low" in an absolute sense or relative to benefits of the regulation.

While we initially attempted to record a cost for each of the 500 hypotheses, as our on-site visits progressed we narrowed down the set of hypotheses to 140. Some sub-functions that we included in initial lists of hypotheses were removed if we observed little to no costs incurred at that sub-function or if the participant bank considered the costs to be incurred by another function or sub-function.

Based on our list of hypotheses, we developed an interview instrument that would give us sufficient flexibility to address these hypotheses.[41] Before visiting each participating institution, we briefed key personnel by telephone conference call to explain the scope of the Study and answer questions. We gathered background information about each participating institution prior to arriving on-site, such as organizational charts, sample disclosures, and policies and procedures. This information allowed us to familiarize ourselves with each institution, organize in advance our interviews, and structure our questions accordingly.

It is important to note that some of the costs that we measured fall outside of the taxonomies. Specifically, costs related to preparing for and managing external examinations are not necessarily costs related to complying with particular provisions of the regulations in scope. Still, institutions are subject to examination around the in-scope regulations and products. To remain consistent with our definition of compliance costs, which includes the costs of demonstrating compliance, we included some costs associated with undergoing a supervisory exam related to the in-scope regulations. The compliance-related examination costs we report in the Study only include the Compliance function costs of facilitating exams, as estimated through activities associated with pre-exam preparation, on-site support, and post-exam follow-up. While we believe this captured a major portion of examination costs, our estimates may underestimate the full cost of exams by not fully accounting for the involvement of non-Compliance function staff and executives in relevant

[41] Per requirements set forth in the Paperwork Reduction Act, we obtained approval from the Office of Management and Budget to collect this information (OMB Control Number 3170-0032). See *Appendix D: Pre-Visit Documents — Compliance Cost Study Pre-Visit Information*. While in the field, we adapted the instrument to each bank function as needed.

exam activities. Further, we included the costs related to external examination to provide greater context and because the staff we interviewed often were involved in the examination process.[42]

PHASE 2: CONDUCTING ON-SITE INTERVIEWS

Phase 2 focused on conducting on-site bank interviews. We interviewed approximately 200 bank executives and employees across all seven participant banks.

The on-site visit at each case study bank started with a kick-off meeting to remind relevant senior executives, managers, and other bank personnel of the Study's goals and brief them on the Study's methodology. Following the kick-off meeting, the initial portion of the on-site visit (one to two days) was spent in scheduled meetings with executives and other bank personnel. These initial interviews focused on getting an overview of the business functions of each participant bank and discussing the key compliance responsibilities of each of these functions as they relate to the Study scope. At each participant bank, some aspects of the business functions were different. For example, while HR staff at most participants were responsible for the development of training materials and modules, one bank placed more development responsibility on Retail function staff. We ensured that, despite such differences, costs were captured and allocated to functions consistently in our analyses.[43]

We made efforts to interview personnel who were either responsible for or who would have the most knowledge of the cost of a particular compliance activity. For example, at each participant bank we interviewed a branch banker to find out how much time is spent on activities related to the in-scope regulations during the account opening process.

The initial interviews also provided an opportunity for executives and managers at each respective participant institution to identify additional staff who had a more detailed understanding of compliance activities. Follow-up interviews with these identified personnel comprised the remainder of the on-site visit. These targeted discussions focused on estimating the costs of

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[42] The Study does not draw conclusions on the costs or activities the Bureau considers "reasonably necessary" for compliance with the Bureau's deposit-related regulations. It is not clear that aggregate examination costs will increase because of a new rule going into effect. In addition, although the cost of demonstrating compliance in the course of an examination is not necessarily a cost of complying with specific provisions of the in-scope regulations, we have included this cost in our estimates because staff we interviewed uniformly regarded examination costs for the in-scope regulations as compliance activity.

[43] See discussion in sub-section *2.2.4: Methodological Challenges – Standardizing Data and Analysis* for more information on the steps we took to control for any inconsistencies in the manner data was collected by different teams or in the way banks provided us with data.

particular sub-functions within one of the identified business functions. We also conducted follow-up interviews to review and corroborate information from on-site conversations.

During each interview, we took time to explain the concept of incremental cost of compliance, which helped interviewees understand the key concepts of our methodology and describe the costs and activities related to the in-scope regulations. Since each participant is organized differently, we needed to be structured but not rigidly prescriptive in our interview approach. This allowed interviewees to identify relevant tasks, personnel, and issues that might have been otherwise overlooked.

Two different interview approaches, or a combination thereof, were used to lead the interview:

- **Top-down** – Interviewees identified the scope of their responsibilities, and the Study team facilitated the interviewees in narrowing those responsibilities to those related to compliance with the in-scope regulations and products, and ultimately to our hypotheses (e.g., interviewees describe their responsibilities and Study team prompts them to divide up their time – by hours or percentages – dedicated to those responsibilities and activities).
- **Bottom-up** – The Study team framed the conversation around particular compliance-related activities based on the hypotheses developed, and the interviewees specified the details of their everyday tasks that contributed to those activities (e.g., the Study team described the broad responsibilities within the business function of regulatory interest, and interviewees itemized their activities – by task and time spent on each – which are tallied for analysis).

In most interviews, we generally obtained information on staffing, dollar costs for labor and non-labor resources, dollar costs on third-party services, and time (or percentage of time) spent on compliance activities.

Information collected during the on-site interviews was sometimes supported by additional documentation. We also asked participants for any readily available reports and other relevant documents, such as department budgets, policies, and project plans, that may have described or itemized activities and costs related to compliance. Depending on the institution, participants also shared detailed information such as the number of account openings and Regulation E complaints in a year, the cost of training modules for the in-scope regulations, time spent by call center personnel on compliance activities, the budget for the Compliance department, and the overdraft opt-in implementation plan. Participant institutions submitted additional information on a purely voluntary basis, and not all information collected during interviews was further substantiated by written documentation.

PHASE 3: ANALYZING AND VALIDATING DATA

Once the on-site visits were completed, we began to analyze data and compare the information, including a review of the quality of information across the seven participant banks. For each participant bank, we attempted to estimate incremental compliance costs for as many of the 140 hypotheses we addressed while in the field.

As part of our quality control efforts, we followed up directly with participants to verify certain pieces of information, correct any inconsistencies, and fill gaps in our data. Follow-up was conducted through e-mail and phone calls. To further verify certain costs, we contacted external industry experts. For example, we had conversations about pricing with external experts who had experience in pricing software compliance modules at several financial technology vendors. As a result of these conversations, we adjusted accordingly the Study's estimates of IT core processor software costs related to compliance for several participant banks. The adjusted estimates were consistent with the results we received from the participant bank that had used actual invoices from their core processing vendor to parse out the incremental cost of software related to the Bureau's deposit-related regulations.

The results from this and similar analyses are presented in the *Key Findings* section of this report.

2.2.4 Methodological Challenges

From our initial preparation for on-site information collection at participant banks to our post-visit follow-ups, we took steps to mitigate the challenges inherent in gathering information on compliance costs. Again, these challenges are rooted in the fact that there is no standardized method of measuring or collecting costs of business models and different approaches to compliance management. In the following section, we further describe the challenges of collecting cost information and of calculating incremental compliance costs at each participant. We also explain how we adapted the case study methodology to address these challenges. Similar to assumptions on baseline and incremental cost, the steps taken to mitigate the methodological challenges have implications for the costs measured.

IDENTIFYING ALL RESOURCES INVOLVED IN COMPLIANCE ACTIVITIES

As discussed above, our preparation for the on-site interviews included developing a framework that represented all relevant compliance activities within a participant bank and identified how those activities were distributed across various business functions and sub-functions. We designed this framework to ensure that no major compliance activity would be overlooked and that discussions with personnel at participant banks could focus on the compliance activities relevant to their respective sub-functions. As previously mentioned, prior to on-site visits, we held multiple conversations with executives and other personnel and reviewed organizational charts to identify the right individuals for initial interviews.

We refined our questioning as interviews with executives and staff progressed, combining "top-down" and "bottom-up" lines of inquiry and probing questions as appropriate. Pre-field preparation and communications ensured that all Study team members knew how each participant bank organized its functions and could ask about compliance activities in a standardized way. However, this approach assumed that an institution's management had enough knowledge of the units they managed to connect the work they performed to the compliance activities and sub-activities that we described, which we believe that all seven participant institutions in the Study had. We may have missed some resources involved in compliance activities if the relevant activities were not described in enough detail, or if an interviewee failed to mention that certain personnel, systems, or vendors performed specific activities. We mitigated these risks by detailing beforehand our categorization of business functions and how those functions support compliance activities.

Identifying all personnel and systems involved in compliance activities was more challenging for the larger institutions than for the smaller ones. At the larger banks participating in the Study, information about the same compliance activities and processes was often allocated among many people across multiple teams. Individual employees were often specialized within one aspect of a multi-step process. It could be difficult to identify all the relevant staff associated with that particular process, increasing the possibility that they may have been overlooked and that not all in-scope compliance activities and costs may have been fully accounted for.

Among the smaller banks participating in the Study, fewer people were involved with compliance activities and processes, which made it easier to identify nearly all of the appropriate people to interview. In some cases, a single person at a smaller institution may have had comprehensive knowledge about the equivalent areas spread over many people at a larger institution. At the same time, as more compliance-related responsibilities are centralized under one department or individual, it may become more difficult to parse the labor costs for individual activities.

Identifying all of compliance-related vendors relevant to the Study scope was also a challenging, time-intensive exercise. While the Study participants could produce lists of vendor names from invoices or their vendor management databases, accurate identification of resources directly attributed to compliance activities was generally difficult, since the in-house staff managing the relationship with the vendor might not have the same granular knowledge of the work and systems as the vendors themselves. Gathering details about vendor-driven compliance activities was further complicated by the fact that the differently sized participant banks had vastly different numbers of relevant vendors, ranging from just a few contracted service companies for the smallest case study banks to many thousands of companies for the largest banks in the Study. However, every institution participating in the Study had staff who knew what the bank was buying and could identify the compliance functionality of different systems and services.

In particular, the smaller Tier 4 banks were able to discuss in relatively rich detail each system or product supplied by vendors and provide a specific percentage of the cost of each product that was allocated to the in-scope regulations. These participant banks were able to supply lists of vendors and systems involved with the deposits line of business. To estimate similar costs at Tier 2 and Tier 3 banks, we typically used a combination of documentation provided by the bank on its vendor relationships and a framework we provided to participants to systematically detail which of their third-party costs were relevant to the in-scope products and regulations.

QUANTIFYING COMPLIANCE ACTIVITIES

Once compliance activities were identified, they had to be quantified in a standardized and informative way. This meant assessing the tasks and activities to determine the amount of staff time spent on certain compliance activities or share of a system or product that was used for compliance.

Recognizing that circumstances varied across participants, we would accept answers in whatever form staff could provide them. We would ask about the number of personnel engaged in a particular compliance activity for a particular percentage of a week or for a certain number of hours per week. Most staff interviewees were able to describe their compliance-related activities in a weekly time frame, although in some cases answers were given as percentages of a week. Such responses would not necessarily have been consistent with the answers given as a number of hours. For activities performed via third-party vendors, we would ask directly about the share of spending associated with the part of the product or service engaged in compliance.

There are certain challenges in quantifying compliance activities. First, the same personnel, systems, and vendors might perform both compliance and non-compliance activities. Moreover, those personnel, systems, and vendors may be responsible for many different compliance activities. As such, it may be difficult to distinguish how much of some period of time or what particular portion of a certain system was dedicated specifically to the compliance activity within the regulatory scope of the Study. Staff interviewees were usually able to estimate the hours that they spent engaged in compliance activities in general. For example, staff in the Marketing function might know the times per year or number of weeks they spent interacting with the Compliance function for the purposes of reviewing marketing campaigns or designing new products. However, it was difficult to be precise in estimating the extent to which this interaction addressed specific requirements of the in-scope regulations. The accuracy of quantitative information provided by interviewees likely depended on the extent to which bank staff could check their intuition against corroborating or conflicting information, as well as the perceived importance of providing accurate answers.

Certain rules require “smaller” compliance activities that are hard to measure. For example, it is difficult to quantify the cost of extra lines on a periodic statement attributed to the overdraft disclosure rule; the cost would be a very small percentage of the annual maintenance fee paid to core processors to generate periodic statements. Similarly, the time spent replacing paper in ATM machines to ensure that banks can always provide a receipt to the consumer is an incremental compliance cost, but contributes only a tiny portion of the total time spent on ATM maintenance. We believed it was important to account for these costs so as not to ignore the types of cost that add up over multiple regulations. However, quantifying these small costs with any amount of precision is inherently challenging.

Another challenge resulted from the fact that staff at different participant banks might have different perceptions of the general intensity of compliance activity over time. The Study only focused on “point-in-time” costs and did not compare these costs to the size and composition of compliance costs from previous periods. In general, we asked for answers for a typical week. When specifying year, we used 2012 as the benchmark and focus of a bank’s in-scope regulatory experience. Our assumption was that financial institutions had largely adjusted their products and services to the most significant recent regulatory changes in this market (the Regulations DD and E overdraft amendments).[44] However, it is possible that the different perceptions of bank personnel regarding the intensity of compliance activity in a typical week or year could lead to different answers across the seven participants in the Study.

Finally, as indicated earlier, there is an inherent challenge in trying to discern costs that are “reasonably necessary” to fulfill regulatory requirements from other factors, such as any discretionary costs financial institutions may incur based on the way they choose to respond to regulation. Institutions may employ any number of different strategies to satisfy regulatory requirements, and some courses of action and their associated costs may depend on how an institution decides to conduct its business. As we describe in the *Key Findings* section, some of the

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[44] As previously mentioned, amendments to Regulation E associated with remittance transactions were not in-scope for the Study. In addition, costs related to any operations changes resulting from the amendment to the Electronic Funds Transfer Act (the “Durbin amendment”), which regulates interchange fees , were not captured in the Study. The Durbin amendment is implemented by the Federal Reserve Board's Regulation II (12 CFR part 235). Information about Regulation II is available at http://www.federalreserve.gov/paymentsystems/regii-about.htm.

differences in compliance costs among case study participants may be attributed to certain business decisions by institution, such as the choice to offer overdraft coverage or shorten the error resolution timeframe to resolve claims more quickly and improve customers' experience. Business models can differ based on any number of decisions and contribute to the challenge of measuring compliance costs consistently across institutions.

MONETIZING COMPLIANCE ACTIVITIES

For in-house labor, participant institutions provided wage and salary information. We multiplied this information by the percentage of time personnel reported spending on a particular compliance activity to determine the compliance costs in different functions. Each participant also reported salaries at different levels of precision. At smaller institutions we received nearly individual-level salary information, while at larger institutions we obtained broad ranges by general position.

In order to monetize vendor-driven compliance tasks and activities, we needed to estimate expenses for systems and activities completed by third-party vendors. Pricing information for systems and vendors ranged from approximations to line items from invoices and contracts. Regardless of the precision of the pricing information, monetizing vendor systems and activities required confidence that the systems and activities truly provided some degree of functionality related to compliance with the in-scope regulations. Validating relevance of a third-party service to compliance required multiple follow-up discussions, especially with IT personnel. During interviews with IT personnel, we inquired about each system used in the retail deposit business and clarified how such systems supported specific compliance activities within this line of business.

CONTAINING THE COSTS OF THE STUDY TO ORGANIZERS AND PARTICIPANTS

Executing a case study methodology with on-site interviews requires substantial effort on the part of both our eight-member research team and Study interviewees. As the organizing researchers, we needed to be efficient in our collections. We took time to design an appropriate approach for uncovering and capturing data and identifying the right people to speak with at each participating institution. As previously indicated, using case studies to collect information balanced important factors affecting collection burden and quality, including the amount of time spent at each participant, quality of information collected, and number of institutions visited.

Efficiency in a case study methodology also required some flexibility in research team composition. While we wanted to minimize the resource burden on participants, we also wanted to have enough time to collect information appropriate for analysis. Interviews and follow-ups depended to some extent on the availability of bank personnel and what information the research team gathered. A larger research team was more appropriate for larger banks with more personnel. For smaller banks that often had the same individuals working in different business functions, it was more efficient to split the team and conduct interviews at smaller Study participant banks separately but simultaneously.

Participating institutions had to make managers and staff available for discussions lasting up to 90 minutes and accommodate possible follow-up conversations with all interviewees. Effective information collection in this limited amount of time per interview required clear, advanced communication about the Study, methodology, and expectations to managers and personnel. As we completed interviews and site visits, we also actively incorporated feedback about clear communication so that we could make more effective at the next interview or visit.

STANDARDIZING DATA AND ANALYSIS

As noted in the previous sub-section, an efficient information collection process sometimes necessitated splitting up the eight-member research team. Sending different teams to different participants, or even splitting up teams within a single institution, is a potential source of inconsistency in the depth and accuracy of information collection. To manage interviewer heterogeneity, members of the research team were trained to pose questions and follow-up questions in similar ways. However, every interview was different, and interviewers had to adapt based on the amount and quality of information produced during each interview.

We scrutinized the answers in the field and asked clarifying questions as necessary to limit error and any potential bias in those answers. In some cases (e.g., responses to questions on call center time, employee training time, certain IT systems), we could check the answers against other information provided by the bank. Due to the limited amount of time to collect information during on-site visits, we sometimes had to follow up with participants following the visits to fill in missing information and data gaps.

Data standardization and analysis also involved identifying inconsistencies both internal (e.g., quantified hours spent on an activity at a participant bank did not match up with the bank's qualitative explanation) and external (e.g., major quantitative and qualitative differences with respect to other participant banks). Any major discrepancies in data led to careful review of whether inconsistent information was possibly subject to the errors in identification, quantification, and monetization described above. We also examined whether any participant banks exhibiting data discrepancies were subject to the same degree of on-site questioning as at other participants. For example, one bank might report the share of different IT systems devoted to in-scope compliance activities while another bank might report the share devoted to all compliance activities.

Given the methodological and logistical limitations described above, we attempted to standardize the information in a number of ways. Standardization techniques were especially relevant for information that appeared to be major outliers. As previously described, we took steps to investigate certain outliers, such as consulting with Bureau and external experts to validate certain pieces of data and to ensure we were calculating costs in a consistent manner. In some instances, we received more granular data from certain banks that was not consistently collected from others. For example, at one participant bank, we collected very detailed information on the cost of third-party products and services on the Compliance function's budget and time spent by staff outside the Compliance function liaising with an examiner during a supervisory exam. For such cases, we noted the information, but excluded it for the purposes of having consistent measures across all seven Study participants.

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This section presented the scope and methodology of the Study, including steps we took to mitigate inherent challenges measuring compliance costs. Distinguishing incremental costs from baseline costs was one of the principal challenges of the Study. The judgments we made to distinguish incremental costs have implications for our estimates of these costs.

Other researchers may wish to use, adapt, and refine the methodology we present here. To make it easier for researchers to build on this methodology, we summarize the incremental cost considerations and general techniques of the methodology in *Appendix C: Incremental Cost Assumptions* and *Appendix H: General Techniques*, respectively.

3. Key Findings

We executed the methodology described in the previous section by defining a framework for the information collection, conducting on-site interviews at various institutions, and analyzing the data. In this section, we discuss findings about the nature and extent of compliance activities and costs among our Study participants for the in-scope regulations.

We report analyses of compliance costs from three different perspectives. To deepen understanding of the sources of compliance costs, we analyze costs in two ways – by business function and by type of regulation – and examine how these breakdowns vary across the seven participating institutions we studied. We also compare aggregate compliance costs for the regulations we studied across the seven institutions.

We quantify costs at the level of the business function and at the level of the institution. We report the share of compliance costs for the in-scope regulations attributed to each business function and compare those shares across participant banks. We also report compliance costs at the institutional level, using a common denominator to enhance comparability.

Quantification of costs helps sharpen understanding of their sources and how those sources may vary from institution to institution. All of these estimates are subject to the limits that we set forth in the *Methodology* section and key caveats we state at the end of this section. The most important caveat is these data reflect costs at seven banks for the regulations we studied – not necessarily for other financial institutions or for other regulations. Moreover, this report assumes that each participant bank considers a number of factors, such as the size of the geographic or customer footprint and operational efficiencies, prior to determining which business model is appropriate for their respective institution.

3.1 Overview of Key Findings

We analyze the sources of in-scope compliance costs for the seven case study banks from three different perspectives.

First, we examine costs by business function. Among the Study's seven participant banks, compliance costs appear to be concentrated in **Operations**, **Information Technology (IT)**, **Human Resources (HR)** (as it relates to employee training), **Compliance**, and **Retail** functions. We describe the compliance-related activities that each function engages in and also identify activities that entailed higher costs. Table 3 of *Appendix B: Taxonomies* provides details on the functions and sub-functions.

Second, we examine activities and associated costs for the types of regulatory requirements that caused the participant banks to incur the most costs among the requirements we studied. The four types of requirements we analyze are: **authorization rights** (which include opt-in for overdraft coverage under Regulation E and opt-out for sharing information with third-party affiliates under Regulation P), **error resolution requirements**, **mandated disclosures**, and **advertising standards**. We describe the activities conducted by banks to comply with these requirements and explain how these activities may have generated costs across different functions. The findings are consistent with a hypothesis that, for the in-scope regulations, authorization rights and error resolution are generally more costly to administer than advertising standards or disclosure mandates.

Third, we compare aggregate costs across the seven case study participants. We find that the two smallest institutions in the Study incur higher relative costs (as a portion of their total retail deposit operating expense) than the five larger participating institutions and offer potential explanations for possible economies of scale.

3.1.1 Quantitative Presentation of Compliance Costs

In this section, we present costs in two different ways. In sub-section *3.2*: *Compliance Cost by Business Function*, we present the share of compliance costs in each function at each participant bank. The cost figures presented in this sub-section are largely in the format of percentage costs:

$$\begin{array}{r}\textit{Percentage incremental compliance cost}\\ \textit{(Function X at Bank Y)}\end{array} = \frac{\textit{Incremental compliance cost due to Function X at Bank Y}}{\textit{Total incremental compliance cost at Bank Y}}$$

Percentages provide a common unit of measurement. We frequently report a median figure – the median share of compliance cost in that function – in addition to the range of shares. We do not report an average, as the average is less meaningful within the small number of participants.[45]

The percentages we report should not be confused with absolute levels of cost. A small institution may have a higher fraction of its compliance costs in a specific function than a large institution, but it has a lower total compliance cost (in dollar terms) than the large institution. Further, a higher percentage of costs does not necessarily mean that dollar-level costs are higher. [46]

In sub-section *3.3: Compliance Costs by Regulatory Requirement*, we do not present quantitative costs for the types regulations. We did not collect the data in a way that would allow us to estimate those costs with sufficient accuracy.

In sub-section *3.4: Compliance Cost by Participant Bank*, we quantitatively present the costs for the in-scope regulations at the institution level for each of the seven Study participants. We present the costs as a percentage of total retail deposit operating expense (i.e., a percentage of total incremental, in-scope compliance costs relative to the total that an institution spends to operate its retail deposits business). The intuition behind this denominator is that compliance costs are an operating expense. We also use other denominators to test for consistency of patterns.

We avoid reporting dollar figures for several reasons. A dollar figure has little meaning without comparison to a common denominator. Moreover, reporting dollar figures could risk revealing the identities of the otherwise anonymous participant banks or divulging proprietary information.

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[45] In general, at least one of the following three different statistics is used to summarize data: mode, average (mean), and median. In the Study, given that no two data points are the same, using mode would be unhelpful. With only seven observations, using average would give excessive weight to any outliers – even one outlier observation can significantly affect an average across seven participating institutions. The median value summarizing the data from the seven participant institutions is unlikely to change because of any outliers. Median is therefore preferable for expressing the Study's findings.

[46] This is especially evident when comparing large banks with very small ones. For example, assume a large bank has $1,000,000 in total incremental compliance costs and a small bank has $100,000 of total incremental compliance costs. A finding that Function X accounts for 1% of a large bank's total compliance cost and 5% of a small bank's total compliance cost requires nuanced interpretation. Although some readers may interpret this finding as a small bank experiencing five times as much cost as its large bank counterpart, the dollar costs for the smaller bank are actually lower ($5,000, versus $10,000 for the large bank).

3.2 Compliance Cost by Business Function

The Bureau set out to improve understanding of how regulation may affect operations within and across business functions. *Appendix C: Incremental Cost Assumptions* provides details on the particular activities in functions and sub-functions associated with incremental compliance costs for regulations within the scope of the Study.

As mentioned in the description of the Study's methodology, a function is a set of responsibilities and corresponding activities. A financial institution may organize this set of responsibilities and activities in a single department or divide them among several departments. In a smaller bank, one department or even one individual might be responsible for several functions. A functional analysis allows us to compare allocations of costs across institutions in a way that controls for at least some of the differences in the ways institutions organize themselves. Variations in functional shares of cost are not necessarily variations in responsibilities and activities. We may record costs for the same activity in different functions because banks vary in how they organize activities within their functions.

Across the seven participant banks, 85% to 95% of the total in-scope, ongoing compliance costs were contained within five functions. We list them below in roughly descending order of the function's median share of compliance costs.

- **Operations –** Costs within Operations are driven primarily by fulfillment and management of disclosures, mandated error resolution processes, and consumer interactions in Call Centers. Across participants, the Operations function's costs comprise 15% to 29% of total compliance costs identified (median = 23%).
- **Information Technology (IT) –** While they are mostly considered as business-as-usual expenses, core operating systems and software also address compliance needs. As a result, we consider a portion of the costs of these systems and their required maintenance as compliance-related costs. Across participants, IT function's costs comprise 10% to 43% of total compliance costs identified (median = 22%).
- **Human Resources (HR) –** For the purposes of the Study, HR costs are principally determined by the development, deployment, and monitoring of employee trainings that include compliance content. Across participants, HR function's costs of compliance-related trainings comprise 9% to 24% of total compliance costs identified (median = 16%).
- **Compliance –** Costs within the Compliance function are driven by regulatory research, design of compliance policies and procedures, monitoring the activity of business units, advising business units on compliance-related issues, and preparation and facilitation of

bank supervision. Across participants, Compliance function's costs comprise 5% to 31% of total compliance costs identified (median = 13%).

- **Retail –** Retail costs are primarily driven by front-line staff time spent explaining certain disclosures to consumers, particularly during the account opening process. Across participants, the Retail function's costs comprise 3% to 35% of total compliance costs identified (median = 10%).

TABLE 5. SUMMARY OF MEDIAN COMPLIANCE COSTS BY FUNCTION AND COST TYPE ACROSS SEVEN STUDY PARTICIPANTS (AS % OF TOTAL COMPLIANCE COSTS)[47]

	Type of Cost			
	In-house Labor	In-house Non-labor	Third-party	Overall
Operations	14.0%	9.0%	2.3%	22.6%
IT	0.2%	0.0%	21.4%	22.0%
HR	12.4%	0.0%	0.3%	15.7%
Compliance	12.6%	0.0%	0.0%	13.0%
Retail	9.5%	0.5%	0.0%	9.5%
Marketing	2.3%	0.0%	0.0%	2.3%
Audit	1.9%	0.0%	0.0%	1.9%
Legal	0.0%	0.0%	0.0%	0.5%
Overall	66.0%	14.3%	30.3%	

[47] Shading denotes overall high, medium, and low relative shares of compliance costs, where red = high, yellow = medium, and green = low. All costs of compliance are given in median percentages of the seven participating institutions and for individual sub-components of in-house labor, in-house non-labor, and third-party costs (include outsourced labor and non-labor costs). Please note that given numbers are reported as median, individual sub-components of cost across the seven institutions and will not sum to total overall median. Similarly, "Overall" median components will not sum to 100%.

Table 5 summarizes the median levels of cost by function, as a percentage of total compliance cost indicating roughly which functional areas may incur relatively higher shares of compliance costs. *Appendix F: Compliance Cost Breakdown by Institution* details the percentages of compliance cost by function and cost type at each participant bank.

3.2.1 Operations

Across most of the Study participants, the Operations function contained the largest share of compliance costs. Within Operations, four sub-functions emerged as most relevant to our scope: fulfillment of disclosures, back office support for customer activities, call centers, and error resolution. Each of these four sub-functions is discussed in detail later in this section. Customer-facing front office activities were captured within the Retail function, which is discussed later in this section.

Among the Study participants, the Operations function accounts for 15% to 29% (median = 23%) of the total costs of compliance. We further divided these costs into in-house labor costs (median = 14% of total compliance costs), in-house non-labor costs (median = 9% of total compliance costs), and third-party costs that include outsourced labor and non-labor components (median = 2% of total compliance costs).

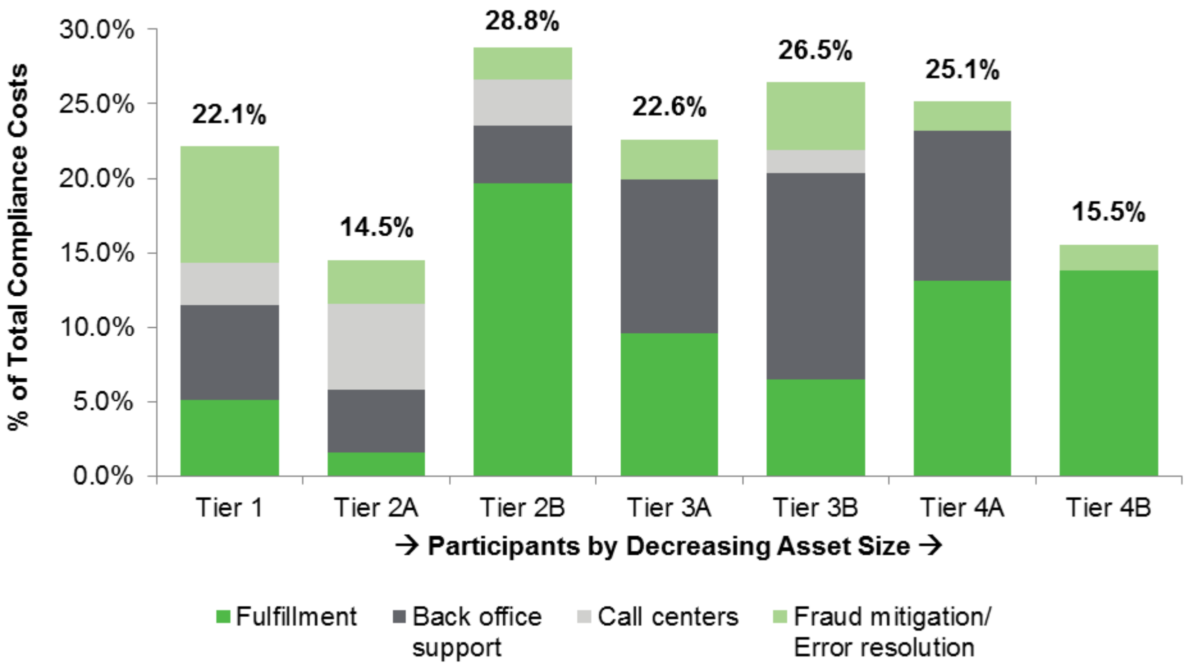
Regulations requiring significant support processes or operational infrastructure to ensure compliance drive the majority of compliance-related Operations costs. For example, the authorization rights and error resolution requirements discussed later in sub-section *3.3: Compliance Costs by Regulatory Requirement* entail a number of support processes, many of which fall in the Operations functions

Some of the Study participants also reported they were trying to increase efficiency in certain areas of their Operations functions. Banks may pursue different paths for achieving new efficiencies – for example, by streamlining processes in back office operations or improving call routing at call centers. One Tier 4 bank senior executive interviewed for the Study shared that *"[w]hoever on staff who doesn't have a customer-facing service represents a chance to explore opportunities for greater operational efficiencies."*

Relative shares of compliance cost differ across the four Operations sub-functions. Two of the sub-functions contribute a substantive share of the Operations costs (median = 23% of total compliance costs): **fulfillment of disclosures** (median = 10% of total compliance costs) and **back office support** (median = 8% of total compliance costs). The other two sub-functions, **call centers** and

fraud mitigation/error resolution, each represented a median value of 3% of total compliance costs.

FIGURE 3: RELATIVE OPERATIONS SUB-FUNCTION COSTS AS A PERCENTAGE OF TOTAL COMPLIANCE COSTS, BY PARTICIPANT BANK



FULFILLMENT

The fulfillment sub-function accounts for 10% of total compliance costs and includes the costs for production (e.g., materials, printing, assembly) and delivery (e.g., postage, mailing) of all regulatory disclosures. Fulfillment costs typically correlate with the number of disclosure mailings required (a number partly determined by the overall size of the institution), the number of customer deposit accounts served by the institution, and the geographic density of that customer base.[48]

Financial institutions in general may incur three major types of fulfillment costs, relative proportions of which vary depending on the business model: internal labor costs, production costs, and third-party vendor costs. The larger Tier 1 and 2 participants in the Study may leverage their own in-house production resources and vendor services to deliver mailings. One of the Tier 2

[48] Geographic density may be a driver of overall cost variance, as distribution costs (e.g., postage, transportation costs of collateral produced, etc.) are generally greater for institutions with larger geographic footprints.

institutions experienced relatively higher levels of fulfillment costs compared with its larger counterparts, possibly because it conducted fulfilling with in-house staff.

Meanwhile, the smaller Tier 3 and 4 institutions in the Study tended to rely on third parties for help with fulfillment activities. In general, smaller institutions interviewed (Tier 4) incur higher fulfillment costs of about 13% to 14% of total compliance costs. Smaller institutions may have to rely more on vendors, while larger institutions have a greater capacity to leverage in-house fulfillment capabilities and balance third-party services.

Participants of varying size in the Study indicated that they seek opportunities for efficiency, such as combining standard disclosure mailings (e.g., change in terms notice) with monthly statement mailings. However, all seven participants interviewed used dedicated mailings for certain communications, such as the annual privacy notice and major product change notifications.

BACK OFFICE SUPPORT

The back office support sub-function of Operations accounts for a median value of about 8% of total compliance costs across all seven institutions in the Study. Back office operations generally include all administrative activities required to support business functions, such as information verification (e.g., review and quality assurance of new account opening notices and forms) and information processing (e.g., scanning and uploading signature cards for overdraft opt-in forms).

Participating institutions varied in how much they centralized compliance responsibility in the back office support sub-function. The Tier 1 institution took a centralized approach, where back office staff receive and process all account-opening materials by courier or electronically from all the bank's branches, including opt-in/opt-out signature forms and new application materials. In contrast, one Tier 3 institution adopted a more decentralized approach, encouraging each branch to conduct its own set of back office activities. In the two cases, the different approaches may partly explain the variance in back office compliance costs of 4% and 10% respectively.

Employees at the Tier 3 participant bank adopting a decentralized approach did perform particular "back office" activities, but only as a part of their other daily responsibilities as members of other functional and sub-functional offices. In fact, since employees had multiple responsibilities over several business functions, it was not entirely appropriate to categorize their labor in a back office support role. We recorded the costs in their respective principal business functions. As these back office examples from the Study's participant banks demonstrate, the responsibilities of certain sub-functions can vary depending on the business model adopted by each respective bank.

CALL CENTERS

Call center sub-functional compliance costs represent a median value of 3% of total compliance costs across the Study participants. Three customer service representative activities contribute to these costs:

1. Addressing issues or answering questions related to deposit regulations (mostly Regulations E and P);
2. Conducting quality checks on customer calls to ensure compliance; and
3. Reading account opening disclosures (when applicable).

The responsibility assigned to each participating institution's call centers varies. At one end of the spectrum, the call center at the Tier 1 bank acts as an extension of its retail footprint, capable of opening and closing accounts. At the other end of the spectrum, one of the Tier 3 participant banks did not use call centers for compliance-related activities, choosing instead to route compliance-related activities directly to staff at their branches. This is the reason why this particular Tier 3 bank effectively recorded no incremental compliance cost in their call center sub-function. Call center employees at this institution had essentially no compliance-related responsibilities because they served as a "pass-through" office that directed compliance issues to other branch employees. As a senior executive respondent from one of the Study institutions pointed out, "*Call centers will be given as much responsibility as [is] deemed [of] low risk. Today, everything's recorded so if it's too risky, we just don't give it to our call centers.*"

The two smallest Tier 4 participants had no incremental compliance costs associated with this sub-function because neither operates a call center. Their costs to handle compliance-related phone calls from their customers (such as claims of account errors) are captured in other business functions (such as the error resolution tasks under the Retail function).

FRAUD MITIGATION/ERROR RESOLUTION

The fraud mitigation/error resolution sub-function within the Operations function accounts for a median 3% of total compliance costs. [49] Due to the high visibility and potential risks associated with error resolution, it is one of the most tightly managed functions across the seven Study participants. An executive working in the Risk department of a Tier 2 institution expressed the view that "*[o]nly*

[49] The fraud mitigation/error resolution sub-function is related to, but should not be confused with, with the error resolution regulatory requirement discussed in sub-section *3.3.2: Error Resolution*.

one error resolution or escalation issue needs to get out of hand for us to be in trouble, so we keep it very closely monitored." The other Tier 2 participant in the Study has imposed more stringent error resolution timelines than are mandated by regulation. These approaches may lead to higher compliance costs.

Fraud mitigation/error resolution costs are driven primarily by Regulation E disputes and occasionally by Regulation P when consumers raise privacy concerns. Three activities account for these costs:

1. Processing claims and disputes (primarily Regulation E);
2. Performing quality checks on handling claims and disputes (primarily Regulation E); and
3. Handling escalated claims.

An institution's size and operating model for handling error resolution issues may affect the relative costs of these operational activities. For example, the Tier 1 participant incurred the highest relative share of fraud mitigation/error resolution compliance costs (8%), versus a range of 2% to 5% for Tier 3 and 4 institutions. These smaller institutions tend to address questions and disputes with the same resources they use for non-compliance-related issues that are outside the scope of the Study. For example, at one Tier 4 institution one Operations function associate was dedicated to handling not only debit card disputes, but also disputes regarding garnishments, levies, and loans. An estimated 15% of this associate's total time was spent on Regulation E disputes.

In contrast, larger institutions assign dedicated resources to Regulation E disputes, in part as a risk-mitigating measure. A senior Compliance executive at one case study institution observed that "*[t]he level of service and expertise needed to address Regulation E disputes is not the same as other issues.*" The Tier 1 institution in the Study created separate dedicated groups to address Regulation E disputes and privacy issues, respectively.[50]

Among the participants in the Study, separate groups dedicated to Regulation E disputes were typically staffed with personnel who have more experience or additional training in the relevant

[50] The group dedicated to privacy issues was responsible for overseeing such issues across all business lines, not just deposit products alone.

regulation and customer service. They may be compensated more than their peers within the same institution may.[51]

One of the Tier 2 banks in the Study has also adopted additional standards on its Regulation E dispute resolution staff by having more stringent timelines than are mandated by regulation. The bank's respondent remarked, *"We'd rather be over-compliant than under. By imposing tighter timelines, we ensure we are always compliant."*[52]

3.2.2 Information Technology (IT)

Given the importance of technology in banking, it is unsurprising that IT is one of the two business functions that incur the highest share of total compliance cost at four of the seven banks studied. We begin the discussion of Information Technology (IT) systems with some background information that characterizes the participating institutions more generally.

IT systems are comprised of both hardware and software. Within the context of the Study, we assume that hardware does not impose ongoing compliance costs, as it is purchased and incurs a one-time cost. We also assume that software can be developed internally, licensed from a third party and managed internally, or acquired through vendors (licensed and managed by a third party). The IT system enables activities in the IT function for the bank that range widely from issuing disclosures (e.g., automatic generation of initial disclosures), to enabling back-end operations (e.g., scanning and data retention of new application forms), to ensuring operational quality control (e.g., monitoring call center quality).

The IT function bears a significant portion of compliance costs because the automation of compliance processes often requires incremental improvements in banking IT systems, whether they are proprietary or off-the-shelf systems. To facilitate these automated compliance activities, financial institutions generally rely on systems of core processors and applications to execute the processes. A core processor provides a software system that is effectively the bank's information

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[51] For example, one Tier 2 institution in the Study noted that they pay as much as an additional $10,000 annually for a Regulation E claims specialist, relative to a regular claims specialist.

[52] For a discussion about how the Study distinguishes different types of costs, see sub-section *2.2.1: Defining Compliance Costs and Other Key Concepts*.

technology backbone. Among other services, core processing software typically assists in maintaining and updating account information (e.g., deposits on-hand and accumulated interest) and in processing and clearing check and ACH transactions. Financial institutions can also acquire add-on software modules or applications to run more specialized tasks, such as those related to debit card transactions or interfacing with the bank's ATM. Whether developed internally or acquired from a third-party vendor, the specialized software applications interact with the core processing software to access and to update account information.

In addition to business-as-usual operations, both the core processing software and any add-on modules and applications provide compliance-related functionalities. For example, applications allow banks to draw data from the core system for generating periodic statements that comply with Regulations DD and E. Similarly, an add-on ATM application allows the bank to generate receipts for transactions, required by the deposit regulations within the scope of the Study. Thus, the cost of both the core processing software and at least some of the associated add-on applications are partially within scope and can be considered an incremental compliance cost.

In general, many financial institutions do not design or implement their own proprietary IT software. Rather, they buy or license core processing systems and software applications from third-party IT providers. These third-party providers offer a variety of IT systems and services, which can be tailored to a given institution's priorities and needs at additional cost. If banks buy the software systems outright, they are then responsible for managing and maintaining the systems themselves. If a financial institution chooses to license systems, it must also sign a contract with the providers under which they pay a monthly fee in exchange for use of the software, as well as any maintenance services or upgrades that may be needed.

Much like other financial institutions, the seven participant banks in the Study implement their general IT needs through any number of in-house and third-party options, which can make the task of estimating compliance-related IT costs very difficult. Most of the financial industry licenses their systems from vendors – for example, the Study's Tier 4 participants relied exclusively on third-party providers. The largest banks typically design and maintain much of their IT systems in-house, as was the case with the Tier 1 participant in the Study. The Tier 2 and Tier 3 participant banks combined elements of both models. These institutions maintained some components of their systems with in-house personnel, and many also relied on multiple vendors, which required their IT departments to ensure that systems were integrated effectively.

While this division of in-house and vendor-contracted activities is not exclusive to the IT function alone, it is important to differentiate in-house incremental IT compliance costs from those incremental IT compliance costs that are contracted with an outside vendor. Compliance costs represent a relatively small share of the total costs to maintain these IT banking systems, which are highly-integrated with "business-as-usual" functions. Only a small portion of the in-house resources dedicated to IT, as well as the charges that vendors directly bill to their banking customers, are considered as compliance-related. Parsing out the incremental costs from the available information is challenging for researchers and respondent personnel at each of the Study's participating institutions. Particularly for the IT function, interviewed respondents reported wide-ranging perceptions of which incremental IT costs were attributable to the in-scope regulations, despite the fact that each participating institution described similar functions, activities, and IT systems. For example, in estimating the portions of a core system's deposit components that were associated with compliance to the in-scope regulations, participant institutions' responses ranged from 1% to 35% of various components of IT core system costs that service the in-scope deposit products.

The breadth of this range across the Study participants is a discrepancy that raises questions about the accuracy of the estimates. Inaccuracy would not be surprising since the seven participating institutions may not have reasons (apart from this Study) to separate baseline IT costs from incremental compliance IT costs nor sufficient records to separate them. In addition to applying the general techniques for mitigating measurement error (see sub-section *2.2.4: Methodological Challenges*), the Study team also reviewed the estimates of costs with independent experts familiar with core system providers and the participant banks' activities. Based on this feedback and validation from participants, we used a standard assumption that 4% of deposits-related IT costs are incremental, in-scope compliance costs.

With this assumption, we find that IT costs comprise 10% to 43% of total compliance costs (median = 22%) across the seven institutions interviewed. When broken into its components, the bulk of IT costs fall into the category of payments to third-party vendors (0% to 30% of total compliance costs; median = 21%). Internal labor represents a smaller fraction, ranging from 0% to 12% of total compliance costs (median = 0.2%) amongst the participant banks.

IT costs as a share of compliance costs did not have a simple relationship to the size of the participant. The IT costs at the largest two participating institutions were each 10% of total compliance costs. IT costs at Tier 3 banks reach 43% before dropping again among Tier 4 banks to 22%. We observed that the middle-sized institutions amongst our participants had complex combinations of proprietary, in-house systems and licensed third-party systems that must be integrated by the respective teams in the IT function. The larger Study participants manage their IT systems in-house (allowing them to be tailored and perhaps to run more efficiently) and smallest participants rely primarily on a small number of external vendors (to which they pay a monthly maintenance fee). However, the middle-sized Study participants may incur additional costs because they are overseeing a complex patchwork of systems which contain features of both models. This trend in compliance-related IT costs therefore may have less to do with bank size specifically than with the components of the IT function as they are organized in differently sized institutions.

While compliance represented a small share of ongoing IT costs, a change to regulations could entail a substantial one-time compliance cost for IT, due to the need to upgrade systems and purchase new hardware and software. *Appendix G: Insights on One-time Implementation Costs* provides details on one-time cost issues for this and other cost functions.

The two major components of IT costs can be disaggregated into the sub-functions of **application development and maintenance** (including that of core processors) and **infrastructure management**.

APPLICATION DESIGN AND MAINTENANCE

The sub-function of application design and maintenance costs account for most or all of total compliance costs in the IT function of each Study participant (median = 21%). Key activities involved in this sub-function include the development and design of software applications to execute specific compliance activities, and the maintenance of these applications to ensure that they remain compliant as products change (e.g., fee changes to products may trigger a new disclosure to be issued).

INFRASTRUCTURE MANAGEMENT

The key activities and tasks of infrastructure management include the set-up, support, and management of all IT hardware and software infrastructure systems, including network systems, servers, and computer and telecom systems. Costs associated with Infrastructure Management are captured at participant banks in substantially different ways; however, these costs are typically considered part of business-as-usual maintenance and not considered incremental due to compliance. As one senior IT executive at a Tier 2 bank remarked: *"Infrastructure management is like maintaining highways. No matter how costly the cities are to build, the cost of maintaining the highways are [necessary and business-as-usual] to me."* Only the Tier 1 bank in the Study reported compliance-related costs in Infrastructure Management.

3.2.3 Human Resources (HR)

As the function primarily responsible for the development and deployment of employee training across an organization, HR bears a notable share of compliance costs. Across participating institutions, HR costs represent 9% to 24% (median = 16%) of total compliance costs identified. This cost primarily originates from two component sub-functions: the **design and development of compliance trainings** and the **deployment and monitoring** of those trainings across a broad employee base. Employee training hours associated with the in-scope regulations comprise the majority of identified HR compliance costs, and for the purposes of the Study are captured as part of the deployment cost. As a result, the majority of HR-related compliance costs are internal labor costs; however, there are some non-labor and third-party costs associated with the production of customized training material and/or the purchase of off-the-shelf training materials and administrative software.

It is unsurprising that the cost of employee time spent in training appear to scale in a nearly linear fashion with the size of a bank's employee base. Regulation P drives the majority of these training costs, since privacy is typically a training topic for *all* bank employees, even if only a portion of the regulation is relevant to the scope of the Study. While Regulation E also demands a significant share of compliance-related training time for the in-scope regulations, the number of relevant employees requiring Regulation E training is typically smaller across the Study participants.

TRAINING DEVELOPMENT AND DESIGN

A small portion of total HR compliance costs comes from the continuous development and design (and possible re-design) of compliance-related trainings. As referenced above, the Study suggests that financial institutions generally either purchase off-the-shelf trainings (in which case the bulk of design costs are third-party costs) or create trainings using their in-house (in which case the bulk of design cost are primarily internal labor costs from the collaboration of HR and Compliance departments). These costs differ significantly from participant to participant (ranging anywhere from less than 1% to 9% of total compliance costs, median = 2.4%), based on how much a participant bank chooses to customize its respective training program. The programs can range from a few thousand dollars for training on established disclosures within Regulation P to tens of thousands of dollars for a more integrated program that is customized for a particular bank's learning priorities. For example, the Tier 1 bank developed a curriculum that sequenced training modules for new compliance officers in their first six months of employment so they could develop a basis of compliance knowledge as they acquired responsibilities for their role.

The smallest institutions in the Study found it more economical to use off-the-shelf trainings, even though the material was not necessarily adapted to their own products or internal procedures. As an institution grows, adaptation can reduce costs. One Tier 3 institution opted to design in-house trainings to replace the standard modules that they had purchased from a vendor for years. As that institution's HR representative pointed out, *"Training time really adds up. We've been purchasing off-the-shelf training modules from [a vendor], but the truth is those are too long – not all of that content is relevant for our employees, so starting next year we're going to design our own, more efficient modules. It will be more work on the front-end, but employee time saved [from avoiding unnecessary training] will more than outweigh that additional cost."* Tier 4 participants in the Study did not customize the content of their third-party training modules. While the use of off-the-shelf trainings may minimize development and design costs, the inability to streamline pre-packaged curricula may cause employees to spend more time than is necessary with learning unrelated content, thereby increasing the costs of deployment and monitoring as described below.

TRAINING DEPLOYMENT AND MONITORING

Out of all individual sub-functions studied across business functions, deployment and monitoring of training represents the second highest portion of total compliance cost across the seven participant banks (ranging from 3% to 24% of total compliance costs, median = 11%). As mentioned previously, this cost is primarily generated by employees' compliance training hours related to the in-scope regulations. The Study's participating institutions required trainings to be taken by nearly all employees touched by regulation, ranging from the Retail function's front-line employees (including bank tellers, personal bankers, and new accounts representatives) to back office support specialists, to call center representatives. Even when the in-scope deposit-related regulations do not change, the participant banks incur this cost annually, as they require all employees to re-certify compliance knowledge each year. This deployment and monitoring cost includes both fully incremental employee training hours (e.g., time spent on a Regulation P-specific module), as well as the portion(s) of operational, job-specific trainings that implement compliance at the bank (e.g., the portion of a Retail front-line employee's training time spent on overdraft disclosure obligations under Regulations E and DD). In an effort to avoid unnecessary training costs, one Tier 3 participant recently elected to review its distribution list to ensure that only core employees were required to undergo the training.

In addition to the cost of *conducting* this employee training annually, some participants incur an incremental cost associated with *delivering* and *monitoring* that training. The largest institutions in the Study invest in infrastructure to distribute trainings and track employee completion rates (e.g., monitoring software, web conferencing). Maintaining such infrastructure for larger scale delivery and monitoring may be more substantial than designing the training. An HR executive at the Tier 1 bank noted that the ongoing cost of designing (or purchasing) the training curriculum and materials are relatively small when compared to the cost of supporting the logistics and infrastructure required to administer the trainings to staff and record the outcomes on a regular basis. For banks with many branches and employees, the costs associated with deploying and monitoring compliance-related training comprise a relatively large share of their ongoing HR function costs.

But the use and purpose of the delivery and monitoring of training also blurs the line between truly incremental costs and business-as-usual costs. Systems for monitoring training play a critical role in tracking employees' completion and comprehension of required trainings. The experiences of the Tier 1 and 2 Study participants suggest that mid- and large-sized institutions would need to invest in tracking systems to standardize training on business processes, even if they did not have to train employees on the in-scope deposit-related regulations. Smaller financial institutions, however, may adopt tracking systems to provide examiners with a clear record of training their employees on specific regulations. The experience of the Study's Tier 3 and 4 participants suggest that at least some smaller banks might use training monitoring systems to demonstrate compliance to their bank supervisors. They would not have necessarily purchased the systems without the need to train continually employees on regulatory requirements and to demonstrate compliance to a regulator. A Tier 4 institution shared that the purchase of its training administration software greatly enhanced HR's ability to track the assignment and completion of employee training. The new training platform also established a more formal assessment of training results. These tracking, deployment, and monitoring processes all became more efficient and executable after the introduction of the software. The improved deployment and monitoring of employee training helped the bank to demonstrate compliance to its supervisory examiners across a variety of regulations, including those beyond the scope of the Study.

Both small and large institutions in the Study appear to rely primarily on online trainings and web-based content to educate employees about compliance with specific regulations. One Tier 3 participant bank conducts all of its compliance training online. The HR executive at one Tier 4 bank also asserted a preference for the efficiency of remote training: *"Our bank's branches are pretty widely dispersed, so we try to conduct as many trainings as possible through video conference; we try to avoid in-person trainings because of the travel time and costs they require."* However, for highly prioritized trainings (e.g., trainings about new or changing regulation), the session may be held in person, and therefore may generate additional costs. In general, financial institutions with geographically dispersed branches may find that travel time and associated costs are incremental costs. For example, in the event of significant regulatory change, a compliance officer at one of the Study's Tier 3 participants may travel to other branches over a period of three to four months to speak directly to branch employees. *Appendix G: Insights on One-time Implementation Costs* discusses in fuller detail these one-time costs associated with a change in regulation.

3.2.4 Compliance

As the primary corporate oversight group responsible for ensuring a financial institution's compliance with regulation, the ongoing costs incurred within the Compliance function can be a considerable portion of overall compliance costs within an institution. Across the Study's seven participating institutions, Compliance function costs represent 5% to 31% (median = 13%) of total in-scope regulatory compliance costs identified. These Compliance function costs are lower than the total incremental compliance costs incurred in other functional areas of the bank. The primary Compliance sub-functions contributing to the participant banks' compliance costs are **monitoring and reporting**, providing **business advice and counsel**, conducting **regulatory research and gap analysis**, **designing policies and procedures**, and **facilitating supervision**.

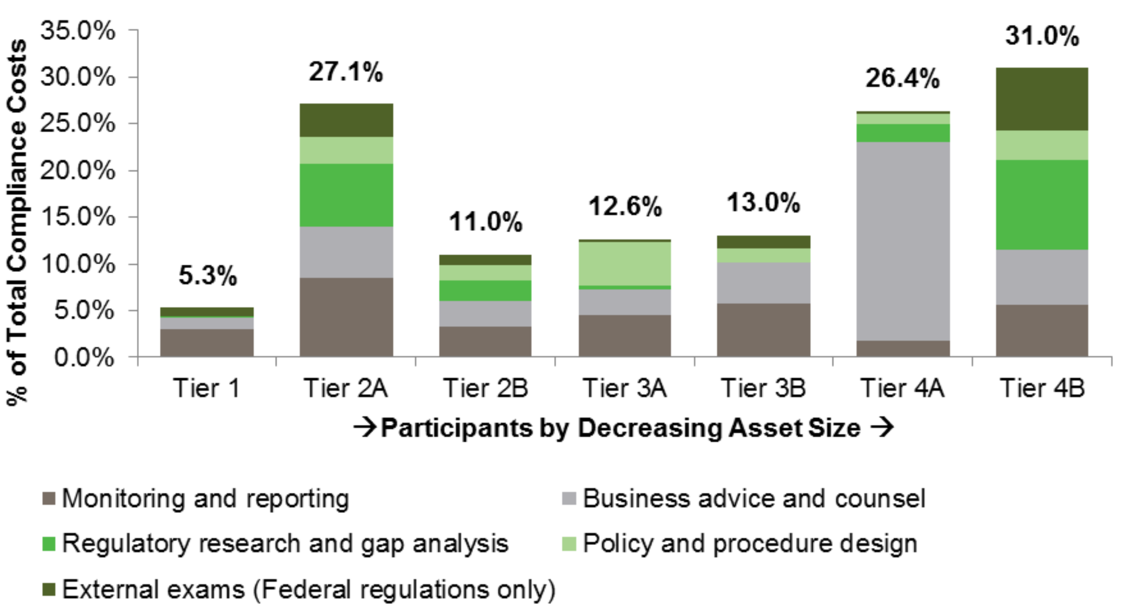
Some institutions adopt a centralized model where their corporate compliance departments tightly direct compliance activities, while others have a more decentralized model that relies primarily upon compliance personnel embedded in the business lines. Some banks may have full-time employees dedicated to compliance activities; others may not have any personnel dedicated to compliance, much less a full "function" or "group", and typically assign Compliance function tasks to a variety of existing bank staff. Regardless of the model, the Compliance function conducts a similar set of activities, both with external stakeholders (e.g., trade groups, regulators) and internal stakeholders (e.g., other business functions, other business lines).

The participants in the Study demonstrate variation in the organization of their Compliance functions. Although all Tiers 1 and 2 participants have first, second, and third "lines of defense" for implementing compliance with the in-scope regulations (i.e., front-line support, Risk and Audit), each participant structures differently the division of responsibilities amongst these three lines of defense. [53] This variation speaks to the tension between the benefits of a highly centralized, unified Compliance authority and the benefits of a decentralized, more nimble Compliance support system embedded within business units. An institution's choice as to how much of the compliance activities to centralize within a Corporate Compliance function can affect the distribution of costs across functions. For example, information collected from a Tier 2 bank suggested that institution had relatively higher Compliance function costs than Tier 3 participants did. In Figure 4, this

[53] Financial institutions commonly refer to the three "lines of defense" model when speaking of compliance and risk management. The "first line" typically refers to management of activities, while the "second line" addresses the institutional policies set at the enterprise-wide level. The "third line" is usually associated with audits to check that activities and policies are aligned.

concentration of costs within the Compliance function makes this Tier 2 bank appear as if its Compliance function's costs are far greater than other large banks. In fact, this "outlier" result in our group of Study participants was likely due to the bank's decision to pursue a highly centralized model of regulatory compliance guided by their Compliance function organization.[54]

FIGURE 4: RELATIVE COMPLIANCE SUB-FUNCTION COSTS AS A PERCENTAGE OF TOTAL COMPLIANCE COSTS, BY PARTICIPANT BANK



As we studied seven banks and did not attempt to measure the "success" of the Compliance function, we cannot compare cost or effectiveness of the decentralized versus centralized approaches. However, three of the seven case study institutions were undergoing – or had recently undergone – a restructuring of the Compliance function moving from one approach to the other, with some banks moving towards a more centralized model and some moving away from it. It appears that, at least within cases in the Study, institutions continue to work to find the most efficient and effective way to integrate compliance responsibilities.

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[54] We also note that the outlier results between the Study's Tiers 2 and 3 participants may have been heightened due to peculiarities of labor costs at a Tier 2 bank and a Tier 3 bank. The Tier 2 bank exhibiting substantially higher Compliance function cost not only demonstrated a highly centralized Compliance function, but also had a very experienced staff who were paid relatively higher salaries (likely due to their extensive experience and geographical cost-of-living adjustments). On the other hand, one Tier 3 participant bank embedded much of their compliance activities in the Operations and Retail side of the business, and had relatively lower salaries due to their geographic area.

- At the Tier 1 participant, the Compliance function had recently decentralized, opting to embed first line Compliance personnel within each line of business and have those compliance officers report through their respective business lines. According to the corporate compliance officer responsible for consumer banking, "*It made more sense to formally insert those individuals into the business lines they were supporting – their counsel and compliance expertise are too integral to how those groups function in day-to-day operations; we need them more readily available to the businesses.*"
- A Tier 2 participant had recently made the decision to centralize Compliance. The Chief Compliance Officer explained the change, saying: "*Our corporate Compliance function has doubled in the past few years – we pulled a few people out of the business units and into the corporate group to try to better coordinate and standardize the compliance support we provide those business units.*"
- Lastly, a Tier 3 participant institution implemented a unique, though more centralized, approach. Compliance officers are embedded in branch offices as the first line of defense, while the traditional second and third lines of defense are comprised of enterprise-wide Compliance and Audit function specialists.

The smaller banks in the Study (Tiers 3 and 4) have a lower degree of organizational complexity in that they do not have defined employees separated by the three distinct lines of defense. Therefore, these banks do not face these challenges to the same extent – they may have just one or two lines of defense. However, smaller institutions generally may grapple with different challenges, including the higher price they pay for in-house compliance expertise on a relative basis. All participating organizations in the Study had at least one dedicated employee responsible for compliance, regardless of size, and for the smallest (Tier 4) participant banks, the cost of even a single compliance individual can contribute to a significantly higher percentage of total in-scope compliance costs (as well as overall retail deposit operating expense) than for a larger case study institution.

Institutions smaller than the ones we studied may not have a dedicated employee responsible for compliance. Rather, they may assign Compliance function activities to employees with another role. Some smaller institutions may also contract for part-time compliance officers, or (as with the case of more than one bank in the Study) employ on a contract basis recently retired Compliance function staff. In smaller institutions, compliance costs may follow different patterns based on the final business decisions on how to assign different compliance responsibilities.

Regardless of size or organizational structure, Compliance functions across all of the participant banks perform a similar set of activities for the organization. The activities can be categorized into the five sub-functions of the Compliance function.

MONITORING AND REPORTING

The Compliance function includes a critical corporate oversight sub-function that identifies compliance risks, addresses those risks, and internally reports on the status of those risks. This sub-function has grown as senior management engages more deeply in the evaluation of risk. At the Tier 1 institution, two first-line compliance staff members are 100% dedicated to quality control and perform a near constant cycle of compliance testing to ensure protocols are strictly observed. A second line compliance officer then spends a full week out of every month reviewing those reports, addressing issues identified, and preparing results for senior management. The amount of time spent on this particular activity contributes a substantial share of compliance costs for most banks participating in the Study (2% to 9% of total compliance costs; median = 5%).

BUSINESS ADVICE AND COUNSEL

Compliance officers spend a portion of each day advising personnel other business lines and functions on compliance-related matters. For the in-scope regulations, compliance officers may spend time weighing in on customer disputes pertaining to Regulation E (e.g., reviewing contested charges on a debit card), P (e.g., processing opt-outs of information sharing), or V (e.g., checking the accuracy of credit history that the bank relied upon when deciding to approve or deny a customer's application for a new account). For example, a new advertising campaign for checking or savings accounts can also take significant time of a compliance officer due to Regulation DD requirements. When a bank changes a product, the compliance officer may also have to spend a considerable amount of time consulting with Marketing on the redesign of disclosure forms. The amount of time spent on these particular business counsel activities can translate to a substantial share of compliance costs, as demonstrated by some of the participant banks in the Study (1% to 21% of total compliance costs; median = 4%).

REGULATORY RESEARCH AND GAP ANALYSIS

Interviews with staff at participant institutions suggest that compliance officers may spend a portion of each day filtering through industry and government news to remain updated on the latest regulatory developments and interpretations. As the regulations in the Study have not changed much for several years (apart from remittance transfer rules, which were out of scope), this activity represents only a relatively minor portion of total compliance costs (anywhere from less than 1% to 10% of total compliance costs; median = 2%). However, when a specific regulation changes (or an existing interpretation of a regulation changes), compliance officers must perform a gap analysis to evaluate the status of an organization's compliance with that new regulation or interpretation. This activity can generate a more substantial share of cost, as demonstrated by the information in *Appendix G: Insights on One-time Implementation Costs*.

POLICY AND PROCEDURE DESIGN

Even in a stable regulatory environment, compliance officers may conduct an annual review of all policies and procedures to ensure compliance with regulations. All seven participant banks reported conducting such reviews, with key differences in intensity of effort. At the Tier 1 institution, the compliance officer dedicated to consumer deposits regulations reported spending two to three weeks of every year reviewing official policies, revising those policies in response to any changing circumstances, and developing communication for new policies. The smallest Tier 4 bank in the Study also reported conducting similar policy and procedure reviews. The compliance officer at this Tier 4 participant bank, who is responsible for overseeing deposits as well as IT issues, reported spending up to 90 minutes to review each policy and anywhere from one to 1.5 days to update those in need of an update (including updating any associated disclosures). Like regulatory research and gap analysis, this activity takes more time in an evolving regulatory environment but represents a relatively minor cost on an ongoing basis (anywhere from less than 1% to 5% of total compliance costs; median = 1.6%).

SUPERVISORY EXAMINATIONS

Facilitating supervisory activity – in the form of on-site examinations – requires particular attention from the Compliance function. At the participant banks, activities for facilitating supervisory exams include:

1. *Pre-exam preparation*, which typically lasts about 30 days among the participating institutions and commands the equivalent of 50% to 100% of a Compliance function full-time employee (FTE) to compile data and coordinate logistics for regulatory supervisors' planned onsite activities ;
2. *On-site support*, which typically lasts four to eight weeks and typically requires at least one Compliance FTE to assist supervisors as needed; and
3. *Post-exam follow-up*, which typically involves answering any outstanding questions and filling data gaps and varies in duration and intensity.

Collectively, these compliance-related costs appeared to vary substantially by participant size. The largest banks in the Study faced higher supervision costs for the in-scope regulations.[55] Across the seven case study participants, we estimated the costs of facilitating supervision to range anywhere from less than 1% to 7% of total compliance costs (median = 1%). However, it is possible that these figures do not reflect the full scope of activities conducted by bank staff during related regulatory examinations.[56]

3.2.5 Retail

Two specific Retail sub-functions are relevant to compliance costs: **front-line management and in-branch customer service** (e.g., account opening), and **product development and management**.[57] The compliance costs in these sub-functions are discussed in detail later in this section. Depending on the organization of the bank, these costs may also include activities that may be typically found in other functions (e.g., error resolution activities that may be conducted in back office and call center operations in other banks).

For the banks interviewed for the Study, the Retail function accounts for a considerable share of compliance cost because it bears a substantial share of a bank's responsibility to inform consumers

[55] The largest banks in the Study may experience higher supervision costs for the in-scope regulations due in part to the more frequent nature of examination by multiple regulators at larger institutions.

[56] Bank personnel from affected/examined business units are often also responsible for facilitating supervisory exams, but the estimates presented for the costs of facilitating supervision are standardized for the staff within the Compliance function and may therefore reflect only a portion of the true compliance-related costs of undergoing a bank examination. Some participant banks were able to detail the involvement of Compliance and non-Compliance function staff for very specific activities related to pre-exam preparation (e.g., back office support staff preparing reports related to error resolution records or overdraft histories), on-site support (e.g., the amount of time that non-Compliance function staff spent in examiner interviews), and post-exam follow-up (e.g., bank executives writing response letters and participating in activities related to the release of the exam report). But not all seven of the case studies captured this level of detail, so the figures we report include only the Compliance function costs of facilitating exams. While we believe this captured a major portion of examination costs, we recognize that the Study results may systematically underestimate the full cost of examination by not fully accounting for the compliance-related time spent on examinations by personnel in other functions at the bank.

[57] The third major sub-function identified by the Study's business function taxonomy is distribution, which is comprised of the participant banks' activities to set up, manage, and maintain its distribution network – including its physical assets, such as ATMs and branches. However, this sub-function did not substantially contribute to the operational activities and costs for Study estimates. Many distribution costs were considered to be business-as-usual expenses or very small (and nearly negligible) relative to the overall in-scope compliance cost (e.g., the cost of paper for ATM receipts).

about products, features, and services. Across participating institutions, Retail costs represent 3% to 35% of total compliance costs (median = 10%), almost all of which are internal labor costs. The bulk of these labor costs are associated with front-line management and in-branch customer service (e.g., review of disclosures at account opening, explanation of adverse action disclosures if relevant). The remaining costs (median = 2% of total compliance cost) come primarily from personnel involved with product development and design, who interact with Compliance function staff throughout the product development process. Each executive within the Retail function confirmed it is essential to involve a compliance officer throughout the product development process. For some institutions, we include a non-labor compliance cost associated with Retail distribution (e.g., paper costs to print Regulation E disclosures at ATMs), but these costs were usually negligible.

FRONT-LINE MANAGEMENT AND THE ACCOUNT OPENING PROCESS

Discussion of disclosures with consumers during the account opening process – particularly overdraft disclosures – was a source of the Retail function's front-line compliance costs at participating institutions.[58] The number of account openings that a participant bank performs annually and the amount of time accorded for each account opening determined the absolute magnitude of these costs. Many factors (e.g., a bank's strategy and business model, geographic location, customer base) may determine the number of account openings . The amount of time spent with a customer per account opening reflects some of the same factors, as well as an institution's approach to compliance and customer service.

Retail front-line employees interviewed at participant banks reported spending between one and ten minutes reviewing disclosures (primarily overdraft disclosures) with new customers. Small differences in time can add up in cost: as a hypothetical example, if a bank opened 100,000 new accounts per year, paid its employees handling new accounts $15 per hour[59], and spent two minutes on compliance disclosures during the account opening process, the incremental cost of that time spent explaining disclosures would be approximately $50,000. If the same bank chose to spend five

[58] We assume that time spent by bank personnel to implement a regulatory requirement should count as an incremental cost. In the case of front-line staff and the account opening process, the incremental activity is explaining required disclosures to the customer. Such disclosures include those associated with overdraft opt-in, Regulation E error resolution, fee schedules required by Regulation DD, etc.

[59] The Department of Labor's Bureau of Labor Statistics estimates the mean hourly wage of $15.85 for "New Accounts Clerks" (Occupation Code 43-4141) from the National Occupational Employment and Wage Estimates (May 2012).

minutes explaining the same disclosures, the cost would be over $125,000.[60] Participants in this Study varied widely in time spent explaining required disclosures:

- **High-touch example –** A Tier 4 bank participant with frequent overdrafters shared that "*easily the most time-intensive topic during account opening is explaining to our customers the overdraft opt-in rule. In a thirty-minute account opening process that can take a full 5 to 10 minutes – some of our customers have a hard time understanding the concept or the disclosure itself*." This bank also chooses to spend an average of three minutes per account opening on the Regulation E Initial Disclosure forms and Regulation DD fee schedules to ensure that customers are informed about all fees they might incur as a result of electronic fund transfers. No other participant bank in the Study asks Retail front-line employees to actively review this disclosure with customers.[61]
- **Light-touch example –**The other Tier 4 institution in the Study had a substantially different approach to account opening, opting to let customers read and absorb disclosure information in their own time: "*We don't spend more than 15 to 20 minutes on account openings, and probably only 1 minute on all disclosures – my customers just aren't interested. We're neighbors – they trust me, and they know I'm not going to do anything…to betray that trust.*"

Despite the widely different approaches, both Tier 4 participants believed that their protocols were adequate for achieving compliance. The two approaches imply that different costs are incurred not only at the Retail front-line, but also possibly from other functions, such as compliance-related

[60] The incremental compliance costs we capture that are associated with the Retail function include the time that Retail front-line employees – such as bank tellers, personal bankers, and new account representatives – take to provide certain disclosures for consumer deposit accounts at account opening, such as explaining the bank's policy on overdraft coverage. Such activity may not create an additional out-of-pocket expense for the participant bank if no additional hours or new personnel are needed to explain these disclosures. Although the compliance-related costs for front-line employees might not be immediately out-of-pocket, for the purposes of the Study, we consider these costs to be incremental because they are related to incremental activities that would not be performed absent the regulation.

[61] The amount of time used to explain required disclosures during account opening is reported by the Study participants. For each participating case study institution, we estimate the compliance costs related to the regulation based on the institutions' reported average times. However, the Study does not make conclusions on the time, costs, or activities the Bureau considers "reasonably necessary" for compliance with the Bureau's deposit-related regulations. The amount of time reported by participants and used to estimate costs in the Study do not constitute any guidance or standard for compliance.

training (if staff who spend more time explaining disclosures require more training about the disclosures).

Differences among participants in the time spent explaining disclosures highlight the challenge of distinguishing baseline costs from compliance costs. These differences are not necessarily explained by differences in compliance practices; instead, they may be the result of differences in business choices, such as the decision to provide and describe additional in-scope product features at the time of account opening. Some banks might have spent time to explain overdraft fees and practices to their customers without Regulation E's requirements. But to calculate costs for this Study we used the time the participants reported spending to explain the required disclosures and opt-out rights. This was a relatively conservative approach.

PRODUCT DEVELOPMENT AND DESIGN

In addition to the costs associated with customer service and disclosure review, there are Retail function compliance costs associated with the sub-function product development and design. These costs are driven by how frequently a bank chooses to change its products. The pace of product change in the market also affects the frequency of these product changes and thus also the extent to which compliance officers are consulted in the product development and design process. The compliance-related time spent by the product development teams may be substantial, but it is usually concentrated within a small number of personnel and therefore represents a relatively minor cost. At the Tier 1 participant, a senior executive in Marketing described his relationship with compliance as follows: *"We spend a lot of time liaising with Compliance when we design a new product. They are in almost every meeting. And we spend a lot of time revising product proposals based on their feedback."*

If a change in regulation (not necessarily a regulation that is the focus of the Study) prompts a need for new product development activities, this cost increases further on a one-time basis. For example, one Tier 4 participant bank typically redesigns three to four deposit products a year. Recently, they have undertaken additional projects in response to the electronic funds transfer requirement for customers' receipt of federal benefit payments, such as Social Security and Supplemental Security Income (SSI) benefits.[62] The participant's changes to its products compelled by the new regulatory change also required the bank to ensure the changed products remained compliant with the

[62] U.S. Department of the Treasury, "Management of Federal Agency Disbursements," *Federal Register* 75, no. 245 (December 2010): 80315-80335.

regulations in the scope of the Study. These types of one-time product design costs are discussed in greater detail in *Appendix G: Insights on One-time Implementation Costs*.

3.2.6 Other functions

Across the seven Study participants, the **Marketing**, **Audit,** and **Legal** functions account for relatively small fractions of overall ongoing compliance costs. These functions primarily provide support to other functions dealing more directly with compliance-related concerns, serve as additional “lines of defense” for ensuring enterprise-wide compliance, and provide counsel on compliance-related inquiries and issues. Across participating institutions, Marketing function costs comprise anywhere from less than 1% to 8% of total compliance costs identified (median = 2%), Audit function costs comprise anywhere from less than 1% to 7% of total compliance costs (median = 2%), and Legal function costs comprise 0% to 3% of total compliance costs (median = 1%).

MARKETING

On a day-to-day basis, the Marketing function may conduct research on consumer insights, analyze the state of the market for a specific consumer product, perform marketing analytics, develop marketing and brand strategies for bank products and services, as well as design and execute advertising campaigns. Banks without dedicated Marketing function personnel may divide these activities amongst a number of other bank employees (and the smallest institutions may not conduct these activities). Personnel within the Marketing function liaise with staff from other business functions (e.g., Compliance) to ensure that the strategies and campaigns developed in the course of these activities are compliant with in-scope regulations. Marketing also provides support to other business functions on compliance-related issues requiring marketing expertise, such as the design of forms, notices, disclosures, and other materials needed. As a result, the Marketing function’s compliance costs identified in the Study are almost all labor-related. To ensure consistent measurement, we re-categorized as Operations function costs any expenses associated with the fulfillment of marketing materials, which participants may have initially reported as Marketing function expenses.

Some of the compliance-related costs of the Marketing function stem from regular back-and-forth between employees designing and revising advertising campaigns and Compliance function personnel. Marketing’s compliance-related disclosure activities may also increase compliance costs for other business functions: at one Tier 3 participating institution, an executive noted that changes adopted by the bank in the annual privacy notice resulted in such a spike in consumer questions and concerns that the bank needed to adjust staffing and hours of branch employees and call center support. In addition, there was a need for the Operation function's call center and the Retail function's front-line staff to handle increases in customer visits and call volume.

AUDIT

The Audit function at participant institutions typically serves as a "third line of defense," ensuring that the various business units conducted effectively the activities necessary for implementing compliance. The Audit function's compliance activities typically include enterprise-wide **risk assessments** and **design of audit processes and tools**. The Audit function is also typically responsible for an internal exam component, in which it schedules and carries out assessments and exams, potentially resulting in additional monitoring. Across the seven participating institutions, Audit function costs comprise anywhere from less than 1% to 7% (median = 1.4%) of total compliance costs. Study participants of varying sizes noted the trend away from "vertical audits" of multiple issues within a single business function (e.g., conducting an HR audit) and towards "horizontal audits" of a single topic or regulation across several functions (e.g., a Regulation E audit across all business lines of a bank).

Responsibilities in the Audit function may be conducted in-house, outsourced to third-party accounting firms or other vendors, or conducted by both in-house labor and third-party vendors. The seven participant banks exhibited a range of different approaches to implementing the Audit function. The Tier 1 and Tier 2 institutions largely relied upon dedicated in-house staff to implement risk assessments and the actual audits (plus related remediation, if necessary). One Tier 4 bank employed one internal auditor (as opposed to a full-time staff of three to four individuals, which it had done in the past) who served principally as a vendor manager who directed the third-party contractors conducting most of the Audit function tasks for the bank. Combining elements of these two models, one Tier 3 bank noted that it would soon fully transition to a hybrid method of internal assessments and auditing – mixing the efforts of its small in-house Audit function staff with a third-party vendor specializing in audit services. In particular, this institution would conduct in-house risk assessments, but assign the actual execution of audits to in-house personnel or its vendor, depending on the complexity of the audit and the relative expertise of bank employees. This participant bank's experience provides some evidence that different institutions consider trade-offs between in-house resource investment and contract costs for compliance oversight.[63]

LEGAL

Across the participating case study institutions, the Legal function was part of the Corporate Oversight suite of functions (including Risk and Audit) that typically operated alongside the Compliance function as a "second line of defense," ensuring that business unit activities are compliant with regulations. As such, the Legal function's compliance-related responsibilities fall into three key sub-functions: conducting **research, reviews and assessments** of legal requirements to guide compliance activities; providing **product and policy reviews** for other business functions (e.g., Marketing function, product development processes, general business policy); and providing **advice and counsel** regarding potential compliance and litigation risks.[64]

Most of the Legal function's compliance-related costs comprise of labor expenses. The participant banks reported legal costs of less than 1% of compliance costs associated with the in-scope regulations. All four Tier 3 and Tier 4 institutions participating in the Study outsourced a significant portion (if not all) of their legal-related activities, relying on professional legal services, accounting firms, and state bank associations for legal and compliance advice. These smaller institutions in the Study do not maintain a permanent, in-house Legal function, instead using outside legal services only on a retainer or on an as-needed basis. The experience of the smallest participating institutions suggest that they are also likely to rely on vendors, trade associations, regulators, and other sources for legal and compliance expertise rather than law firms.

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[63] Because this Tier 3 bank had not yet implemented the hybrid in-house/vendor auditing model at the time of the on-site interviews and follow-ups, we recorded only the in-house labor costs typically associated with auditing activities for the in-scope regulations.

[64] As noted in the *Methodology* section, we have excluded the costs from paying fines, penalties, damages, or settlements associated with accusations of non-compliance from the costs captured in the Study. However, the Legal function at the Tier 1 participant does generally consider potential litigation costs as a risk in their compliance-related reviews. One Tier 3 institution said it had incurred litigation costs to defend a recent class action suit alleging a violation of Regulation E, but did not obtain estimates for use in the Study.

3.3 Compliance Costs by Regulatory Requirement

In addition to reporting shares of compliance cost by business function, we draw inferences about compliance costs for different types of regulatory requirements. We draw these inferences from our own assessments about the cross-functional activities conducted by participants in complying with regulatory requirements.

As described in the *Methodology* section, we collected information on 140 areas that were hypothesized sources of in-scope compliance costs, focusing primarily on collecting information by *business function*, not regulatory requirement. As our on-site visits progressed, we observed that personnel at the participant banks were more likely to understand and report incremental compliance activities and costs by associated business function, not actions associated with specific regulatory provisions. More focused interviews would be required to disentangle components and costs of the specific regulatory requirements (e.g., percentage of IT systems costs specifically related to resolving Regulation E disputes).

However, with the detailed, business function-based information that we were able to collect from the seven case study institutions, it was possible to examine compliance costs by regulatory requirement at a qualitative level. To accomplish this, we assessed the activities required to comply with the nine requirement types in our regulation taxonomy (Table 1 in *Appendix B: Taxonomies*). We also considered the frequencies (i.e., how often they were triggered) and relative costs of these activities. Based on these considerations, we believe four types of regulatory requirement contribute the most costs at the participants we studied. For these four requirement types, we sought to understand why certain types of requirements drove more costs in banks than others. We also studied operational differences in how some participant institutions had chosen to meet the requirements of a certain regulation. The four types of regulatory requirements we discuss in this sub-section are:

- **Authorization rights** require a bank to obtain a consumer's consent (opt-in) or give a consumer the opportunity to decline (opt-out) before engaging in a specified activity. In the Study, we focus on customer choices to opt-in to an overdraft program that charges fees and opt-out of sharing certain customer information with an institution's third parties and affiliates (if applicable). Significant cross-functional coordination is required to build opt-in/opt-out functionality (IT), inform customers about their options (Retail, Operations), and oversee adherence to their preferences (Operations, Compliance, Audit).

- **Error resolution procedures** set standards regarding the manner and timing with which consumer disputes must be resolved. Prescribed time tables and the need for assurance in meeting these time tables contribute to incremental compliance cost.[65]
- **Disclosure mandates** are requirements to provide information to consumers, either verbally or through written form. Disclosure design and especially delivery contribute towards related incremental compliance costs.
- **Advertising standards** govern the kind of language or content that can be used to advertise for consumer financial products or services. The interpretation and application of open-ended regulations require negotiation and coordination between Marketing and Compliance functions during campaign design.

3.3.1 Authorization Rights[66]

Requirements involving authorization rights stipulate a consumer's ability to opt in or out of bank practices and services. We categorize the major components of cost for authorization rights as activities and costs associated with:

1. The participant bank's need to obtain the consumer's opt-in to overdraft coverage for debit card and ATM transactions (Regulation E) in order for the bank to be permitted to assess fees for overdrafts;[67] and
2. The consumer's right to opt-out of the disclosure of non-public personal information to non-affiliated third parties (Regulation P).

The Study's participant institutions incur a material portion of their compliance costs from activities in a number of business functions: the Retail function's front-line activities (where consumers receive explanations of their opt-in/opt-out rights and elect preferences), the Operations function's

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[65] The Study did not consider costs from error resolution activities that were not governed by federal regulations, such as check processing disputes.

[66] In this report, "authorization rights" refer to the authority given by the consumer to the bank for participation in certain deposit products and deposit account-related services within the scope of the Study. For example, authorization rights granted to the bank can include authorization to pay an overdraft (opt-in) or to stop sharing non-public personal information with non-affiliated third parties (opt-out). "Authorization rights" in the Study are not related to any other payment authorizations specific to ACH payments.

[67] Six of the seven banks participating in the Study have an overdraft opt-in program governed by Regulation E.

back office (where these preferences are coded and operationalized), and the Corporate Oversight functions (where these processes must be designed and monitored). The depth of cross-functional coordination necessitated by authorization rights is partially responsible for the relatively higher compliance costs attributable to this type of requirement.[68]

FIGURE 5: AUTHORIZATION RIGHTS PROCESS FLOW – OVERDRAFT COVERAGE OPT-IN

These compliance costs vary according to a number of factors. Back office support costs may depend on the complexity of IT systems (i.e., how applications and systems are integrated to implement compliance) and the efficiency of branch-support processes (which likely depend on a participant bank's asset size and strategic priorities). Retail front office costs depend in part on the number of account openings, and oversight costs also vary with the depth and rigor of quality assurance efforts (which likely depend on a participant bank's assessment of compliance risk and its decisions on how to manage it). Although costs to comply may vary, the seven Study participants share similar processes to implement overdraft opt-in and privacy opt-out rights, composed of the steps described below.

- **Step 1: Explain opt-in/opt-out rights to customers and record their decision.** Typically this process is handled by participants' Retail front-line employees in branches, customer service representatives in Call Centers, or through an integrated voice response (IVR) system or online channels (i.e., by the consumers themselves through the bank website).
- **Step 2: Accept, check, and process forms.** Study participants centralize and automate this effort to varying degrees. Some of the participant banks process forms manually in branches and store the information in an electronic spreadsheet; others mail all forms to a central location but still upload preferences manually into the corresponding database. Still, others image forms in

68 Institutions may choose to enact more costly compliance processes for a number of reasons. For the example of overdraft opt-in, banks may have chosen their course of compliance in order to maintain their revenue from overdraft coverage or simply to continue offering a service so that customers could have the benefit of choice.

branches and digitally submit them. Each approach has different cost implications and scale benefits.

- **Step 3: Ensure that customers are served according to their authorization status.** At most participant banks this step is automated in the IT function, but some need to support automation with manual processes that can generate further costs (e.g., one participant manually verified Regulation P opt-out status for customers before distributing information or sending certain mailings).
- **Step 4 (optional): Follow-up with customers.** Some participant banks will review customer data and follow up with customers to provide additional information and encourage them to change their opt-in/opt-out status. The bank then has to start again at Step 1. These additional customer follow-ups are likely based on a business decision and generate costs that are not necessarily an incremental compliance activity.

When customers decide to change their opt-in or opt-out status on their own and without prompting by the bank, the process is not wholly different than described above. Steps 2 and 3 are similar, but banks may not provide as extensive explanations as in Step 1. Follow-up with customers in Step 4 may not be as relevant when customers initiate the change in status.

CROSS-FUNCTIONAL INTERDEPENDENCIES

Regulatory requirements regarding authorization rights can affect multiple business functions at each of the Study's seven participating institutions, creating interdependencies that may make daily operations more complex. For example, some institutions change consumers' Regulation E opt-in elections for overdraft in near real time, while others accept requests but only process them in batches at day's end. One senior executive at a Tier 3 participant institution commented on the complexity for their bank:

> *When we designed our new opt-in system, we had to think about it in terms of workflow – how we would pass information from function to function to ensure a customer's choice was correctly recorded, implemented, and acted on. Customers can opt-in or -out through a number of channels – online, in our call center, in the branch. Whichever way they chose, we have to make sure to transfer that information from our front-line customer service reps to our back office processing folks and then ultimately into the right IT systems. And we have to involve Compliance and HR along the way to make sure those processes are designed correctly and that our staff is properly trained.*

Different banks may implement authorization rights in different ways to fit their needs, organization, and available resources.

More cross-functional coordination may also require additional oversight. For example, at the Tier 1 bank, the Compliance function performs regular quality assessments of its key compliance protocols. Adherence to overdraft opt-in and privacy opt-out protocols are at the top of the priority list during these assessments, as this bank judges that compliance risk is higher for more complex processes that involve more functions. In addition, the Audit function performs an independent review of the institutional opt-in process every 12 to 24 months.

At both this Tier 1 institution and the larger Tier 2 institution, Compliance functions employ a dedicated privacy officer to provide constant oversight over privacy procedures across functions and product areas. The personnel working in the privacy sub-function may also have responsibilities for other activities related to other compliance, lines of business, and reputation that are outside the scope of the Study. The compliance officer who managed privacy issues at the Tier 1 bank estimated that 10% of his time is spent managing opt-out decisions for retail deposit customers. This work included routine quality assurance work (e.g., management of tasks originating from other business functions and lines of business, re-directing issues to appropriate bank offices) and regularly interfacing with the personnel from the IT function to evaluate or fix any system connections necessary to operationalize a customer's opt-out preference.

3.3.2 Error Resolution

Error resolution regulations shape the way that financial institutions handle customer disputes and the speed with which institutions resolve them. Without the regulatory requirements, error resolution procedures would likely vary between the currently mandated timelines and "baseline" levels of service.[69] All of the banks participating in the Study indicated that, regardless of any regulation or payment network rules, addressing consumer errors was a business-as-usual activity provided as a matter of basic customer service.[70] While "basic customer service" as a baseline cost may vary as a matter of institutional business practice, we consider any mandated actions or timelines stipulated by the in-scope regulations as sources of compliance cost.

[69] State regulations and various network rules, such as those overseen by NACHA and other payment networks (e.g. Visa, MasterCard), also determine an institution's error resolution timelines and procedures. For the purposes of the Study, the costs associated with these timelines and procedures are part of the baseline costs for the participant institutions.

[70] This potentially means that an institution may choose to operate on a faster timeline than required by regulation or network rules as a matter of providing superior customer service.

The major error resolution regime that the Study addresses is the set of provisions for handling disputes regarding electronic fund transfers (EFTs) under Regulation E. The EFT error resolution provisions add compliance cost because of the requirements to meet specific deadlines and the higher perceived risk relative to claims for which there is no prescribed resolution timeframe.

Incremental costs vary based on the rate at which errors occur in a given participant bank and the incremental cost per claim, which is itself a result of differences in procedures that each bank designed to manage the risk around these claims. Components affecting differences in procedures and associated costs observed at the participant institutions include the activities and costs associated with:

1. The participant bank's need to meet the federally mandated error resolution timelines; and
2. Costs related to quality assurance standards adopted by the financial institution.

FIGURE 6: ERROR RESOLUTION PROCESS FLOW

REGULATION-MANDATED TIMELINES

Across all participants interviewed, execution challenges arise from the timetables associated with mandated error resolution processes, including the evaluation of a complaint within 10 days of being notified by a consumer and the awarding of provisional credit if the case is not resolved on certain timelines.

In trying to assess the incremental costs of the Regulation E timetable, we asked Study participants to compare their EFT error resolution process to the way they managed disputes or claims that were not governed by a federal regulation (e.g., complaints about check processing). For the larger participants, the mandated time table appeared to necessitate additional staffing. An executive with responsibility for fraud mitigation/error resolution activities at the Tier 1 institution manages a Regulation E claims assistance staff of approximately 30 full time employees, but he asserts: "*I probably have to maintain a staff that is about one-third larger than I would …were there not such stringent requirements in the rule.*"

For smaller Study participants, the incremental cost manifests as overtime hours put in by the business-as-usual error resolution team. At one Tier 3 institution, the sole fraud investigation associate responsible for overseeing Regulation E disputes estimated that she worked 10 to 20 additional hours each week (above a 40-hour work week) to meet the regulation timeline. This associate also believed that the deadlines create incremental responsibility for her: "*If a customer files a complaint and then stops responding to my calls, I have to spend valuable time just trying to get them back on the phone to investigate before the ten day mark* [by which a disputed account must be provisionally credited if not yet resolved]. *In an unregulated world, I would assume that an unresponsive customer means he/she resolved the issue.*" Smaller Tier 4 banks dealt with error resolution in a similar manner as this specific Tier 3 institution, except without the benefit of a dedicated associate. The investigation activities were part-time assignments to bank employees with other work responsibilities.

Finally, several of our Study participants maintained timelines for error resolution that were more stringent than those imposed by the rule. The banks may have adopted the abbreviated timelines in their official policy, or staff may have held themselves to shorter internal deadlines as an informal compliance practice. In some cases, these more stringent timelines were driven by a desire to provide exceptional customer service, and in other cases it was the result of seeking to manage risk and guarantee compliance. For example, one Tier 2 institution in the Study maintained a policy to resolve Regulation E disputes within eight days, ahead of the mandated ten-day period, in order to ensure that every dispute was handled in compliance with the rule.

HIGHER QUALITY CONTROLS

The Study findings also suggested that participating institutions incur incremental cost due to the higher quality controls they feel are needed for effective error resolution processes. Higher-skilled employees are assigned to deal with federally regulated claims processes. These employees may dedicate more time to resolve such claims than they might for claims not governed by federal regulations. The Tier 1 bank maintained a dedicated group for the management of Regulation E claims, asserting that "*the unique requirements and risk profiles of those dispute types require a higher skill level for the individuals who handle them*." A Tier 2 participant also deploys more skilled personnel to handle Regulation E claims than it uses to handle unregulated claims. As a result, that particular Tier 2 participant institution pays individuals on the Regulation E claims team approximately $10,000 more per year. The call center manager at this institution noted the incremental complexity of the Regulation E disputes that come into the call center: these calls take "*twice as long to handle as normal dispute calls because of the extra requirements and the extra quality assurances we build into call scripts given the risk of these kinds of claims*." Regulation E claims at this bank may also use more resources to reach a resolution – before denying a claim, the bank undergoes four rounds of case review. At one Tier 4 case study institution, the compliance officer noted that front-line employees spent significant time fielding questions about customer disputes at branches that were particularly susceptible to fraud. The front-line bankers' direct access to Compliance function personnel ensures higher quality and efficiency in error resolution efforts due to clearer understanding of the regulatory requirements, but does generates additional labor cost from the compliance officer's time to address inquiries.

It appears likely that some of the Study participants employed higher-skilled staff and implemented higher quality controls at least in part to ensure compliance with mandated timelines. However, it is also possible that participant banks employed higher-skilled employees and more controls and reviews for EFTs because these transactions are more frequent and more complex than other types of transactions, such as checks. For example, consumer payments by EFT are much more common than consumer payments by check, and so a bank may receive more reported EFT errors than check errors, simply because of volume. Further, EFT claims may involve multiple parties (e.g., merchants, processors, payment networks, other banks, law enforcement) and may be associated with significant events (e.g. potential stolen account information, hacked accounts and systems) that require extensive knowledge well beyond the regulatory realm. The Study does not further differentiate the reported costs into components associated with the regulatory requirements, the general complexities of EFT claims, and the interactive effects between the two. Nor does the Study determine whether the length of time for resolving non-Regulation E disputes was satisfactory for consumers. One could consider at least some of the costs of error resolution requirements that we treated here as incremental compliance costs to be baseline costs that banks would likely incur in business-as-usual practice.

3.3.3 Disclosures

Compliance costs associated with disclosure requirements among the Study's seven participating institutions can be disaggregated into the activities and costs associated with:

1. The participant bank's efforts in designing disclosures; and
2. Production and delivery of the disclosures.

These costs vary across participants, depending on the extent of modifications to standard disclosure language or formats, the means of delivery (i.e., with mailings of other, unrelated materials, in an independent mailing, in-person, or electronically), as well as the nature and timing of disclosures (e.g., prompted by an irregular event or occurring at periodic intervals).

DISCLOSURE DESIGN

For those Study participants that develop forms in-house, disclosure design can generate pertinent compliance costs. The process is labor-intensive, typically undertaken jointly by a bank's Marketing and Compliance functions, and tends to be iterative to ensure that disclosures are compliant while also tailored to meet a bank's communication priorities. Even banks that utilize model forms or clauses may engage in design. At a Tier 2 participant, the Marketing function takes model disclosure clauses and translates them into bank-specific language. The Chief Marketing Officer commented: *"[T]he irony is that the disclosure designed to protect consumers is written in a way that's difficult for those consumers to understand. We end up investing a lot of resources into the development of customer friendly language: we test it, retest it and then roll it out, which is time consuming."* We did not verify whether the institution's modifications made the disclosures more "customer friendly." For the purpose of the Study, we observe that the participant found it in its interest to adapt the model disclosures to its business needs.

DISCLOSURE PRODUCTION AND DELIVERY

In addition to design costs, participants incur non-labor costs to produce and distribute disclosures. These costs depend on the channel of delivery, as well as the nature and timing of the disclosure.

Disclosures are delivered through a number of channels and, in order of decreasing per item expense, they can be: mailed, provided in branches, or distributed electronically. Total printing costs for physical disclosures (both mailings and in-branch disclosures) can be sizeable; postage costs for the former increase expense. To reduce these costs, the participant banks embed disclosures within pre-existing mailings (e.g., monthly statements) whenever possible. However, disclosures that address sensitive customer information, such as the Regulation P annual privacy notice, are usually distributed independently and therefore incur additional costs. One Tier 3 institution spent more than 15% of its total compliance-related fulfillment costs on production and postage for the Annual Privacy Notice alone . Electronic disclosure delivery is the most efficient, generating no *incremental* compliance cost: as one representative from the same Tier 3 bank stated, *"Customers that go through the account opening process online just click a link to see the disclosures – it doesn't take more than 30 seconds of time to upload those documents, so there really are no delivery costs."* Of course, electronic delivery does require a basic level of IT functionality, but we considered these costs business-as-usual for the participants in the Study.

The nature and timing of these disclosures can also contribute to cost – more specifically, cost will vary depending on whether these disclosures are unprompted (i.e., scheduled regularly by the bank) or prompted (e.g., triggered by an event or consumer action). Findings from participant banks suggest that prompted disclosures were generally more costly than unprompted disclosures, as the prompted disclosures require banks to create processes that generate disclosures when triggered by a certain event (e.g., in response to a customer inquiry). Moreover, the participant banks prefer to bundle the unprompted disclosures with regularly planned mailings whenever possible, thereby preventing additional distribution costs.

3.3.4 Advertising Standards

Regulatory requirements that create a set of rules to govern advertising activities can generate incremental compliance costs, due to the iterative cooperation that was necessary between the Marketing and Compliance functions. For the purpose of the Study, the key source of compliance cost was the Regulation DD requirement neither to "be misleading or inaccurate or misrepresent a depository institutions' deposit contract" nor to misrepresent when an account is "free" or "no cost."[71] Room to interpret this requirement may create variance in the cost identified at each participating institution. This variance is largely determined by the extent to which a participant chooses to invest in the activities and costs associated with:

1. Analyzing and interpreting guidelines of the regulation, and
2. Crafting advertising language to ensure customer understanding (and revisions thereof).

Given the high-visibility of advertising language to consumers and regulators, Study participants indicated advertising standards to be an area in which they often concentrate efforts to ensure compliance.

ANALYZING AND INTERPRETING GUIDELINES

Study participants cited correctly analyzing and interpreting guidelines as a key challenge. The Compliance and, at times Legal, functions incur costs for these compliance-related activities. An institution's tolerance for compliance risk affects its investments in analysis and interpretation activities. Some standards that can require interpretation were mentioned above. Another example is the requirement to state certain information "clearly and conspicuously" if an advertisement states the annual percentage yield. A compliance officer at a Tier 2 case study institution noted a concern that was common among other Study participants: "*We want to make sure we are complying with the spirit and letter of the regulatory requirement, but how do I know if I'm being clear and conspicuous enough?*" The experiences of the Study participants suggest that the analysis and interpretation of advertising standards often requires Compliance function personnel to invest

[71] 12 CFR 1030.8(a).

time. High profile campaigns may involve additional efforts from the Legal function and the bank's high-level executives.

CRAFTING THE ADVERTISING LANGUAGE

Crafting and revising the appropriate language for an advertising campaign generates the bulk of the costs of complying with advertising standards, due largely to the iterations among Marketing, Compliance, and sometimes Legal functions at the participant banks. While model advertising clauses are somewhat helpful in achieving their aim of mitigating the costs of compliance, all banks interviewed for the Study expressed the opinion that this language is not always customer-friendly. As one compliance officer at a Tier 2 institution noted, *"It doesn't feel like regulations were written by a layman for a layman. I'm in the business, and I don't understand the model clauses most of the time."* As such, the process of resolving the tension between meeting compliance requirements in advertising and satisfying business needs can involve complex and, at times, contentious efforts by the Compliance and Marketing functions to re-interpret the regulation and re-draft language for consumer comprehension while still remaining in compliance.

The different reviews required to reach consensus on advertising language can also extend considerably the total time from the beginning of the design process to the launch of the actual advertising campaign. One of the Tier 4 participant banks in the Study worked regularly with an outside advertising firm to develop its marketing campaigns. One of the bank officers responsible for Marketing function responsibilities[72] stated that compliance-related review and revision delayed the launch of a new advertising campaign. Without the Compliance functions' need to review and revise, the bank officer claimed that the marketing materials would have likely been completed within one week; instead, compliance-related activities extended by an additional five weeks. During this time, multiple employees spent several hours each week revising language. The participant bank considered this additional review time to be an incremental cost that would otherwise not be incurred in the absence of the advertising requirements around clear and conspicuous language.

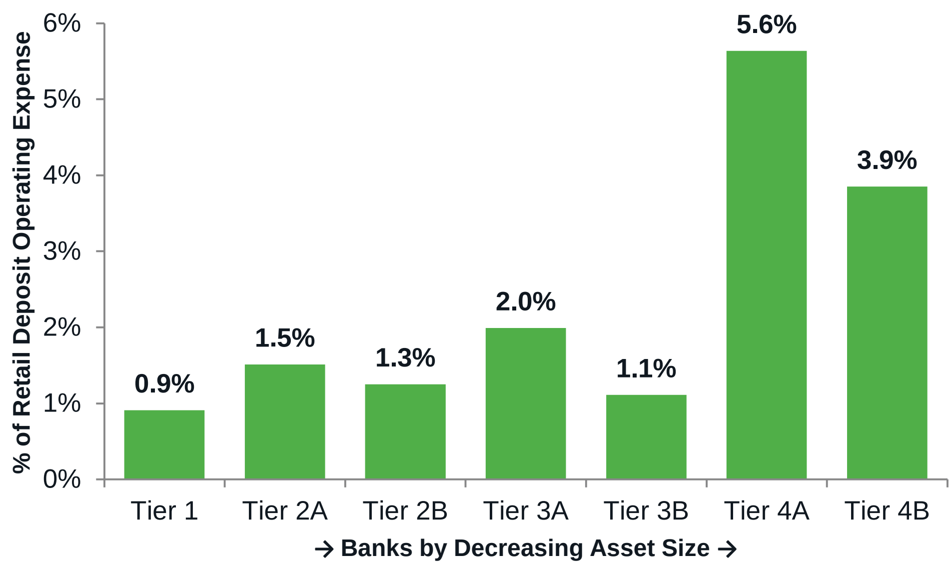
[72] This participant bank did not have dedicated Marketing employees, but did have several bank officers act in a similar capacity through a Marketing Committee.

3.4 Compliance Cost by Participant Bank

The previous sections explored compliance cost by business function and regulatory requirement. We compared each function's share of compliance costs across the seven case study banks. Here we compare each participant's total compliance costs for the in-scope regulations. We present each participant's incremental compliance costs as a percentage of its total retail deposit operating expense. [73] The retail deposit operating expense excludes operating expenses for product lines, such as consumer loans and mortgages, that are not within the scope of this Study.

At the smallest institutions (both Tier 4 participants), total compliance costs for the in-scope deposit-related regulations are 4% and 6% of their respective estimated total retail deposit operating expense. The five largest banks in the Study incurred costs to comply with these regulations roughly equal to 1% to 2% of their estimated total retail deposit operating expenses (Figure 7).

FIGURE 7: TOTAL COMPLIANCE COSTS AS A PERCENTAGE OF ESTIMATED RETAIL DEPOSIT OPERATING EXPENSE, BY PARTICIPANT BANK

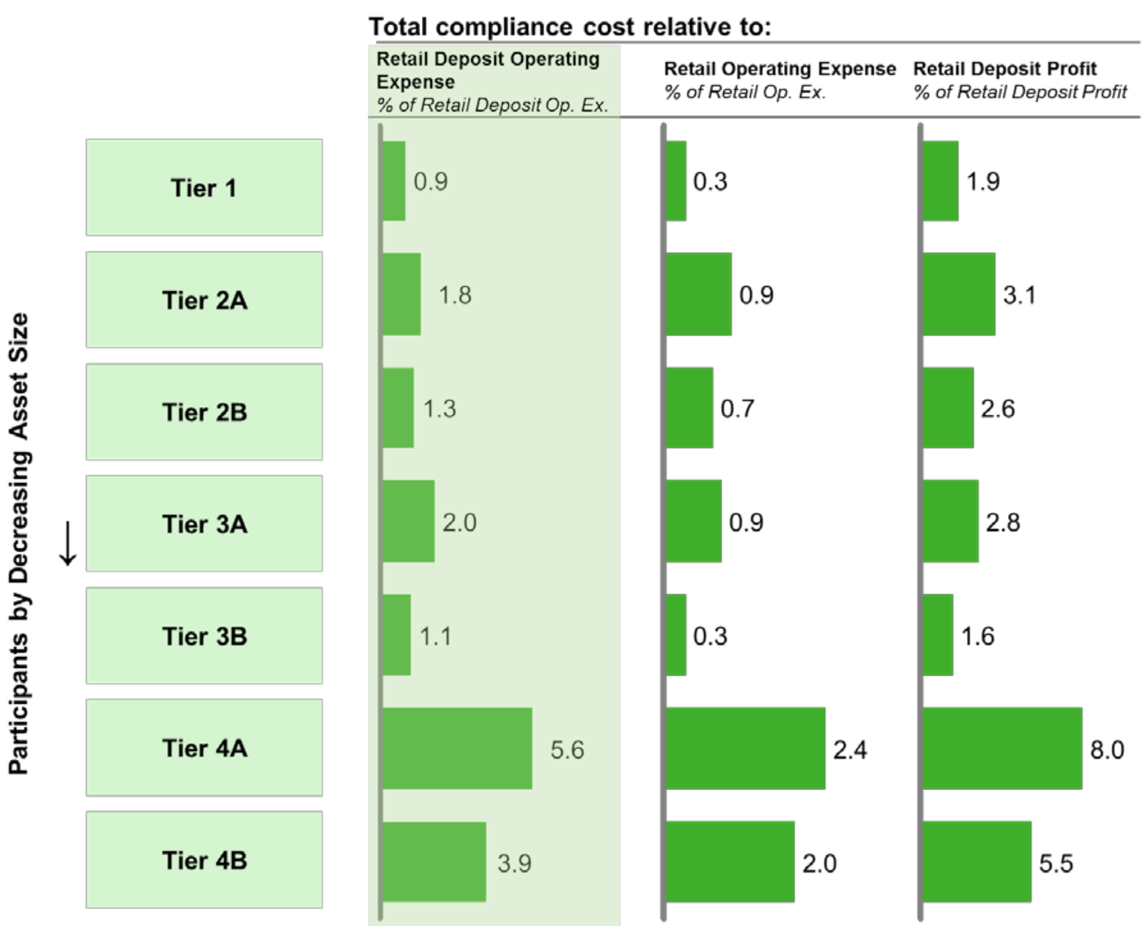


[73] The Study calculated the retail deposit operating expense for each of the seven participant banks using publicly available information on total deposits at each bank and internal research conducted by McKinsey Global Concepts Institute. The model was most recently updated in 2012 and the data set includes all U.S. banks and credit unions.

This pattern may suggest the existence of economies of scale in compliance costs. However, it could also indicate several other differences that may influence business models and compliance costs, such as a participant's geographic location, customer demographics, and competitive position in the region. We cannot control for factors that could have contributed to these cost differences.

Just as we cannot rule out other sources of cost differences aside from economies of scale, we also cannot rule out the possibility that the economies of scale are stronger than the results indicate. The factors described above could lead to diseconomies of scale as well. An example of such diseconomies of scale – in which larger banks may experience compliance costs that smaller counterparts may not – is the ongoing nature of supervision by multiple regulators at larger institutions.

FIGURE 8: POTENTIAL INDICATORS OF POSSIBLE SCALING EFFECTS IN COMPLIANCE COSTS, BY PARTICIPANT BANK



Sources: Case Study Bank Estimates, Company 10-Ks, SNL Financial, McKinsey Global Concepts Institute

This observed pattern of higher costs for the smallest case study institutions for their compliance with the in-scope regulations is consistent across other measures of deposit operations. Figure 8 shows that, with a denominator of total retail operating expense (which includes lending costs and other non-interest expenses from the retail business that are outside the scope of the Study), the differences between the two smallest participant banks and the larger participant banks persist. We see similar patterns across the seven banks when we use a model estimate of retail deposit profits (which also includes components outside the Study scope).[74]

3.4.1 Possible Scale Effects in Compliance Costs

The evidence in this study should be considered in the context of the literature on scale efficiencies. As previously indicated, several empirical studies have documented scale effects in compliance costs. Elliehausen (1998) provides a summary of such studies, some of which examine compliance with the Equal Credit Opportunity Act (ECOA), start-up costs of the Truth in Savings Act (TISA), and ongoing costs of complying with the Truth in Lending Act (TILA). By and large, these studies showed evidence of economies of scale. In general, our findings from the Study on costs for smaller institutions are consistent with those of previous studies: for example, Boyle (1983) finds that the cost per loan of complying with TILA was almost double at smaller banks.

Elliehausen and Lowrey (2000) specifically discuss economies of scale in start-up costs with implementing TISA and find that economies of scale at small, medium, and large bank groups actually diminish when moving up the asset size distribution. In other words, a 10% increase in deposits increases compliance costs by 5.6% for small banks, but a 10% increase in deposits at medium- and large-sized banks would yield 6.0% and 6.52% increases in compliance costs, respectively. In an environment where no economies of scale existed, a 10% increase in deposits would imply a 10% (or more) increase in compliance costs. Economies of scale are always present, but Elliehausen and Lowrey's research finds that such effects may actually attenuate when moving up the asset size distribution.

[74] The small number of cases in the Study limits the conclusions that can be drawn about scale efficiencies in compliance. Readers should not take the numbers in this report as representative of institutions generally or regulations generally. The scale findings are particularly tentative because we studied just two of over 6,000 institutions with assets under $1 billion and our comparisons across institutions could not control for factors other than size. It is possible that other differences besides size explain some or all of the cost differences we observed.

Other studies estimate economies of scale in the financial industry in general (without a focus on compliance costs). In this research, the same pattern often arises. For example, Wheelock and Wilson (2011) use the data from call reports to estimate significant economies of scale at banks of all sizes, and show significant cost savings even around the $1 trillion asset level.

There are many potential reasons – including, but not limited to, economies of scale – why the two smaller banks in the Study appear to incur higher compliance costs as a percentage of retail deposit operating costs, relative to larger banks. The general argument for economies of scale in the retail banking industry may be attributed to:

- **Fixed costs** – A bank needs to procure real estate, hire employees, fill out many forms, and invest in various systems (e.g., hardware, software, vendor services **–** some of which play a role in regulatory compliance) to operate. A bulk of these costs is branch-related and is likely to scale with the size of the business. However, at smaller banks, this cost is spread over a much lower volume of business.
- **Indivisibilities** – While some fixed cost, such as the *minimum* amount of staffing, equipment, and space needed for branches, scale up or down depending on the size of the bank, there are certain costs that are minimally necessary for a bank to offer services. These minimum investments are the fixed costs required to meet the basic operational and compliance needs of a financial institution. These fixed costs are indivisibilities – costs that cannot be scaled down indefinitely. In fact, below the level of indivisible costs, there would be no functioning bank at all. These indivisible costs for operations include expenses for business-as-usual necessities, as well as for implementing compliance. For larger banks with a larger resource base, these indivisibilities likely do not make a material difference.
- **Specialization** – It can pay to specialize: if a bank has two dedicated compliance officers, it may be more efficient to have one person work on deposits and another on lending rather than to have both people work half time on each. Similarly, at a bank where a front-line employee in the Retail function may have been tasked with Compliance function responsibilities, specialization by having dedicated Compliance function personnel may yield greater efficiencies. Smaller banks may not be able take advantage of specialization to the same extent as larger banks.

Moreover, three additional factors need to be considered when examining potential economies of scale: **outsourcing**, **vendor price discrimination**, and **bargaining power**. These concepts are particularly important to keep in mind when contemplating a bank's reliance on third-party vendors.

Some smaller banks **outsource** certain functions to third-party vendors. Instead of investing in and maintaining an in-house hardware system, a smaller bank may opt to contract certain computing functions from a cloud-based system. Similarly, instead of employing a full-time compliance officer, a smaller bank may employ a part-time compliance professional under contract. The use of third-party vendors may provide efficiencies for smaller institutions that would not otherwise be possible. However, the costs of contracting, the lack of specialization within banks (i.e., staff dedicated to specific compliance activities), and quality control issues may also render outsourcing to be impractical some of the time.

When it comes to **price discrimination by vendors**, larger banks do not necessarily benefit from their larger scale as much as one would expect. For example, a vendor may spend similar amounts of time and resources developing systems for large banks and small banks, and its costs might be lower providing services to a few very large customers instead of many smaller ones. However, there may be few vendors that can meet the needs of large banks for reliability, have the desired reputation, or be able to provide the range of services that a large bank may need. If relatively few vendors meet these demands, then large banks may not obtain per-unit discounts that are as large as one might expect. This may also be a reason why larger banks decide to hire their own in-house staff for certain business activities, thereby having higher relative shares of labor cost. The experience of some of the larger case study institutions (particularly within the hiring of in-house IT employees) seems to support this concept.

Larger banks may receive additional benefits from their larger scale due to increased **bargaining power**.[75] For example, we heard from both Tier 4 participants in Study, and from software vendors in other settings outside the Study, that larger banks are better able to bargain for price concessions for their core systems. This implies that vendor competition for smaller banks may not be as intense as it is for larger banks. This could be due to the possibility that smaller banks are disproportionately more expensive to serve (or to bargain with) than bigger banks.

[75] The potential lack of bargaining power of smaller banks vis-à-vis their vendors is not a recent public policy concern. The same concern was the driving force behind the Robinson-Patman Act of 1936 that prohibited price discrimination by producers. At the time, there was a concern regarding price discrimination, with chain retailers having more bargaining power with producers than smaller "mom-and-pop" stores. Interestingly enough, as Katz (1987) writes, "In recent years, a consensus has developed that the effects of intermediate good price discrimination are beneficial and thus such discrimination should not be proscribed. Consequently, the number of Robinson-Patman cases brought by the Federal Trade Commission fell markedly in the 1970s." The situation has not changed since that time.

Any number of these basic overlying factors of economies of scale could be at play when examining the differences in functional compliance costs across participant banks. Other factors such as geography may further exacerbate these scale issues and other operational costs.[76]

The Study findings suggest that smaller Tier 4 banks participating in the Study tend to experience higher compliance costs (relative to their retail deposit operating expense) across more business functions than their larger bank counterparts (Table 6). Whether these higher costs were due to greater reliance on third parties, vendor pricing practices, lack of ability to negotiate the rate, or other factors the bank participants in Tiers 3 and 4 indicated that they had few choices other than to accept the prices as given by their vendors.

TABLE 6. COMPLIANCE COSTS BY FUNCTION RELATIVE TO RETAIL DEPOSIT OPERATING EXPENSE, BY PARTICIPANT BANK[77]

	Tier 1	Tier 2A	Tier 2B	Tier 3A	Tier 3B	Tier 4A	Tier 4B
Operations	0.20%	0.22%	0.36%	0.45%	0.29%	1.42%	0.60%
IT	0.09%	0.15%	0.38%	0.86%	0.34%	1.22%	0.85%
HR	0.22%	0.25%	0.11%	0.24%	0.17%	0.28%	0.74%
Compliance	0.05%	0.41%	0.14%	0.25%	0.14%	1.49%	1.19%
Retail	0.32%	0.32%	0.11%	0.13%	0.11%	1.00%	0.13%
Marketing	0.01%	0.07%	0.10%	0.06%	0.00%	0.13%	0.08%
Corporate Oversight	0.01%	0.08%	0.02%	0.00%	0.02%	0.11%	0.26%
Legal	0.01%	0.01%	0.03%	0.00%	0.03%	0.00%	0.00%
TOTAL	**0.91%**	**1.51%**	**1.25%**	**1.99%**	**1.11%**	**5.64%**	**3.85%**

The small number of cases in the Study limits the strength of any conclusions that can be drawn, and further research and analysis will be required to validate any observations about the relationship between scale and cost.[78]

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[76] Banks with branches spread out across wide, sparsely populated geographies are generally less able to leverage roaming staff due to travel time. These complications may drive staffing levels higher, or reduce the efficiencies of traveling staff, thus potentially driving compliance costs higher.

[77] Shading denotes overall high, medium, and low relative shares of compliance costs, where red = high, yellow = medium, and green = low. The analysis is to compare the highest to lowest proportions of cost for all the functions across all seven participant banks.

3.4.2 Evidence of Possible Scale Efficiencies

We observed cost differences among the Study's seven participant banks that may be associated with scale. The two smallest participants in the Study shared compliance experiences that differed from their larger bank counterparts, principally in outsourcing to third-party vendors and meeting minimum resource requirements.

OUTSOURCING AND INSTITUTIONAL SCALE

Third-party vendor expenditures comprise a larger share of costs at the smaller institutions in the Study. On average, estimated third-party expenses as a share of total compliance costs in Tier 3 and Tier 4 participants are approximately double that of Tier 1 and Tier 2 participants, with such expenses concentrated within IT and Operations.

The IT experiences among the smallest participants in the Study suggested that smaller banks were more likely to purchase off-the-shelf solutions after assessing the limits of their resources to develop and maintain in-house systems. As presented above in the general discussion about possible causes of scale effects, given their size and limited bargaining power, the smaller participants within the Study may have limited pricing leverage with their vendors. A smaller pool of possible vendors catering to small banks' needs may also limit abilities to negotiate price. Such situations may generate additional incremental compliance costs in vendor-reliant functions. As a senior executive working in IT at a Tier 3 participant described, *"It's all 0s and 1s to us. We are tech people so if we're told by Compliance we need to have a new compliance functionality in our system, we typically call our vendors and see if they have something for us and we pretty much pay what they tell us."* Similarly, in the fulfillment sub-function of Operations, a third-party vendor typically handles production capabilities (e.g., printing and assembly of mailings). Beyond any specific experience of the seven Study participants, larger institutions often issue Requests for Proposal (RFPs) for their fulfillment needs across a selection of large vendors who compete for the institution's business. However, smaller banks may lack the size to generate the same competition

[78] The smaller the institution, the more difficult it may be to collect accurate information on labor costs that conforms to a function-by-function breakdown. Tracking costs by function is a useful way to ensure consistent data collection and interpretation, but these functions may be organized differently across banks. Different institutions may merge functions into one department (for example, Retail and Marketing in the case of one Tier 3 institution in the Study). The smallest institutions may have only one employee who performs activities across multiple functions. For example, the CEO of a small institution might also be the compliance officer and handle Marketing function activities, as well as some Retail function front-line responsibilities. The more that functions merge in single departments or individuals, the more difficult it can be to accurately measure compliance-required labor hours for a particular function or activity. Thus, the smaller the institution, the more caution should be exercised in interpreting the allocation of labor hours between business functions.

and possess smaller procurement organizations within their institutions to manage vendors. Less competition among firms and reduced in-house ability to dedicate to competitive shopping may both contribute to increased compliance costs at smaller banks.[79]

While larger banks typically have the resources and capabilities to adopt more proactive strategies toward managing compliance (e.g., dedicating project managers to create more efficient compliance processes, or designing customized systems), many smaller institutions usually wait for vendors to develop, test, and then supply the new solutions, software, or other tools. For example, a smaller bank's internal IT department (if they have one) may tailor the software, once acquired, to integrate the new system into its existing infrastructure. Waiting for competitors and third parties to develop solutions and then adopting them piecemeal can result in additional costs for many institutions, and perhaps more so for smaller banks.

One bank IT executive remarked, *"The fact that we have to buy and then integrate all these acquired systems, means that we have a bunch of independent systems stitched together. It is not the most efficient process."* This reliance on vendors may also have a downstream effect of higher technological and logistical inefficiencies, as smaller banks often wrestle with the complexities of trying to use a patchwork of systems that were independently developed by different vendors.[80]

The Study also provides some evidence that banks may at times choose to incur higher vendor costs for a mix of business and compliance reasons. In the Study, one of the Tier 4 banks had recently transitioned to a new core processor and associated applications, driven in part by general regulatory compliance needs. An extensive research and procurement process spanning almost two years ultimately resulted in a new system that was substantially more costly than the old core processor. However, the bank executive with responsibilities in both the Compliance and IT functions at that bank noted that the extra one-time and ongoing costs of the new system were worth the operational efficiencies and greater assurance of compliance gained across multiple regulations and products.

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[79] Additional vendor contract analysis would be necessary to confirm these hypotheses. For purposes of the Study, vendor contract analysis was deemed to be out-of-scope.

[80] Technological efficiency is not necessarily the same as economic efficiency: it may not be *economically* efficient for a small bank to install the latest and the most *technologically* efficient hardware or software.

MINIMUM LEVEL OF RESOURCE REQUIREMENTS

Some processes are unrelated to size, and institutions of all sizes must commit a minimum threshold of time and resources to implement such processes. The discussion above suggests that fixed costs may contribute in part to relatively higher compliance costs at smaller banks. These fixed costs can be generally bucketed into labor (e.g., minimum number of compliance-related personnel needed to manage day-to-day tasks across all business functions) and non-labor (e.g., basic level of IT applications and infrastructure needed to run compliance applications). For example, the personnel and systems required by Compliance and Marketing functions to update existing disclosures or issue a new disclosure are unrelated to the number of customers that the disclosure will reach.

As noted by the senior officer working in the Marketing function of a Tier 2 institution, *"There are a basic number of hours that it takes my staff to review and approve [marketing materials]. I don't think that basic number changes significantly if you go from bank to bank."* At smaller banks, this minimum level of time and resources will naturally form a higher percentage of a bank's total retail deposit operating expense.

For example, the smallest banks in the Study had the highest Compliance function cost shares as a percentage of their institution's total compliance cost (e.g., 26% and 31% of total compliance cost at the two Tier 4 institutions in the Study, versus an overall median of 13% for the seven participant banks). The costs of the Compliance function were larger as a share of retail deposit operating expense for the smallest participants. Specifically, the Compliance function accounted for 1.2% to 1.6% of Tier 4 institutions' total retail deposit operating expense, compared to 0.05% to 0.4% at institutions from Tiers 1 through 3. One possible explanation is that all participants must maintain some minimal level of compliance resources, as certain compliance tasks must be performed at all financial institutions regardless of size. In the Study, even the smallest Tier 4 participants had at least one full-time employee who specifically addressed compliance issues for deposit products, although the Bureau is aware that many small institutions generally may not have dedicated compliance staff.

□ □ □

In presenting the Study's key findings, we sought to present consistently and objectively the information we elicited from the seven case study subjects. This section offered findings about compliance costs for the seven case study institutions by business function, regulatory requirement, and participant bank. We observed that a substantial share of compliance costs for the deposit-related regulations that the Bureau inherited are concentrated in five of the eight business functions identified in the Study methodology, and principally in the Operations and Information Technology functions. The Study's findings also suggested that four particular regulatory requirements – authorization rights, error resolution, disclosures, and advertising standards – were associated with higher compliance costs for the product lines we studied. We also investigated potential scale effects in compliance. We observed that total compliance costs as a share of total retail deposit operating expense were larger for the two Tier 4 participants compared to the five larger participating institutions in the Study.

Interpretation of the findings requires important caveats both methodological and practical. Readers should not take the numbers in this report as definitive or as representative of institutions or regulations generally.

However, the Bureau does believe that the business models of these seven participants are within the mainstream of retail deposits business models for banks within their respective asset tiers.[81] While the estimates of compliance cost for the seven banks are not generalizable, the quality and depth of information shared by the bank participants were far richer than could have been collected via a survey. Past studies as well as this one suggest that there is a sharp trade-off between reliability and representativeness of data. For this foundational effort, we chose to err on the side of reliability.

We did not estimate the cost of compliance with other consumer regulations such as lending regulations. Nor did we estimate the cost of compliance with non-Bureau deposit regulations. The costs of complying with other statutes and regulations that apply to deposit products, such as Bank Secrecy Act/Anti-Money Laundering rules, may be significant. Thus, the figures reported in this report do not capture the participant institutions' entire incremental costs to comply with all deposit-related regulations (including those not administered by the Bureau).

[81] For a discussion about how we selected case study participants, see sub-section *2.2.2: The Case Study Approach –Bank Selection*.

While we sought to measure costs consistently across institutions, care should be taken in comparing costs of one institution to costs of another. The seven banks may differ from each other in important ways that the Study did not consider. For example, some participant banks may be more profitable or more efficient in their retail deposit operations than other case study banks, an area that we did not measure independently. Some of the participant banks may also spend more resources than necessary to achieve adequate compliance, but the Bureau did not define or judge what constitutes “adequate” or “reasonably necessary” compliance for the Study. Separating the Study from the supervisory examination process and experience was critical to obtaining full cooperation with the participant banks.

Because the seven case study participants may differ in ways the Study did not measure, particular caution should be exercised in drawing conclusions about scale effects. Caution in drawing such conclusions is also warranted because we studied only two banks of the over 6,000 banks with assets of less than $1 billion. Thus, the Study provides only limited evidence of small bank retail deposit compliance costs or of scale effects in compliance. However, the limited evidence of scale effects we find is consistent with previous research and economic intuition. The findings from the Study reinforce the potential value of further research to confirm the existence, size, and causes of scale effects in compliance costs. We discuss this point and other possible implications of the Study in the next section.

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4. Potential Implications

In this Section, we discuss the implications of the Study in four broad categories. First, the Study advances research on compliance operations and costs by producing some of the most rigorous information available, refining research methods, and helping interested parties identify potential areas for further research. Second, we discuss how research on compliance costs can contribute to understanding ultimate effects on consumers and markets, as well as the substantial challenges to researching those effects directly. Third, we describe how the Study will inform and help the Bureau refine its ongoing efforts to reduce or avoid unnecessary compliance costs. Fourth, we suggest how stakeholders could use this report to improve their participation in the regulatory process.

(1) The Study advances research on compliance costs in several ways.

The Study advances research on compliance costs by producing data and qualitative information based on rigorous methods, refining research methods for others to use, and helping researchers discern fruitful avenues for further study.

The Study produces some of the most rigorous information available about compliance costs. Several past studies have used the case study method to try to measure compliance costs. To our knowledge, this Study is the only published analysis using in-depth case studies with large numbers of field interviews to assess ongoing costs of a set of regulations that govern a set of products.

Moreover, the findings we report are based on research that is rigorous in each of three key dimensions: distinguishing incremental compliance costs from baseline costs, covering major sources of compliance cost, and measuring those costs consistently within each institution and across institutions. We believe our efforts in these three dimensions have produced reasonably reliable evidence of costs at the seven participant banks. At the time of publication of this report, we are not aware of more reliable evidence that is publicly available.

We believe the seven institutions we studied are not outliers among deposit businesses. Seven case studies do not, however, justify broad generalizations – especially about scale effects – so we are careful not to draw any. This is not a flaw of the methodology; rather, it is a necessary trade-off of careful research. This Study required substantial effort. A large-scale study of compliance operations and costs with anything approaching the depth or breadth of this Study would be exceedingly resource-intensive for both researchers and participants. Even a single regulatory requirement can impose costs in several functional areas of a financial institution, requiring estimates of labor costs for many different categories of typical employees. Collecting such information by survey is not nearly as reliable as collecting it by case study. Moreover, past studies show that achieving a meaningful response rate to a survey is very difficult.[82]

We refrain from offering subjective opinions on whether the institutions we studied spend "too much," "just enough," or "too little" on compliance. We did not evaluate the effectiveness of the seven institutions' compliance operations in achieving compliance. This Study was not a supervisory exercise, and the staff who conducted the Study did not use or consult information about the participant banks' compliance records (e.g., examination reports). Nor did we evaluate the efficiency of participating institutions' operations. We assumed the participant banks determined explicitly or implicitly that their compliance activities were reasonably necessary to achieve compliance.[83] In short, we did not try to judge whether an institution was spending too much or too little to achieve the desired result.

This report shares practices other researchers can use while highlighting the persistence of major challenges to this type of research. As expected, we found that compliance costs can be quite difficult to measure. The processes, systems, and personnel that fulfill compliance obligations are closely interwoven with the processes, systems, and personnel that fulfill business needs. Separating employee time spent on regulatory activities versus baseline activities is both very important – because labor costs are more than half of compliance costs – and particularly difficult – because institutions generally do not track employee time this way. Labor costs must be gathered "from the ground up" – by finding out through in-depth interviews how employees spend their time. Technology is one of the major costs of compliance and difficult to measure because systems and applications are programmed to meet both business and regulatory needs simultaneously.

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[82] For more on the challenges of surveys, see sub-section *2.2.2: The Case Study Approach* and *Appendix A: Review of Existing Research*.

[83] See sub-section *2.2.1: Study Scope and Key Concepts – Defining Compliance Costs and Other Key Concepts.*

The methodology we used to tackle these challenges builds on work of Elliehausen and other researchers – including its development, testing, and public disclosure – and is one of the Study's principal contributions. This methodology can be adapted to study other products and regulations. For any regulation, the methodology can help researchers define carefully what they are trying to measure and determine systematically whom to interview and what questions to ask, as well as what documents to review.

We encourage other parties to adapt and use the methodology detailed in Section 2 of the report. Checklists provided in *Appendix H: General Techniques* distill the approach in a form that researchers may find useful for planning purposes.

But the checklist is not intended to suggest research on compliance costs is straightforward or mechanical. Major conceptual and practical challenges must be navigated in this type of research, as we detail richly in the *Methodology* section.

Separating incremental compliance costs from baseline costs is a key example of both a practical challenge and a conceptual challenge. The distinction between incremental compliance costs and baseline costs depends on a counter-factual: What would institutions do without the regulation? Different beliefs about what an institution would do in the absence of regulation lead to different cost estimates. There may be more than one reasonable baseline for a given regulation and business. The best that researchers can do is make reasonable assumptions, specify them transparently, and apply them consistently.

Obtaining statistically valid results for a meaningful and useful set of hypotheses is also a major challenge, for the reasons discussed earlier. Researchers who attempt surveys can draw lessons from past studies that used surveys, as well as any useful insights about data collection from this Study. In general, a survey is more likely to be effective and worthwhile if it has a narrow scope, such as a limited set of products and regulatory requirements (more limited than the scope of this study). Furthermore, a survey of compliance costs would likely benefit from an initial pilot study to refine the questions and methodology. Any researcher attempting a large-scale survey would be well-served to determine in advance which employees have the desired information, how to ensure that the survey reaches those employees, and how to craft questions that will effectively and unambiguously elicit the collection of the desired information.

This report may help researchers scope areas for further research, such as one-time costs and economies of scale. The Study only briefly addresses the one-time costs of implementing new regulations. However, the very limited evidence we adduce, is consistent with suggestions that these one-time costs can be significant relative to ongoing costs. Further research on implementation costs would be valuable to inform regulators, stakeholders, and the public about these costs and how to estimate them. In general, such research should follow the principles of this Study, such as distinguishing baseline costs (i.e., changes and upgrades institutions would have made anyway in the absence of regulatory requirements) from incremental costs (i.e., changes and upgrades institutions make only because of a change in regulation).

Moreover, the limited evidence of economies of scale we observed in the participant banks suggests further research on the sources of potential economies could be valuable. With only seven institutions in the Study, it is not possible, without making stringent assumptions, to reject the possibility that there are no quantitative differences in compliance costs between institutions with assets of more than $1 billion and smaller institutions. But the finding of even limited evidence for economies of scale is consistent with evidence from previous studies and suggests further research is warranted because the question of scale is an important factor in policy decisions.

Investigation of smaller institutions' costs to use third-party vendors may be particularly illuminating. The costs of technology in compliance are likely to correlate strongly with the costs of technology in the business overall. Smaller institutions that have difficulty getting the best price and service from technology vendors for general business purposes may also have higher associated compliance costs. Systematic information about how vendors compete for business and how effectively smaller financial institutions shop and negotiate for services could improve understanding of the potential to reduce costs, including compliance costs, associated with third-party vendors.

Future research could also help illuminate how the level and composition of compliance costs changes over time. Costs are not static – they change with the business and regulatory environment and with the market for compliance services. The consumer deposits business, which was the focus of the Study, is currently witnessing a decline in the number of branches and in branch activity (e.g., consumer visits,[84] number of deposit accounts serviced,[85] and teller transactions[86]) and an increase in online banking and electronic payments. Changes in products and services may increase the share of compliance costs in certain functions (e.g., advertising and disclosure, which have to be

[84] Celent (2013).

[85] Cornerstone (2012).

[86] FMSI (2013).

tailored to each new product), but increased reliance on technology may reduce shares of other functions (e.g., mailing disclosures). Moreover, technology for compliance has improved greatly over time and may continue to improve. At the same time, in certain markets, some financial institutions may have a harder time hiring highly qualified personnel for compliance jobs or for front-line jobs that involve more compliance responsibilities. As a result of these or other factors, the level and composition of compliance costs can change over time. Research that would attempt to capture these changes would be particularly useful, although it would be difficult to execute because it would require consistent measurement not just across institutions but across time.

(2) **The Study is just one step toward understanding the effects of regulations on consumers and markets, and further, more direct research on these effects may face even bigger obstacles.**

The study of compliance operations and costs for individual firms is most valuable as part of a broader effort to understand how regulations affect consumers and markets.

This Study concerns the operational effects of regulations, which are among the most direct and immediate effects of regulation, and may be easier to measure than other benefits and costs. Understanding the operational effects of regulation may nonetheless shed some light on its broader effects on consumers and markets. Two examples illustrate this point.

First, researchers and policy-makers can potentially determine whether costs of regulation will be passed to consumers by examining the proportion of operational costs that are fixed. Fixed compliance costs are not passed on to consumers to the extent that pricing is based on marginal cost. It appears that a high proportion of the costs we evaluated in the Study are fixed costs. However, a rigorous assessment of the effect of compliance operations on prices of checking accounts and related products and services was outside the scope of the Study.

Second, assessing operational effects of a rule can help the Bureau understand whether the effects may be significant enough to trigger substantial changes in product terms or availability. The Study provides the Bureau and the public with a methodical way to identify in other cases (e.g., proposals of new rules) the operational costs that may be significant enough to affect consumers and the greater marketplace.

As challenging as it may be to measure costs of regulations, they may be easier to measure than benefits. Direct measurement of the benefits of regulations for consumers and markets is preferred but much more challenging. Researchers would have to determine the number of consumers who would receive the benefits and then assign a monetary value to the benefits, while also taking into account any non-monetary benefits.

In addition, it is difficult to isolate and quantify in dollars the extent to which regulatory changes produce observed changes in market outcomes. Regulatory change will not generally produce a large and immediate change in market outcomes that researchers could attribute to the regulatory change itself. Measuring benefits in dollar terms generally requires data on a large number of transactions and on all of the major determinants of prices or product attributes besides the regulation, as well as information about consumer demand for the product. The model and data would need to be developed for each particular circumstance of regulatory change, and this requires extensive effort.

Alternatively, regulatory requirements may make consumers aware of certain product risks or may be intended to reduce directly the frequency of adverse outcomes like disruption to household budgets, delinquency, default, bankruptcy, or other unanticipated cost. Quantifying these benefits presents additional challenges because of the difficulty of measuring reduction in these outcomes and assigning a monetary value to this reduction. For example, a researcher might measure the impact of a disclosure on consumer awareness of risk, which is suggestive of the benefit of the disclosure, but it may not be possible to monetize the benefit.

Measuring the benefits of regulation for market growth and confidence is also very difficult. Mandated product characteristics and services from providers may allow the market for the product to grow as consumers trust the providers and products more. These effects may be large. However, they would also unfold over a period of time, and other determinants of the size of the market might also change in that time. Thus, again, the researcher would need data on a large number of transactions and on all the determinants of the demand for the product in addition to the mandated characteristic in order to measure the effects of these regulations on market size.

Understanding the costs of regulation for firms besides the operational costs we have studied is also important. From the perspective of an individual financial institution, the business opportunity it loses because of a regulation may exceed the operating cost of the regulation (i.e., the compliance cost). The Study did not evaluate the effects of in-scope deposit-related regulations on firm profits (e.g., profits from overdraft programs).

This limitation of not evaluating the impact of the in-scope regulations on firm profits should not be overstated. Some regulations might increase some firms' profits. Five of the seven participant banks (all of whom offered overdraft programs in 2009) said they lost revenue because of the Regulation E opt-in requirement. However, one participant reported that when the Federal Reserve adopted the opt-in requirement, the bank reversed its earlier decision not to offer an overdraft program because having clear standards reduced its reputational concerns.[87] In short, evidence that some firms lose profits can be entirely consistent with a positive outcome for consumers, markets, and many other firms. While information about individual institutions' lost profits is useful and should be generated where feasible, it cannot be evaluated in a vacuum.

(3) This Study will inform, and help the Bureau refine, its ongoing efforts to reduce or avoid unnecessary compliance costs.

The Study will help the Bureau refine steps it has taken to reduce or avoid unnecessary compliance costs, without sacrificing the benefits of regulation. These steps include collecting information about costs, designing regulations that may reduce costs while still achieving desired benefits, and communicating effectively about regulations. While the Bureau will always strive to improve its ability to avoid or reduce unnecessary compliance costs, in some cases institutions themselves may have the ability to reduce their costs.

When the Bureau considers a potential new rule, it tries to assess the rule's potential operational effects based on the available evidence so it can reduce costs where possible. The Study concerns compliance costs of *existing* regulations. We have explained why estimating those costs is quite difficult. Estimating costs of a regulation that does not yet exist is even more difficult and uncertain.

The techniques the Bureau used in the Study will not necessarily work to produce reasonable estimates of the costs of a potential new regulation. Asking institution employees how they would spend their time differently several years hence if a hypothetical regulation became law may not elicit useful responses. Nor may asking them how much time they would spend implementing the regulation. Quantifying the labor costs associated with a new regulation that has not yet taken effect can require a fair degree of judgment and is necessarily indeterminate.

Thus, the Bureau generally conducts qualitative assessments of the potential effects of a regulation under consideration. The Bureau seeks to make these assessments as rigorous as possible by publishing them for public comment.

[87] The seventh participant bank did not offer an overdraft program subject to the new Regulation E protections, either before or after the protections were adopted.

The Study will help the Bureau conduct these qualitative assessments. It provides a systematic framework for mapping the effects of a regulation on a typical institution's operations. In the Study, we framed questions about rules' operational effects in language that financial institutions use to describe their business functions and activities. We directed those questions to the most knowledgeable employees and sought to cover all affected functional areas of the institutions. These techniques will inform future Bureau efforts to assess potential new rules.

The Bureau considers ways to design regulations to avoid unnecessary or unwarranted operational costs. The Study sheds some light, but provides no definitive evidence, on two key regulatory design questions: How prescriptive should a regulation be? And should a regulation treat smaller institutions differently than larger institutions?

Prescriptive rules versus open-ended rules – The Bureau frequently is confronted with the question of whether to make a rule prescriptive (i.e., spell out in detail how to implement an obligation) or open-ended (i.e., leave it to the institution to figure out how to implement its obligation). Institutions and their representatives have often asked the Bureau for detailed prescriptions, citing a need for certainty. We have frequently accommodated these requests, although more detailed prescriptions can also prompt complaints about the length of a regulation.

The Study elicits evidence that granting institutions discretion on how to comply with a regulation can lead them to spend more time coordinating and negotiating internally and with third parties about how to comply. For example, all of the participants reported spending time figuring out how to apply Regulation DD's broad injunction against "misleading" advertisements. Institutions also reported spending time debating internally how to disclose fees, which Regulation DD requires to be disclosed "clearly and conspicuously" without specifying format or language. These findings help explain why institutions have often asked the Bureau to be more prescriptive.

But the Study does not provide an adequate basis to compare the benefits and costs of prescriptive regulations with open-ended regulations. This is a complex topic beyond the scope of the Study, so we offer just a few examples to illustrate the complexity. Prescriptive regulations may reduce the cost of figuring out how to comply, but open-ended regulations may reduce the cost of complying by allowing an institution flexibility to comply at lower cost. Open-ended regulations also may require less frequent updating, while more frequent updates on prescriptive regulations could be essential to keeping up with changing market conditions and yet increase costs. Furthermore, prescriptive regulations might help ensure that consumers have a consistent experience with different institutions, but open-ended regulations may, in some cases, provide more protection than prescriptive regulations as they have a built-in capacity to adapt as products change. These are just a few examples of the complex trade-offs between open-ended and prescriptive regulations.

Adjustments or exemptions for smaller institutions – In several major rulemakings the Bureau has conducted to date, concerning mortgages and remittances, the Bureau has adopted a number of adjustments and exemptions for smaller institutions. Among other factors, the Bureau considered the extent of any estimated higher costs on smaller institutions and the consumer benefits of applying the rules to those institutions. The Study elicits limited additional evidence that regulations can have a minimum indivisible cost, which falls proportionally higher on smaller institutions. This evidence supports paying particular attention to the effects of rules on smaller institutions, though it is far from adequate to support a categorical policy of different treatment for smaller institutions. The mere existence of scale efficiencies does not necessarily support different treatment of small institutions. One must consider the effects of regulation on consumers and on the marketplace as a whole. The Bureau will continue to consider potential distinctions between smaller and larger institutions on a case-by-case basis.

The Bureau has sought to share its rulemaking plans publicly where feasible to try to reduce costs associated with uncertainty. Several participants in the Study cited the cost of uncertainty as to when or how regulations would change. The Bureau has sought to signal well in advance its potential future rulemakings, in part so institutions can plan. For example, the Bureau publishes a fairly detailed semi-annual rulemaking agenda with forecasts of schedules for its upcoming rules. When the Bureau convenes a panel of small businesses for a rulemaking (in accordance with the Small Business Regulatory Enforcement Fairness Act), it often releases to the public detailed materials about its plans for the proposed rule several months before publishing a proposed rule. This is not required by any statute.

At the same time, uncertainty about the Bureau’s path is unavoidable when it signals it is considering a regulation in an area. The rulemaking process necessarily takes time to develop careful proposals, consider public feedback, and formulate final rules, and the Bureau cannot and does not want to prejudge the outcome. The Bureau remains open to suggestions as to how it could provide more certainty, consistent with the imperative to remain open-minded throughout the rulemaking process.

The Bureau has translated new regulations into a plain language format to try to reduce institutions’ research and training costs. The Study highlights the broad range of institution employees and executives – beyond compliance officers, attorneys, and auditors – who need to be familiar with regulations because they help implement them.

The Bureau has already taken steps to make its regulations easier for this broader audience to understand and use. For example, the Bureau has published plain language guides in both written and audio form of its recent mortgage and remittance regulations to date. We have also improved the Bureau's website to make the regulations and these compliance aids more accessible to all.

Anecdotal feedback indicates that these aids have reduced some institutions' costs to update their internal procedures and train their employees. The Bureau welcomes feedback on the Bureau's efforts to assist industry with implementation from industry members and representatives. Feedback can assist the Bureau in making solid cost-benefit judgments about investments of this kind.

The Bureau will review major new regulations it adopts to determine their effectiveness. The Dodd-Frank Act requires the Bureau to review significant regulations it adopts within five years of the effective date to determine their effectiveness in meeting their goals. For example, the Bureau will review in the coming years the new remittance regulations and the more significant parts of the new mortgage regulations. The Study will provide the Bureau and stakeholders a foundation for assessing the operational impacts of those regulations when the time comes.

While the Bureau will strive to improve its ability to avoid or reduce unnecessary compliance costs, in many cases institutions themselves may be better able to reduce their costs. At some point after a regulation becomes law, compliance operations and business operations may become intertwined to such a degree that they are inseparable. In that case, the most significant potential savings may come from institutions' increasing operational efficiencies rather than from the Bureau changing the regulation.

Where regulatory and business processes, systems, and personnel are interwoven, it is possible that institutions may be able to reduce regulatory costs by streamlining operating costs more broadly. Institutions may find ways to reduce their operating expenses through better technology systems. At the same time, these more efficient processes may also reduce their compliance costs. For example, an institution that adopts a less costly system for producing periodic statements may also lower its costs for producing statements that comply with applicable regulations. To that extent, industry has at least some capacity to reduce its compliance operations costs independent of steps that regulators can take.

Indeed, a regulatory change intended to reduce burden may impose more short-term costs to implement the change than it produces in long-term savings to the financial institution. There may be a more clear-cut case for cost savings from regulatory or statutory amendments where an amendment simply removes a requirement (as opposed to substituting it for a new one) and gives an institution a long or indefinite period in which it can continue to comply with the requirement if it chooses.[88] But in many cases removing a separable requirement could impose significant costs on consumers and markets, which as a result might not function as well.

(4) Stakeholders may find that this report helps them improve their participation in the regulatory process.

Stakeholders such as industry participants and consumer advocates may find that the findings presented in this report helps them improve their participation in the regulatory process – both during rulemakings and in anticipation of reviews of existing regulations. The traditional notice and comment process via the Federal Register has often fallen short of producing concrete and reliable information about compliance costs (or, for that matter, about costs more broadly). The Study points to a number of suggestions stakeholders may wish to consider when providing the Bureau information about compliance costs. These suggestions are purely voluntary and at the discretion of stakeholders.

Information about actual (or expected) compliance costs of existing (or potential new) regulations that reflects the methods used in this Study would be highly valuable to the Bureau. When stakeholders address costs of an existing or potential new regulation, they are invited to describe systematically, to the best of their ability, the effects of the regulation on an institution's operations. One technique, illustrated by this report, is to describe the major business functions of an institution affected by a regulation and trace the effects of the regulation through each function.

Stakeholders are also invited to consider several critical distinctions. Specifically, stakeholders providing input to the Bureau are invited to distinguish:

- Operational effects from effects on products and pricing (or point out where and how the effects are connected);
- Incremental costs from baseline costs (i.e., costs reflecting what an institution would do anyway, regardless of regulation, because of business practice, private standards, or other laws);

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[88] For example, after Congress removed the requirement to place a physical disclosure of ATM fees on ATMs, banks could choose to phase out the stickers on their own schedule with minimal, if any, effect on systems, processes, or personnel training.

- One-time costs to implement a regulation from ongoing costs to maintain and document compliance;
- Fixed costs from variable costs; and
- Labor costs from non-labor costs (e.g., third-party vendor costs).

The Bureau would particularly value detailed qualitative assessments of effects of regulations on operations and reliable quantitative estimates of associated monetary costs. Stakeholders interested in providing such assessments and estimates could consider following the basic methods of this Study. For example, to estimate labor costs, stakeholders could identify the affected types of employees and describe how each type would be affected, estimate the number of employees of each type, estimate the time that each type of affected employee would spend on compliance with the relevant regulation, and provide the average salary for each employee type so that labor hours can be translated to dollars. Validated estimates of non-labor costs with supporting documentation, including expenditures on outside vendors, would help to complete the picture. Furthermore, for stakeholders that consider conducting surveys, it is also important to provide information about how the survey was conducted and the key characteristics of respondents, such as size and scale.

Information that comes as early as possible in the rulemaking process would be particularly useful. Estimating the effects of a regulation that is only in proposed form requires resources that an institution might prefer to spend elsewhere until the regulation is final. But the Bureau and the general public both benefit substantially when institutions are willing to spend some effort to provide reliable information on anticipated regulatory impact *before* the regulation is final, when the information is still timely for advising the final regulation text. In advance of a final rule, we would welcome opportunities to work with institutions to better understand how they would implement the proposed regulation and what effort that would take on the part of the institution. Where that is not feasible, we welcome institutions to share with us, after the fact, concrete and detailed information about their processes and costs to implement new regulations. The Bureau can use this information in future rulemakings.

The Bureau also values vendors' participation in the rulemaking process. Institutions of all sizes rely on vendors and large numbers of small institutions rely heavily on them, especially for technology services. Vendors often have better information than the financial institutions about the services they supply and the costs of these services. The Bureau welcomes vendors' active participation in the regulatory process and sharing of information about the nature and cost of their services.

5. Conclusion

Assertions of regulatory burden are heard frequently in discussions of consumer financial policy, but reliable, publicly available data on the operating costs of complying with consumer financial regulations are relatively sparse. The Bureau hopes that this report provides a more solid factual basis, and a more systematic framework of analysis, to inform and elevate discussions about those costs. While the report does not support a conclusion about the size of these costs industry-wide, it provides insight into the sources and distributions of these costs within institutions. The report also offers a vocabulary to help describe the types of operations that implement many standard types of regulation, such as disclosure, advertising, authorization rights, and error resolution. Moreover, the Study provides researchers and stakeholders a field-tested method to estimate the cost of these operations in individual institutions.

At the very least, the methods we employed should help set guideposts for producing, or evaluating, estimates of compliance costs. We hope that this report – with its systematic distinction between baseline costs and incremental regulatory costs, mapping of costs across an institution, consistent measurement of costs across different institutions, and presentation of both quantitative data and qualitative anecdotes – may guide stakeholders to understand better the quality of analysis and information that the Bureau values.

It bears emphasizing that effects on institutions' operations are but one of the wide range of effects of consumer financial regulation on consumers, firms, and markets that matter to policy-makers. Operational effects are among the most direct and immediate effects. Alone, however, estimates of these effects have limited value to policymaking. Operational effects matter more to the extent they suggest how a specific regulation might affect product pricing and availability or market structure and competition. Moreover, these types of effects on a market can be understood properly only in the context of the fundamental benefits of regulation to consumers and the marketplace.

The ultimate benefits and costs of a regulation are difficult to measure, and progress in their measurement is likely to come in small increments rather than major breakthroughs. Research on the effects of regulations is an ongoing priority for the Bureau, and we welcome opportunities to work with interested parties to enrich the body of evidence. Meanwhile, we will continue to address problems that we see in the marketplace and evaluate potential responses to those problems on the basis of the evidence that is reasonably available – mindful that, whatever the costs of regulation, the costs of not regulating adequately can be even larger.

6. Appendices

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APPENDIX A: REVIEW OF EXISTING RESEARCH

This appendix offers a detailed review of some of the relevant research around the costs of regulation. These studies, along with others, helped frame the CFPB's thinking around the Study methodology. Prior efforts used various methodologies to study the impact of regulations on financial institutions. We followed best practices from these studies and tried to mitigate some of the challenges when developing the CFPB's Study methodology. We highlight some of the strengths and weaknesses of these studies below.

Elliehausen (1998) offered a review of some of the empirical studies conducted on regulatory burden and compliance costs. He assessed the strengths and weaknesses of previous studies' methodologies (e.g., case studies, surveys, and econometric analyses). Elliehausen also provided a taxonomy that defined sources and types of regulatory costs, such as operating costs and opportunity costs, among others, as they related to regulations.

Based on his assessments, Elliehausen found that researchers obtained reliable estimates by:

- Identifying regulations and the specific regulatory requirements covered in the study;
- Suggesting activities that may have been undertaken to satisfy those requirements;
- Defining the types of costs that are being measured (e.g., ongoing costs versus start-up costs); and
- Providing specific instructions for estimating components of those costs.

In Elliehausen's view, studies that were less likely to produce meaningful data and insights were those that attempted to estimate the aggregate cost of regulation for the banking industry. Such studies rarely specified the regulations in scope and did not identify the compliance activities that needed to be monetized.

With respect to the case study methodology, Elliehausen pointed out, one of the strengths of case studies is the higher level of reliability of the data given the focus on a limited number of financial institutions. He also noted that further research on regulatory costs should focus on trying to "explain the determinants of cost" instead of only measuring costs.

Elliehausen also noted that many studies found evidence of economies of scale in compliance costs. They concluded similarly that compliance costs are "substantially greater for banks at low levels of output than for banks at moderate or high levels of output."

Grant Thornton (1993) was a three-phase study prepared for the Independent Bankers Association of America (now Independent Community Bankers of America). The first phase of the study (Phase I) was a national survey that sought to identify the costliest regulatory areas. Based on the responses of the survey, Grant Thornton identified the top 13 regulatory areas and developed case studies during the second phase of the study (Phase II) to investigate the costs related to these areas at nine community banks. In the third phase (Phase III), another survey asked respondents to estimate the total full-time employee (FTE) hours for one of the identified 13 regulatory areas. Grant Thornton used the results from Phases II and III to extrapolate the total compliance cost and FTE hours for 13 regulatory areas across the community banking industry, which at the time of the study totaled more than 9,600 institutions. The researchers found that the annual cost of compliance for all community banks in these 13 areas was approximately $3.2 billion and required 48 million FTE hours.

The decision to narrow the scope to only the most burdensome regulations in subsequent phases helped avoid a blurring together of regulations for respondents, a shortcoming suffered by more general studies. In the case studies, Grant Thornton identified possible activities and responsible personnel in their collection instrument. This specificity allowed for comparative analysis between rules. However, the study was not able to separate the incremental cost of regulations, nor was it able to identify which types of activities or regulatory requirements were driving most of the FTE hours and compliance costs. Furthermore, the attempt to extrapolate estimates from Phases II and III results to the broader industry may have been subject to significant measurement error, given the lack of representativeness of the banks in Phase II and a 30% survey response rate for the Phase III surveys.

Barefoot, Marrinan & Associates, Inc. Thakor, and Beltz (1993) offered a collection of observations and recommendations based on two surveys of commercial banks and thrifts that examined the compliance costs related to the Bank Secrecy Act, the Community Reinvestment Act, and the Real Estate Settlement Procedures Act. While the researchers attempted to gather data that were representative of the industry as a whole, response rates from the two surveys were low. The first survey was a nine-page questionnaire that asked institutions to provide estimates on costs and FTE hours related to, among other things, training, development of policies and procedures, use of vendors, monitoring, audit, and recordkeeping as they were related to each of the three regulations. The survey had a response rate of about 3.5%. The second survey asked institutions to provide their best dollar estimates of total annual costs and non-recurring costs related to the three regulations. The survey did not specify which components or variables the institutions should consider when calculating their costs. This second questionnaire had a response rate of 17%.[89] Barefoot, Marrinan & Associates, Inc. Thakor, and Beltz found that total regulatory costs represented approximately 18% of net income on average across all banks. The authors also found evidence of economies of scale, as compliance costs as a percentage of assets and also of net income decreases with larger banks.

Elliehausen and Lowrey (2000) is among the existing studies that attempted to measure the costs associated with implementing a new regulation at financial institutions. This study focused on measure the one-time compliance costs related to implementation of requirements under the Truth in Savings Act (TISA). The researchers used data from a Board of Governors of the Federal Reserve survey of banks and thrifts regarding compliance costs of implementing new consumer deposit account practices to comply with Regulation DD. The researchers administered the survey during the implementation period of the regulatory change and asked participants about policies and practices prior to the new law and the compliance costs they incurred after it was put in place. To assist respondents in completing the survey, the researchers offered a list of possible compliance activities and provided instructions on how to calculate cost estimates. Based on their empirical analyses, Elliehausen and Lowrey found that implementation costs for compliance with TISA exhibited economies of scale. A significant portion of the implementation costs were fixed, such as software for disclosure production and time dedicated to learning the rule's provisions. Of the total costs, IT system changes, managerial and legal resources, and training contributed to nearly 70 percent of the total burden of the regulation change.

Federal Deposit Insurance Corporation (2012) is one of the more recent efforts to understand regulatory compliance costs, and it was conducted by the Federal Deposit Insurance Corporation (FDIC) as part of its ongoing research on community banks. The FDIC conducted interviews with nine community bankers from different banks as part of the *FDIC Community Banking Study*. These efforts were an attempt to identify specific regulations or supervisory practices that were significant drivers for compliance costs and to quantify the cost of regulatory compliance. The FDIC noted that the participants cited the cumulative effects of regulations as having an effect on their businesses, but also identified Bank Secrecy Act, Privacy Notices, and

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[89] The nine-page survey was sent to 3,700 banks and thrifts, and 129 responses were received. The two-page survey was sent to 6,400 banks and 1,105 responses were received. The researchers determined that 445 of the responses from both surveys were sufficient enough to be used in their empirical analyses.

the Electronic Funds Transfer Act, among others, as "requir[ing] significant attention because of their business focus." Participants also noted that they did not track regulatory compliance costs because of the difficulty in trying to separate costs that are "so interwoven into their operations." However, the FDIC reported that, while tracking compliance costs was not regularly done, the participant banks said they could identify the direct costs associated with regulatory compliance (e.g., compliance personnel salaries, employee training, consulting fees, external and internal audit fees, and specific IT costs directly associated with compliance). The challenge for the banks in estimating total compliance costs was identifying the "indirect costs" that are difficult to allocate between Compliance and other parts of the bank (e.g., time spent by FTEs outside of the Compliance department on compliance-related duties).

APPENDIX B: TAXONOMIES

TABLE 1. REGULATION TAXONOMY

Regulation Requirement Category	Definition	Requirement	Definition	Regulation and Code (for Reference)
Advertising	Requirements or limitations on the form or content of information disseminated for the purposes of advertising products	Advertising requirements	Prohibits the use of inaccurate or misleading information in advertisements and requires institutions to represent interest rates as APY when referenced in advertising material	DD 1030.8
		Overdraft rules around advertising	Requires institutions, in their advertisements regarding payment of overdrafts, to disclose any overdraft fees	DD 1030.11
Authorization Rights	Requirements to provide consumers with the option of accepting or declining participation in a given product	Issuance of access devices	Prohibits institutions from issuing access devices (i.e., debit cards) unless a consumer explicitly requests one or unless the device is not validated upon issue	E 1005.5
		Right to stop payment of preauthorized transfers	Requires institutions to allow consumers to stop the payment of a preauthorized electronic fund transfer if notice is given at least three days before the transfer	E 1005.10
		Opt-in requirements for overdraft	Prohibits institutions from assessing a fee for overdraft payment unless the consumer opts in to the overdraft program (either at account opening or at the point of transaction)	E 1005.17
		Opt-out for use of non-public information	Requires institutions to give consumers the right to opt out of having their non-public personal information sent to a non-affiliated third party	P 1016.7
Calculation Methodologies	Requirements regarding methods for calculating rates, charges, fees, or other quantitative metrics	Payment of interest	Enumerates the methods with which an institution is allowed to determine the interested earned on an account balance	DD 1030.7
Contracting and Outsourcing	Requirements or limitations regarding the contracting or outsourcing of bank operations that affect consumers	Electronic fund transfer service provider not holding consumer's account	Requires institutions who use third-party providers for an electronic fund transfer service (i.e., to issue debit cards) to make available any information necessary for service provider to investigate errors	E 1005.14

Regulation Requirement Category	Definition	Requirement	Definition	Regulation and Code (for Reference)
Error and Dispute Resolution	Requirements or limitations regarding the manner in which consumer disputes can be resolved	Procedures for resolving errors	Enumerates the way in which institutions must respond to and resolve error claims brought by consumers regarding electronic transfers, including a timeframe of 10 business days for providing provisional re-credit to the consumer	E 1005.11
		Error resolution for electronic fund transfer service provider not holding consumer's account	Enumerates the way in which a party who offers an electronic transfer service for accounts that it does not hold must respond to and resolve error claims brought by consumers	E 1005.14
		Limitations on liability of consumer for unauthorized transfers	Enumerates the conditions determining an institution's ability to hold consumers liable for unauthorized electronic fund transfers	E 1005.6
		Direct disputes regarding credit information	Requires an institution respond to direct disputes from consumers regarding information that the institution reported to a Credit Reporting Agency ("CRA")	V 1022.43
Information Exchange	Requirements or limitations regarding the provision or receipt of non-public consumer information to or from a third-party agent	Limits on re-disclosure and reuse of information	Enumerates the conditions under which an institution can re-disclose and reuse non-public personal information about consumers	P 1016.11
		Limits on sharing account number information for marketing purposes	Prohibits institutions from disclosing a consumer's account number to a non-affiliated third party, unless it is a CRA	P 1016.12
		Reasonable policies and procedures concerning the accuracy and integrity of furnished information	Requires an institution to establish and implement reasonable written policies and procedures regarding the accuracy and integrity of information that is furnished to CRAs	V 1022.42
		Duties of users regarding address discrepancies	Requires an institution to develop reasonable policies and procedures to apply when they receive a notice of address discrepancy from a CRA	V 1022.82

Regulation Requirement Category	Definition	Requirement	Definition	Regulation and Code (for Reference)
Information Retention	Requirements or limitations regarding the retention and storage of consumer information	Record retention	Requires institutions to retain records documenting evidence of compliance with all requirements in the regulation for two years	DD 1030.9
		Record retention	Requires institutions to retain records documenting evidence of compliance with all requirements in the regulation for two years	E 1005.13
Prompted Disclosures	Requirements to provide information to the consumer prompted by an exogenous bank- or consumer-driven event	Oral response to inquiries	Requires institutions to state the APY when responding to a customer's oral inquiry about the interest rate on his or her account	DD 1030.3
		Prompted account disclosures	Requires institutions to provide account disclosures stating the interest rate, fees, and other key features of the account at account opening and at any time upon request of the consumer	DD 1030.4
		Subsequent account disclosures	Requires institutions to provide account disclosures before a term on an account is changed or before the maturity of time accounts that renew automatically	DD 1030.5
		Overdraft rules on disclosure of account balances	Requires institutions to disclose an account balance that excludes any funds the institution may provide to cover an overdraft	DD 1030.11
		Initial disclosures	Requires institutions to provide disclosures about fees, liabilities, and other terms of electronic fund transfer services before the first electronic transfer is made (i.e., at account opening)	E 1005.7
		Change in terms notice	Requires institutions to provide a disclosure at least 21 days before a change in account terms is made explaining the nature of the change	E 1005.8

Regulation Requirement Category	Definition	Requirement	Definition	Regulation and Code (for Reference)
Prompted Disclosures (cont'd)	Requirements to provide information to the consumer prompted by an exogenous bank- or consumer-driven event	Receipts at electronic terminals	Requires institutions to make available receipts for transactions made at electronic terminals for all amounts above $15	E 1005.9
		Preauthorized transfer notices	Requires institutions or designated payees to provide notice when a preauthorized transfer will vary in amount from the previous transfer under the same authorization	E 1005.10
		Disclosures for electronic fund transfer service provider not holding consumer's account	Requires parties who offer an electronic transfer service for accounts that they do not hold to provide all the disclosures related to electronic fund transfers required of account-holding institutions	E 1005.14
		Initial privacy notice to consumers	Requires institutions to provide a disclosure explaining their privacy policies to a consumer before initiating a business relationship or sharing any non-public information about the consumer	P 1016.4, 1016.6, 1016.9
		Revised privacy notices	Requires institutions to provide a disclosure to consumers if they change their privacy policies	P 1016.8, 1016.6, 1016.9
		Adverse action disclosure	Requires an institution to provide a disclosure to a consumer if they take any action deemed to be an "adverse action" with respect to the consumer (i.e., denial of account approval) based in part on information obtained from a CRA. Other disclosure requirements apply if institutions take an adverse action based on information obtained from another third party.	FCRA Section 615

Regulation Requirement Category	Definition	Requirement	Definition	Regulation and Code (for Reference)
Unprompted Disclosures	Requirements to provide information to the consumer on a recurring and/or ongoing basis	Periodic account disclosures	Requires institutions to provide periodic account disclosures or periodic notices alerting consumers of their ability to request account disclosures	DD 1030.4
		Periodic statement disclosures	Enumerates certain information that must be contained in institutions' periodic statements (e.g., APY, fees imposed)	DD 1030.6
		Overdraft rules for periodic statements	Requires institutions to separately disclose on each periodic statement the amount of all fees charged for overdraft programs and for returning items unpaid	DD 1030.11
		Periodic error resolution notice	Requires institutions to provide consumers with an error resolution notice at least once per calendar year or with the periodic statement	E 1005.8
		Periodic statements	Requires institutions to send a periodic statement to consumers for months in which an EFT has occurred and enumerate key account information (e.g., fees, account balances)	E 1005.9
		Periodic statements for electronic fund transfer service provider not holding consumer's account	Requires account-holding institution to provide a periodic statement to the consumer that describes each EFT initiated by the consumer with the access device issued by the service provider	E 1005.14
		Disclosures at automated teller machines	Requires institutions to provide notice regarding fees for using ATMs on the screen of the ATM or by providing it on paper, before the consumer is committed to paying a fee	E 1005.16
		Annual privacy notice to customers	Requires institutions to send a notice to customers explaining their privacy policies at least once a year	P 1016.5, 1016.6, 1016.9

TABLE 2. CUSTOMER LIFECYCLE TAXONOMY

Stage of Customer Life Cycle	Activity	Sub-Activities
Customer Acquisition	Product Design	Conduct consumer research (internal or external)
		Develop consumer insights
		Adjust existing products to better meet needs
		Design a new product
		Design materials to support new product
	Customer Selection and Product Matching	Conduct market segmentation
		Identify desirable customer segments
		Collect information about potential customers
		Match products to desirable segments
	Market and Reach Out to Consumers	Design and execute advertising campaigns
		Design and place promotional material in bank branches or other locations
	Receive and Manage Customer Inquiries	Receive and manage dial-in inquiries
		Receive and manage in-person inquiries
		Receive and manage online inquiries
		Receive and manage written inquiries
Account Opening	Receive Account Application	Receive account application via website
		Receive account application via bank branch
		Receive account application via mail
	Process and Review Account Application	Read, scan, and check for errors on account application
		Gather additional necessary information on application (e.g., credit bureau, ChexSystems, employer verification)
		Verify consumer identity
		Share information with third party
		Make decision (system or human decision)
	Notify Consumer of Decision (Approve or Decline)	
	Process Initial Deposit	Receive consumer information about initial deposit
		Send ACH request to accept initial deposit (if transferring electronically)
		Deposit initial cash or check (if physically depositing)
	Create Account	Enter account into internal systems and databases
		Enter account into external systems and databases (e.g., ChexStystems)
	Add Debit Card to Account	Notify consumer of debit card option
		Receive and process consumer request for debit card
		Create and emboss debit card
		Send debit card
	Add Overdraft Protection to Account	Notify consumer of overdraft protection options
		Receive and process consumer request for overdraft protection
	Add Other Products/Offerings to Account (Line of Credit, E-Sign)	Notify consumer of additional products/offerings
		Receive and process consumer request for additional products/offerings

Stage of Customer Life Cycle	Activity	Sub-Activities
Account Opening (cont'd)	Create and Distribute Account Opening Material	Develop and produce account-specific opening material
		Deliver account opening material (e.g., add-on products, debit card, and checks)
	Activate Debit Card	Activate via phone
		Activate via ATM
		Activate online
Account Maintenance	Process Deposits	Process check and cash deposits (at ATMs)
		Process check deposits (at tellers)
		Process online deposits
		Process mobile deposits
		Process ACH deposits
	Process Withdrawals	Process ATM withdrawals
		Process teller withdrawals
		Process online withdrawals
		Process ACH withdrawals
	Process Debit Card Payments	
	Process Transfers	Process online transfers (e.g., wires, bill-pay, and automate transfers)
		Process in-person transfer requests (e.g., wires)
	Process Recurring Transactions	Set up recurring transactions
		Manage and process recurring transactions
	Issue Cash Alternatives	Issue travelers' checks
		Issue cashiers' checks
		Issue money orders
		Issue gift cards and pre-paid debit cards
	Calculate Interest and Post to Accounts	Calculate interest
		Deposit interest-earned into accounts
	Provide Account Information (Recent Transactions, Balance, Etc.)	Mail regular bank statements
		E-mail regular e-statements
		Provide account information through online portal
		Provide account information through mobile portal
		Provide account information at ATMs
		Provide account information over the phone
	Provide Customer Service	Provide level-one call center support for dial-in inquiries or complaints
		Provide in-person customer service and level-one support (in branches)
		Receive and process written requests
		Follow-up on customer requests
		Provide consumers with proactive notifications (written and phone-based)

Stage of Customer Life Cycle	Activity	Sub-Activities
Account Maintenance (cont'd)	Assess Overdraft Fees	Determine necessary overdraft fee
		Collect overdraft fee
	Conduct Daily Posting Process	Post bank initiated events (e.g., print check fees and new account deposits)
		Post deposits
		Calculate OD credit limit
		Post holds (e.g., debit, uncollected funds, and fraud)
		Post transactions (depending on posting order policy)
		Calculate fees
		Create ending balance
	Assess Fees	Assess regular service fees
		Assess fee for new checks
		Assess collections fees
		Assess account research fees
		Assess stop-payment fees
		Assess other fees
	Add or Remove New Products or Features	Add (or remove) debit card to existing account
		Add (or remove) overdraft protection to existing account
		Add (or remove) other products/offerings to account
		Upgrade or downgrade accounts
	Monitor Accounts for Upgrade Opportunities or Necessary Account Changes	Collect data on accounts
		Review data on accounts for opportunities or necessary actions
		Share data with third parties
		Reach out or advertise to consumers about new products or upgrade opportunities
		Change account terms
	Prepare for and Conduct Audits	Prepare for and conduct internal audits
		Prepare for and conduct external audits
	Identify and Manage Exceptional Activities	Identify exceptional incident (e.g. non-payment, non-compliance)
		Determine how best to respond to and control for incident
		Respond to incident
		Communicate response to consumer
		Record and document response
	Receive and Resolve Consumer Complaints/ Disputes	Receive consumer complaints/disputes
		Determine appropriate resolution
		Communicate resolution decision to consumer
		Document resolution decision

Stage of Customer Life Cycle	Activity	Sub-Activities
Account Closing	Receive and Process Initiation for Account Closing	Receive and process customer request for account closing
		Receive and process bank-generated initiation for account closing
	Communicate with Consumer	Notify consumer of receipt of account closing request
		Charge closure fee (if applicable)
		Notify consumer of decision to close account
	Close Account	Disperse or escrow funds
		Remove account from internal databases
		Provide information to external providers (e.g., ChexSystems)
		Store and maintain information
	Turn Off Debit Card	
	Send Final Account Closing Information	Design final account closing information
		Send final account closing information
	Review for Potential Opportunities	Review details of account closing for potential follow-up opportunities
		Follow-up with consumer

TABLE 3. BUSINESS FUNCTION TAXONOMY

Function	Sub-Function	Responsibilities
Operations	Call Centers	Manage inbound and outbound calls for existing or potential customers
	Fulfillment	Procure and manage supplies and materials, mailings, postage, packaging, and logistics; manage relationships with vendors who may provide some of these services
	Back Office Support	Provide branch support (e.g., processing documents, compliance forms, transactions); internal helpdesk Q&A; support on research and adjustments (e.g., for disputes and complaints)
	Fraud Mitigation/Error Resolution	Monitor accounts and customer activities to detect fraud incidents and other potential risks; develop and implement policies to prevent fraud and report fraud cases; receive, research, and manage customer inquiries, disputes, and complaints; resolve disputes in conjunction with relevant business functions and document resolution
IT	Application Development and Maintenance	Write, maintain, and check all computer code necessary to support an institution's software systems, including online accounts and services
	Infrastructure Management	Set up and manage all IT infrastructure systems, including network systems, servers, and PC and telecom systems
Retail	Distribution	Set up, manage, and maintain a bank's physical distribution network, including ATMs and bank branches
	Front-line Management/Platform FTEs	Train, oversee, and manage all front-line employees who interface with customers to open or update accounts, provide banking services, and resolve disputes or concerns
	Product Development and Management	Define product strategy roadmaps, develop and design new products/ services and supporting material, perform product demos; market the product to prospects, customers, and others
Corporate Oversight (Risk/Audit)	Enterprise-wide Standard Design	Prioritize areas for audit resources in accordance with risk assessment; prepare for and design audit process, risk categories, schedules, scorecards, etc.
	Internal Exams	Conduct enterprise risk assessment/exams and monitoring to identify risks (e.g., credit, legal, IT) and ensure compliance
Legal	Research	Conduct legal research and draft legal document and memos; review and assess legal requirements and regulations to guide business compliance
	Product and Policy Review	Provide legal advice and product/policy review for business functions (e.g., marketing/advertising, product development, business policy)
	Advice and Counsel	Defend business against lawsuits or complaints brought by internal and external parties and provide pre-litigation counseling, conduct negotiations with external parties (note: only as related to reg. compliance)
HR	Training Design and Development	Design and develop trainings relevant to compliance for new and existing employees across company, liaising with third parties/vendors if necessary
	Training Deployment and Monitoring	Execute trainings across the enterprise (including assigning trainings, monitoring trainings), by specific regulation or by job function

Function	Sub-Function	Responsibilities
Marketing	Marketing Design and Implementation	Conduct research on consumer insights; perform marketing analytics and segmentation analysis; develop marketing and branding strategy for products and overall bank; manage sales force; design and execute advertising campaigns; provide services to other business functions on marketing-related needs (e.g., form design for Compliance function)
Compliance	Regulatory Research and Gap Analysis	Research and assess regulatory requirements/changes and implications on the enterprise (e.g., risk areas, potential areas lacking compliance)
	Policy and Procedure Design	Design policies, procedures, and processes to ensure the organization is in compliance with all regulations; track and plan for changes in regulations
	Monitoring and Reporting	Monitor compliance processes throughout the bank to identify compliance-related risks; enforce compliance policies where necessary; review extent of compliance and any compliance deficiencies and report information to regulators; manage relationships with regulators
	Business Advice and Counsel	Provide advice and respond to other business functions on compliance-related issues (e.g., marketing/advertising, business policies)
	External Exams	Prepare for, facilitate, and oversee external supervisory activity, including time spent with business functions to ensure compliance

APPENDIX C: INCREMENTAL COST ASSUMPTIONS

TABLE 4. SUMMARY OF INCREMENTAL COST ASSUMPTIONS BY SUB-FUNCTION

Note: Unless otherwise indicated below, 100% of identified time and costs are included in the calculation of incremental compliance cost for the in-scope regulations.

Function	Sub-Function	Data Captured and Key Assumptions
Operations	Call Centers	• Incremental time to handle calls that are related to Regulation E disputes; if call center handles these disputes (assume 1/3 of time is incremental, based on interviews with Regulation E dispute center managers) • Incremental time to answer questions that are driven by in-scope regulations (e.g., questions about OD opt-in, questions about privacy notices) • Incremental time taken to quality check calls conducted by personnel to ensure compliance • Time to read disclosures at account opening (Tier 1 only) • Time to manage escalated complaints related to in-scope regulations (Tier 1 and Tier 2A)

	Fulfillment	• Labor, materials, and/or third-party costs to mail the following documents (not comprehensive for each bank)
		    o Regulation P privacy notice
		    o Change of terms notices (where this was a regular occurrence)
		    o Portion of new account packet (assumed 10%)
		    o Portion of monthly statement (assumed 5%)
		• Where breakdowns were not available, assume 10% of outsourced cost to send statements and privacy notice (based on data from other banks)

	Back Office Support	• Time to process documents received during account opening. Generally two components:
		    o Time to check documents for accuracy and completeness
		    o Time to image documents
		• Other back office costs (only in one bank)
		    o Internal helpdesk to answer front-line questions - assume 100% of compliance questions are incremental (Tier 2A)
		    o Operations control group that does quality and control monitoring across Operations group (Tier 1)

	Fraud Mitigation/Error Resolution	• Incremental time to manage claims and disputes related to Regulation E due to special timelines (assume 1/3 of time is incremental, based on interviews with Regulation E dispute center managers) • Incremental time spent to quality check claims handling for Regulation E disputes • Time spent managing escalated claims (assume 100% of time, since claims likely would not be escalated if not for the higher risk profile)

<table>
<tr><th>Function</th><th>Sub-Function</th><th>Data Captured and Key Assumptions</th></tr>
<tr><td rowspan="2">IT</td><td>Application Development and Maintenance</td><td rowspan="2">Software, hardware, and labor cost for systems that directly support a compliance process (e.g., claims tracking) - for these systems we accepted interviewees judgments about appropriate proportions
Software, hardware, and labor cost for systems that support core bank processes, but also include some compliance functionalities (based on expert interviews, we use a standard 4% ratio to determine the proportion relevant to in-scope regulations)
Note: Because of differences in how data was reported, the allocations to Infrastructure vs. Application Development and Maintenance vary greatly; it is therefore most useful to compare IT data across banks at the function level.</td></tr>
<tr><td>Infrastructure Management</td></tr>
<tr><td rowspan="3">Retail</td><td>Distribution</td><td>Proportion of paper and ink cost for receipts at ATMs (assume 20% of this cost)
Cost to install and maintain Regulation E signs at ATMs</td></tr>
<tr><td>Front-line Management/Platform FTEs</td><td>Time spent explaining disclosures and compliance forms at account opening. Forms included (not comprehensive across banks):
Overdraft opt-in/opt-out
Privacy notice and opt-in/opt-out
TISA initial disclosures
Regulation E initial disclosures
Adverse action notices
Printing cost to print the above notices
Incremental time spent receiving and resolving disputes or claims in branches (for some participants)</td></tr>
<tr><td>Product Development and Management</td><td>Time spent liaising with compliance personnel and revising product development plans/proposals/materials based on compliance recommendations. We calculated this in two ways:
Top-down: Divide up total time into activities and then determine percent on deposits and percent on in-scope regulations
Bottom-up: For each activity determine the number of hours devoted to compliance-related activities (e.g., meetings, calls, revising of materials)</td></tr>
<tr><td rowspan="3">Legal</td><td>Research</td><td rowspan="3">Time spent to keep abreast with in-scope regulations (research and meeting time)
Time spent to review materials and counsel on product design with in-scope regulations and deposit products
Time spent on disputes and complaints related to in-scope regulations
Third-party vendor cost for advice relevant to in-scope regulations</td></tr>
<tr><td>Product and Policy Review</td></tr>
<tr><td>Advice and Counsel</td></tr>
</table>

Function	Sub-Function	Data Captured and Key Assumptions
HR	Training Design and Development	• Time spent to design individual training module (by regulation or by job function) • Third party vendor cost for training materials by module
	Training Deployment and Monitoring	• Time spent on each module for in-scope regulations • Total # of FTEs for each module • Time spent to allocate, monitor and track training • System cost to track training • Third party cost to monitor and track training • Training materials cost if not web-base • Instructor time to conduct training
Marketing	Marketing Design and Implementation	• Time spent liaising with compliance and revising marketing/advertising materials based on compliance feedback. We calculated this in two ways: o Top-down: Divide up total time into activities and then determine percent on deposits and percent on in-scope regulations o Bottom-up: For each activity determine the number of hours devoted to compliance-related activities (e.g., meetings, calls, revising of materials) • Third-party research on compliance-related matters
Compliance	Regulatory Research and Gap Analysis	• Time spent on each sub-function activity from both first line and second line of defense on in-scope regulations • Third-party cost for compliance advice relevant to our scope
	Policy and Procedure Design	
	Monitoring and Reporting	
	Business Advice and Counsel	
	External Exams	• Time spent within compliance function to prepare, conduct and follow-up on supervisory activity (adjusted by exam frequency) • Time spent by other functions to support supervisory activity (collected for some participants, but not reported in estimates)
Corporate Oversight (Risk/Audit)	Enterprise-wide Standard Design	• Time spent to conduct risk assessment on our scope (Most banks don't have significant incremental costs while Tier 2A specifically identified time spent by compliance function on risk assessment and work with internal risk management)
	Internal Exams	• Time to prepare and conduct exam on each in-scope regulation (split by DD, E, P and V for some banks and others may combine all) • Third-party cost to conduct scope related audit exam (For Tier 4B which is the only bank using outside vendor, assume 20% of the cost is related to Study scope)

APPENDIX D: PRE-VISIT DOCUMENTS

Compliance Cost Study Pre-Visit Information

The Compliance Cost Study is a research effort of the Consumer Financial Protection Bureau (CFPB). This outreach is being conducted in order to build the Bureau's knowledge base on costs to financial institutions of complying with consumer financial protection regulations. The information that you provide will help the CFPB better understand an institution's cost of regulatory compliance activities for several regulations covering deposit accounts and transactions. We plan to cover Regulation DD (and Truth in Savings), Regulation E (and Electronic Fund Transfers), Regulation P (and Privacy of Consumer Financial Information), as well as portions of other regulations, such as Regulation V (and Fair Credit Reporting), to the extent that they are pertinent to this product space.

Our outreach will follow a general model as outlined below:

- Pre-visit Call(s)
  - CFPB conference line provided
- Onsite visits
  - Day 1 (half-day)
    - At midday: In-person kick-off with key interviewees
    - Afternoon: Pre-scheduled interviews (individual and group) with pre-identified department executives, managers, and relevant representatives
  - Day 2
    - All-day: Interviews (individual and group) with pre-identified department executives, managers, and relevant representatives
  - Day 3
    - Interviews (individual and group) with pre-identified department executives, managers, and relevant representatives

            - Additional interviews (individual and group) with additional executives, managers, and relevant representatives

        - Day 4
            - Additional interviews (individual and group) with additional executives, managers, and relevant representatives

    - Follow-ups

        - By telephone, as necessary

We hope to have discussions with relevant executives, managers, and representatives from across your organization, including those from Operations and Compliance, and extending to those from IT, Marketing, Research, Legal, Risk, and other areas. Participation in these discussions will be voluntary, and we expect each conversation to last between 45 and 90 minutes. The information collected will be used to develop anonymous case studies, and your bank and participating individuals will not be identified. As required by federal law, the Office of Management of Budget has approved the topics of these conversations under the Paperwork Reduction Act. The OMB control number for this collection is 3170–0032.

Most conversations will follow a consistent structure. First, we will confirm the organizational responsibilities of each executive, manager, or group (in the case of group interviews) and understand the business activities in which the executive, manager, or group is involved. Second, based on the scope of those responsibilities, we will identify specific activities that are affected by compliance with Regulations DD, E, P, and V. Next, for each affected activity, we will seek to understand the discrete compliance processes embedded into the execution of that activity. Finally, we will evaluate the above-baseline[90] costs associated with each of these identified compliance processes. Specifically, we will ask about the labor costs and third-party costs required to drive these processes, as well as the non-labor costs and fixed investments required to enable those processes. Throughout each session, we will ask a number

[90] For the purposes of this study, “baseline” costs will refer to those operating costs a bank incurs for activities related to deposit products and/or services that it would likely continue to incur in the absence of the regulation or regulations being studied.

of questions to understand the qualitative context for these compliance costs and their broader strategic implications for the organization.

For a few targeted conversations, **we will ask additional questions** to situate the quantified costs of compliance with Regulations DD, E, P, and V within the larger picture of total compliance costs (e.g., costs associated with Bank Secrecy Act/ Anti-Money Laundering, state law, NACHA operating rules, network rules). For example, we will broaden our interview with the leadership of the Compliance function to understand the total Compliance budget and related metrics (e.g., total number of Compliance personnel dedicated to specific activities).

The topics listed below will serve as the common interview guide, to be tailored to the specific functional leaders with whom we will conduct interviews. To ensure we tailor this guide appropriately, we will request a small amount of data in advance of our visit to strengthen our understanding of your organization and help us establish a denominator against which to assess these compliance costs (e.g., organizational charts, operating expenses for deposit products)**.**

COMMON INTERVIEW GUIDE

(A) Identification of compliance responsibilities and quantification of total costs. In this section of the interview, we would like to learn more about how compliance factors into your business activities and attempt to quantify the cost of that impact for Regulations DD, E, P, and V.

(1) Confirmation of organizational role and responsibilities. We would like to start with a brief introduction to your role/responsibilities and the business activities you manage.

(2) Identification of specific activities implicated by regulatory compliance. From the list of business activities mentioned in Section A1, we would like to identify those affected by compliance with Regulations DD, E, P, or V.

(3) Deep dive into compliance processes. For each of the affected business activities identified in Section A2 above, we will want to better understand how the requirements of Regulations DD, E, P, or V (and the compliance processes they necessitate) shape the execution of those business activities. This will enable us to assess costs in Sections A4 and A5.

(4) Discussion of incremental labor costs. For each of the compliance processes identified in Section A3 above, we would like to better understand the incremental labor required to drive those processes. This will include incremental staff hired, incremental work required from existing staff, or incremental third-party outsourcing. We would also like to understand the components of those costs (e.g., are they ongoing versus one-time, fixed versus variable).

(5) Discussion of incremental non-labor costs. For each of the compliance processes identified in Section A3 above, we would like to better understand the incremental non-labor costs required to enable those processes (e.g., IT systems and software, training collateral, mailing material). We would also like to understand the components of those costs (e.g., are they ongoing versus one-time, fixed versus variable).

(B) Context of compliance costs. In this section, we hope to understand the more qualitative implications those costs have on your business and its consumers.

(1) Organizational implications of regulatory compliance. In this section, we would like to qualitatively understand how regulatory implications may have resulted in modifications to your organization's structure and/or individual roles/responsibilities.

(2) Strategic trade-offs. In this section, we would like to qualitatively understand the strategic implications these compliance costs have had for your business more broadly.

(3) New product introduction. In this section, we would like to understand how regulations may affect the introduction of a new product.

(4) Other concerns. In this section, we would like you to discuss any additional compliance costs/business impacts you deem important for us to understand.

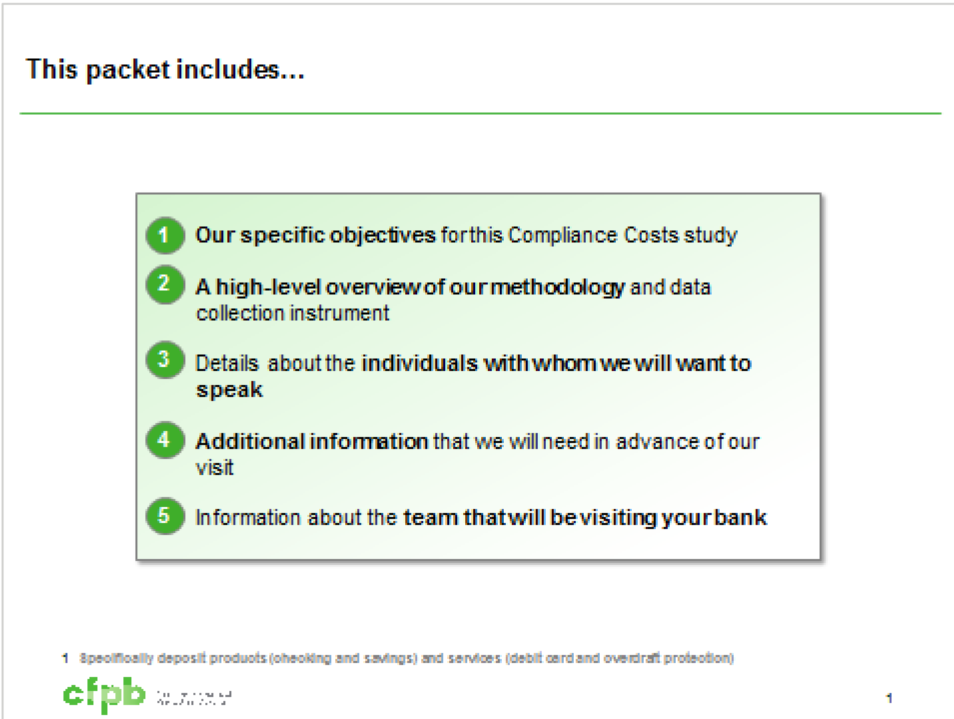
By addressing these topics, we hope to better understand the incremental, non-voluntary costs that result from compliance with Regulations DD, E, P, and parts of V. We hope that this effort will also help you learn something insightful about your own organization.

As required by federal law, the Office of Management of Budget has approved the topics of these conversations under the Paperwork Reduction Act. The OMB control number for this collection is 3170–0032.

Also, a federal law called the Privacy Act directs how the federal government treats the information contained in your answers to these questions. To understand how and when your information may be shared, you can read the Privacy Act Statement on the CFPB's website at www.consumerfinance.gov. The CFPB will also treat the information received consistent its confidentiality regulations at 12 C.F.R. § 1070.

If the responses you provide to this study are requested under the Freedom of Information Act, the Bureau will withhold such responses to the extent that it determines that they constitute trade secrets or confidential commercial information that you would not ordinarily make public. The Bureau will deem any such trade secrets or confidential commercial information to be "confidential information" for purposes of the Bureau's confidentiality rules at 12 C.F.R. § 1070.40 et seq.

Pre-Read for Distribution to Participants



1 Objectives for this foundational phase of Compliance Costs effort

Our mission

The objective of this study is to **develop and execute a methodology for assessing** the specific costs banks incur to comply with **CFPB regulations on deposit products** focusing on **Regulation DD, E , P** and other regulations, as appropriate

1 Specifically deposit products (checking and savings) and services (debit card and overdraft protection)

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2 Our methodology

A high level overview of our approach and instrument

The attached PDF explains, at a high level, our outreach approach and data collection instrument. This document includes:

- An overview of our **outreach process**
- How we will **approach our interviews**
- Our **common interview guide,** to be tailored to meet the individual needs of each conversation

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Interviewee Profiles

Who we would like to meet

During our site visits, we will conduct individual interviews as well as targeted group discussions with representatives across a variety of divisions / functions within your bank. To ensure that we can make the most of our limited time at your institution, we would like some help identifying these individuals in order to schedule those sessions in advance.

Please keep in mind that we are hoping to speak to individuals who manage the functions below for the Deposit space in particular.

If any of the titles below are not relevant to your organization, please just provide the name and contact information of the appropriate individual. If it is more convenient to provide an assistant's contact information, please feel free.

Title	Name	Phone Number	Email address
Head of Retail - Deposits			
Head of Compliance			
Head of Operations			
Head of IT			
Head of Legal			
Head of Risk			
Head of Strategy			
Head of Finance			
Head of Marketing			
Head of HR			

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Additional requests

Information we will need in advance of our visit

We would like to familiarize ourselves with your institution in advance of our visit in order to make the site-visits as efficient and effective and to make the best use of your time. To that end, we request that you send us any off-the-shelf information you may have about (1) your organizational structure and product offering, and (2) key business processes /plans. Specific requests include:

Organizational structure and product offering

- **Organizational charts** for your institution
- **Bios** for your executive team
- **Marketing collateral** / product descriptions for relevant deposit products (i.e., Checking and Savings Accounts, Overdraft Protection, Debit Cards)
- **Disclosure forms** relevant to the regulations we are examining

Key business processes / plans

- **Policies / Procedures** for Account Opening, Exceptions Processing, Dispute Resolution, and Customer Service/Call Center interactions
- **Implementation plan** for any changes to your Overdraft offering following regulatory changes in 2009

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Advance Requests Document

Advance requests
Compliance cost-related metrics (2 of 2)

We have identified some common metrics that are helpful for assessing compliance costs for the regulations in our study. In order to make the best use of your time in advance of your visit, we would greatly appreciate if you could provide any off-the-shelf information and metrics listed below. During (and because of the context of) our conversations, you may think of more information and metrics that may be useful to our study.

Vendor Management

- **List of vendors** that serve a compliance purpose (in whole or in part)
- **Cost of contract spends** (including annual maintenance fees)
- **Estimated % of vendor functions** related to regulatory compliance

Error resolution

- **Number of total errors** (for FY2012)
- **Number of errors** related to electronic fund transfers (for FY2012)

General Questions

- Does your bank **share consumer information with third parties?**
- Does your bank **hold all of its own accounts?**
- Does your **bank report consumer deposits information to ChexSystems** (as opposed to simply using ChexSystems as accounting opening check)?

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APPENDIX E: ONGOING COST DATA SHEET

TABLE 6. ONGOING COST DATA SHEET FOR INFORMATION COLLECTION

FUNCTION / Sub-Function	Labor Cost	Non-labor cost	Third party cost	TOTAL COST
OPERATIONS				
Call Centers				
Reg DD				
Advertising requirements				
Prompted account disclosures				
Periodic account disclosures				
Reg E				
Opt-in requirements for overdraft				
Procedures for resolving errors				
Initial disclosures				
Receipts at electronic terminals				
Periodic error resolution notice				
Disclosures at automated teller machines				
Reg P				
Opt-out for use of nonpublic information				
Initial privacy notice to consumers				
Annual privacy notice to customers				
Reg V/FCRA				
Adverse action disclosure				
Fulfillment				
Reg DD				
Advertising requirements				
Prompted account disclosures				
Periodic account disclosures				
Reg E				
Opt-in requirements for overdraft				
Procedures for resolving errors				
Initial disclosures				
Receipts at electronic terminals				
Periodic error resolution notice				
Disclosures at automated teller machines				
Reg P				
Opt-out for use of nonpublic information				
Initial privacy notice to consumers				
Annual privacy notice to customers				
Reg V/FCRA				
Adverse action disclosure				

FUNCTION / Sub-Function	Labor Cost	Non-labor cost	Third party cost	TOTAL COST
OPERATIONS (cont'd)				
Back office support				
Reg DD				
Advertising requirements				
Prompted account disclosures				
Periodic account disclosures				
Reg E				
Opt-in requirements for overdraft				
Procedures for resolving errors				
Initial disclosures				
Receipts at electronic terminals				
Periodic error resolution notice				
Disclosures at automated teller machines				
Reg P				
Opt-out for use of nonpublic information				
Initial privacy notice to consumers				
Annual privacy notice to customers				
Reg V/FCRA				
Adverse action disclosure				
Fraud mitigation/Error resolution				
Reg DD				
Advertising requirements				
Prompted account disclosures				
Periodic account disclosures				
Reg E				
Opt-in requirements for overdraft				
Procedures for resolving errors				
Initial disclosures				
Receipts at electronic terminals				
Periodic error resolution notice				
Disclosures at automated teller machines				
Reg P				
Opt-out for use of nonpublic information				
Initial privacy notice to consumers				
Annual privacy notice to customers				
Reg V/FCRA				
Adverse action disclosure				
IT				
Application development and maintenance				
Reg DD				
Reg E				
Reg P				
Reg V/FCRA				
Infrastructure management				
Reg DD				
Reg E				
Reg P				
Reg V/FCRA				

FUNCTION / Sub-Function	Labor Cost	Non-labor cost	Third party cost	TOTAL COST
RETAIL/FRONT OFFICE				
Distribution				
Reg DD				
Advertising requirements				
Prompted account disclosures				
Periodic account disclosures				
Reg E				
Opt-in requirements for overdraft				
Procedures for resolving errors				
Initial disclosures				
Receipts at electronic terminals				
Periodic error resolution notice				
Disclosures at automated teller machines				
Reg P				
Opt-out for use of nonpublic information				
Initial privacy notice to consumers				
Annual privacy notice to customers				
Reg V/FCRA				
Adverse action disclosure				
Front-line management (FTEs)				
Reg DD				
Advertising requirements				
Prompted account disclosures				
Periodic account disclosures				
Reg E				
Opt-in requirements for overdraft				
Procedures for resolving errors				
Initial disclosures				
Receipts at electronic terminals				
Periodic error resolution notice				
Disclosures at automated teller machines				
Reg P				
Opt-out for use of nonpublic information				
Initial privacy notice to consumers				
Annual privacy notice to customers				
Reg V/FCRA				
Adverse action disclosure				
Product development and management				
Reg DD				
Reg E				
Reg P				
Reg V				

FUNCTION / Sub-Function	Labor Cost	Non-labor cost	Third party cost	TOTAL COST
LEGAL				
Research				
Product and policy review				
Reg DD				
Reg E				
Reg P				
Reg V/FCRA				
Advice and counsel				
Reg DD				
Reg E				
Reg P				
Reg V/FCRA				
CORPORATE OVERSIGHT (RISK/AUDIT)				
Enterprise-wide standard design				
Internal exams				
Reg DD				
Reg E				
Reg P				
Reg V/FCRA				
HR				
Training design and development				
Reg DD				
Reg E				
Reg P				
Reg V/FCRA				
Training deployment and monitoring				
Reg DD				
Reg E				
Reg P				
Reg V/FCRA				

FUNCTION / Sub-Function	Labor Cost	Non-labor cost	Third party cost	TOTAL COST
MARKETING				
Marketing design and implementation				
Reg DD				
Advertising requirements				
Prompted account disclosures				
Periodic account disclosures				
Reg E				
Opt-in requirements for overdraft				
Procedures for resolving errors				
Initial disclosures				
Receipts at electronic terminals				
Periodic error resolution notice				
Disclosures at automated teller machines				
Reg P				
Opt-out for use of nonpublic information				
Initial privacy notice to consumers				
Annual privacy notice to customers				
Reg V/FCRA				
Adverse action disclosure				
COMPLIANCE				
Regulatory research and gap analysis				
Policy and procedure design				
Reg DD				
Reg E				
Reg P				
Reg V/FCRA				
Monitoring and reporting				
Reg DD				
Reg E				
Reg P				
Reg V/FCRA				
Business advice and counsel				
Reg DD				
Reg E				
Reg P				
Reg V/FCRA				
External exams				
TOTAL				

APPENDIX F: COMPLIANCE COST BREAKDOWN BY PARTICIPANT BANK

Tier 1

TABLE 7. FUNCTION/SUB-FUNCTION COMPLIANCE COSTS AS % OF TOTAL COMPLIANCE COSTS

	TYPE OF COST			
FUNCTION / Sub-Function	**Labor Cost**	**Non-labor cost**	**Third party cost**	**TOTAL COST**
OPERATIONS	**10.9%**	**9.0%**	**2.3%**	**22.1%**
Call Centers	2.8%	0.0%	0.0%	2.8%
Fulfillment	0.4%	4.7%	0.0%	5.1%
Back office support	1.9%	4.3%	0.2%	6.4%
Fraud mitigation/Error resolution	5.8%	0.0%	2.1%	7.8%
IT	**0.0%**	**9.0%**	**1.1%**	**10.2%**
Application development and maintenance	0.0%	0.0%	1.1%	1.1%
Infrastructure management	0.0%	9.0%	0.0%	9.0%
RETAIL/FRONT OFFICE	**34.2%**	**0.8%**	**0.0%**	**34.9%**
Distribution	0.0%	0.0%	0.0%	0.0%
Front-line management (FTEs)	32.6%	0.8%	0.0%	33.4%
Product development and management	1.5%	0.0%	0.0%	1.5%
LEGAL	**0.8%**	**0.0%**	**0.0%**	**0.8%**
Research	0.0%	0.0%	0.0%	0.0%
Product and policy review	0.7%	0.0%	0.0%	0.7%
Advice and counsel	0.1%	0.0%	0.0%	0.1%
CORPORATE OVERSIGHT (RISK/AUDIT)	**1.2%**	**0.0%**	**0.0%**	**1.2%**
Enterprise-wide standard design	0.0%	0.0%	0.0%	0.0%
Internal exams	1.2%	0.0%	0.0%	1.2%
HR	**23.6%**	**0.2%**	**0.3%**	**24.1%**
Training design and development	0.3%	0.0%	0.0%	0.3%
Training deployment and monitoring	23.3%	0.2%	0.3%	23.8%
MARKETING	**1.3%**	**0.0%**	**0.0%**	**1.3%**
Marketing design and implementation	1.3%	0.0%	0.0%	1.3%
COMPLIANCE	**5.3%**	**0.0%**	**0.0%**	**5.3%**
Regulatory research and gap analysis	0.1%	0.0%	0.0%	0.1%
Policy and procedure design	0.1%	0.0%	0.0%	0.1%
Monitoring and reporting	3.0%	0.0%	0.0%	3.0%
Business advice and counsel	1.3%	0.0%	0.0%	1.3%
External exams	0.9%	0.0%	0.0%	0.9%
TOTAL	**77.4%**	**18.9%**	**3.7%**	

Tier 2A

TABLE 8. FUNCTION/SUB-FUNCTION COMPLIANCE COSTS AS % OF TOTAL COMPLIANCE COSTS

	TYPE OF COST			
FUNCTION / Sub-Function	**Labor Cost**	**Non-labor cost**	**Third party cost**	**TOTAL COST**
OPERATIONS	**14.0%**	**0.5%**	**0.0%**	**14.5%**
Call Centers	5.8%	0.0%	0.0%	5.8%
Fulfillment	1.0%	0.5%	0.0%	1.5%
Back office support	4.3%	0.0%	0.0%	4.3%
Fraud mitigation/Error resolution	2.9%	0.0%	0.0%	2.9%
IT	**1.2%**	**2.9%**	**5.9%**	**10.0%**
Application development and maintenance	1.2%	0.0%	5.9%	7.1%
Infrastructure management	0.0%	2.9%	0.0%	2.9%
RETAIL/FRONT OFFICE	**21.5%**	**0.0%**	**0.0%**	**21.5%**
Distribution	0.6%	0.0%	0.0%	0.6%
Front-line management (FTEs)	16.2%	0.0%	0.0%	16.2%
Product development and management	4.6%	0.0%	0.0%	4.6%
LEGAL	**0.5%**	**0.0%**	**0.0%**	**0.5%**
Research	0.1%	0.0%	0.0%	0.1%
Product and policy review	0.0%	0.0%	0.0%	0.0%
Advice and counsel	0.4%	0.0%	0.0%	0.4%
CORPORATE OVERSIGHT (RISK/AUDIT)	**5.5%**	**0.0%**	**0.0%**	**5.5%**
Enterprise-wide standard design	4.6%	0.0%	0.0%	4.6%
Internal exams	0.9%	0.0%	0.0%	0.9%
HR	**16.3%**	**0.2%**	**0.1%**	**16.6%**
Training design and development	0.3%	0.0%	0.1%	0.3%
Training deployment and monitoring	16.0%	0.2%	0.0%	16.3%
MARKETING	**4.4%**	**0.0%**	**0.0%**	**4.4%**
Marketing design and implementation	4.4%	0.0%	0.0%	4.4%
COMPLIANCE	**27.1%**	**0.0%**	**0.0%**	**27.1%**
Regulatory research and gap analysis	6.8%	0.0%	0.0%	6.8%
Policy and procedure design	2.8%	0.0%	0.0%	2.8%
Monitoring and reporting	8.6%	0.0%	0.0%	8.6%
Business advice and counsel	5.4%	0.0%	0.0%	5.4%
External exams	3.5%	0.0%	0.0%	3.5%
TOTAL	**90.4%**	**3.6%**	**6.0%**	

Tier 2B

TABLE 9. FUNCTION/SUB-FUNCTION COMPLIANCE COSTS AS % OF TOTAL COMPLIANCE COSTS

	TYPE OF COST			
FUNCTION / Sub-Function	**Labor Cost**	**Non-labor cost**	**Third party cost**	**TOTAL COST**
OPERATIONS	**14.0%**	**14.8%**	**0.0%**	**28.8%**
Call Centers	3.1%	0.0%	0.0%	3.1%
Fulfillment	4.9%	14.8%	0.0%	19.7%
Back office support	3.9%	0.0%	0.0%	3.9%
Fraud mitigation/Error resolution	2.1%	0.0%	0.0%	2.1%
IT	**11.7%**	**0.0%**	**18.7%**	**30.4%**
Application development and maintenance	11.7%	0.0%	18.7%	30.4%
Infrastructure management	0.0%	0.0%	0.0%	0.0%
RETAIL/FRONT OFFICE	**8.0%**	**0.5%**	**0.0%**	**8.5%**
Distribution	0.0%	0.0%	0.0%	0.0%
Front-line management (FTEs)	7.6%	0.5%	0.0%	8.1%
Product development and management	0.3%	0.0%	0.0%	0.3%
LEGAL	**2.1%**	**0.0%**	**0.0%**	**2.1%**
Research	0.6%	0.0%	0.0%	0.6%
Product and policy review	0.8%	0.0%	0.0%	0.8%
Advice and counsel	0.8%	0.0%	0.0%	0.8%
CORPORATE OVERSIGHT (RISK/AUDIT)	**1.9%**	**0.0%**	**0.0%**	**1.9%**
Enterprise-wide standard design	0.0%	0.0%	0.0%	0.0%
Internal exams	1.8%	0.0%	0.0%	1.8%
HR	**9.0%**	**0.0%**	**0.1%**	**9.1%**
Training design and development	1.2%	0.0%	0.1%	1.3%
Training deployment and monitoring	7.8%	0.0%	0.0%	7.8%
MARKETING	**8.3%**	**0.0%**	**0.0%**	**8.3%**
Marketing design and implementation	8.3%	0.0%	0.0%	8.3%
COMPLIANCE	**11.0%**	**1.2%**	**0.0%**	**11.0%**
Regulatory research and gap analysis	2.2%	0.2%	0.0%	2.2%
Policy and procedure design	1.6%	0.2%	0.0%	1.6%
Monitoring and reporting	3.3%	0.3%	0.0%	3.3%
Business advice and counsel	2.7%	0.3%	0.0%	2.7%
External exams	1.1%	0.1%	0.0%	1.1%
TOTAL	**66.0%**	**16.4%**	**18.8%**	

Tier 3A

TABLE 10. FUNCTION/SUB-FUNCTION COMPLIANCE COSTS AS % OF TOTAL COMPLIANCE COSTS

	TYPE OF COST			
FUNCTION / Sub-Function	**Labor Cost**	**Non-labor cost**	**Third party cost**	**TOTAL COST**
OPERATIONS	**14.0%**	**14.8%**	**0.0%**	**28.8%**
Call Centers	3.1%	0.0%	0.0%	3.1%
Fulfillment	4.9%	14.8%	0.0%	19.7%
Back office support	3.9%	0.0%	0.0%	3.9%
Fraud mitigation/Error resolution	2.1%	0.0%	0.0%	2.1%
IT	**11.7%**	**0.0%**	**18.7%**	**30.4%**
Application development and maintenance	11.7%	0.0%	18.7%	30.4%
Infrastructure management	0.0%	0.0%	0.0%	0.0%
RETAIL/FRONT OFFICE	**8.0%**	**0.5%**	**0.0%**	**8.5%**
Distribution	0.0%	0.0%	0.0%	0.0%
Front-line management (FTEs)	7.6%	0.5%	0.0%	8.1%
Product development and management	0.3%	0.0%	0.0%	0.3%
LEGAL	**2.1%**	**0.0%**	**0.0%**	**2.1%**
Research	0.6%	0.0%	0.0%	0.6%
Product and policy review	0.8%	0.0%	0.0%	0.8%
Advice and counsel	0.8%	0.0%	0.0%	0.8%
CORPORATE OVERSIGHT (RISK/AUDIT)	**1.9%**	**0.0%**	**0.0%**	**1.9%**
Enterprise-wide standard design	0.0%	0.0%	0.0%	0.0%
Internal exams	1.8%	0.0%	0.0%	1.8%
HR	**9.0%**	**0.0%**	**0.1%**	**9.1%**
Training design and development	1.2%	0.0%	0.1%	1.3%
Training deployment and monitoring	7.8%	0.0%	0.0%	7.8%
MARKETING	**8.3%**	**0.0%**	**0.0%**	**8.3%**
Marketing design and implementation	8.3%	0.0%	0.0%	8.3%
COMPLIANCE	**11.0%**	**1.2%**	**0.0%**	**11.0%**
Regulatory research and gap analysis	2.2%	0.2%	0.0%	2.2%
Policy and procedure design	1.6%	0.2%	0.0%	1.6%
Monitoring and reporting	3.3%	0.3%	0.0%	3.3%
Business advice and counsel	2.7%	0.3%	0.0%	2.7%
External exams	1.1%	0.1%	0.0%	1.1%
TOTAL	**66.0%**	**16.4%**	**18.8%**	

Tier 3B

TABLE 11. FUNCTION/SUB-FUNCTION COMPLIANCE COSTS AS % OF TOTAL COMPLIANCE COSTS

	TYPE OF COST			
FUNCTION / Sub-Function	Labor Cost	Non-labor cost	Third party cost	TOTAL COST
OPERATIONS	**20.0%**	**0.0%**	**6.5%**	**26.5%**
Call Centers	1.6%	0.0%	0.0%	1.6%
Fulfillment	0.0%	0.0%	6.5%	6.5%
Back office support	13.8%	0.0%	0.0%	13.8%
Fraud mitigation/Error resolution	4.6%	0.0%	0.0%	4.6%
IT	**0.0%**	**0.0%**	**30.4%**	**30.4%**
Application development and maintenance	0.0%	0.0%	30.4%	30.4%
Infrastructure management	0.0%	0.0%	0.0%	0.0%
RETAIL/FRONT OFFICE	**9.5%**	**0.0%**	**0.0%**	**9.5%**
Distribution	0.0%	0.0%	0.0%	0.0%
Front-line management (FTEs)	9.5%	0.0%	0.0%	9.5%
Product development and management	0.0%	0.0%	0.0%	0.0%
LEGAL	**0.0%**	**0.0%**	**2.7%**	**2.7%**
Research	0.0%	0.0%	0.0%	0.0%
Product and policy review	0.0%	0.0%	0.0%	0.0%
Advice and counsel	0.0%	0.0%	2.7%	2.7%
CORPORATE OVERSIGHT (RISK/AUDIT)	**1.6%**	**0.0%**	**0.2%**	**1.9%**
Enterprise-wide standard design	0.2%	0.0%	0.2%	0.5%
Internal exams	1.4%	0.0%	0.0%	1.4%
HR	**12.4%**	**0.0%**	**3.2%**	**15.7%**
Training design and development	0.3%	0.0%	3.2%	3.5%
Training deployment and monitoring	12.1%	0.0%	0.0%	12.1%
MARKETING	**0.3%**	**0.0%**	**0.0%**	**0.3%**
Marketing design and implementation	0.3%	0.0%	0.0%	0.3%
COMPLIANCE	**11.7%**	**0.0%**	**1.3%**	**13.0%**
Regulatory research and gap analysis	0.0%	0.0%	0.0%	0.0%
Policy and procedure design	0.2%	0.0%	1.3%	1.5%
Monitoring and reporting	5.8%	0.0%	0.0%	5.8%
Business advice and counsel	4.3%	0.0%	0.0%	4.3%
External exams	1.4%	0.0%	0.0%	1.4%
TOTAL	**55.6%**	**0.0%**	**44.4%**	

Tier 4A

TABLE 12. FUNCTION/SUB-FUNCTION COMPLIANCE COSTS AS % OF TOTAL COMPLIANCE COSTS

	TYPE OF COST			
FUNCTION / Sub-Function	**Labor Cost**	**Non-labor cost**	**Third party cost**	**TOTAL COST**
OPERATIONS	**16.6%**	**0.0%**	**8.5%**	**25.1%**
Call Centers	0.0%	0.0%	0.0%	0.0%
Fulfillment	4.6%	0.0%	8.5%	13.1%
Back office support	10.1%	0.0%	0.0%	10.1%
Fraud mitigation/Error resolution	2.0%	0.0%	0.0%	2.0%
IT	**0.2%**	**0.0%**	**21.4%**	**21.6%**
Application development and maintenance	0.2%	0.0%	21.4%	21.6%
Infrastructure management	0.0%	0.0%	0.0%	0.0%
RETAIL/FRONT OFFICE	**16.7%**	**1.0%**	**0.0%**	**17.7%**
Distribution	0.0%	0.4%	0.0%	0.4%
Front-line management (FTEs)	14.9%	0.7%	0.0%	15.6%
Product development and management	1.8%	0.0%	0.0%	1.8%
LEGAL	**0.0%**	**0.0%**	**0.0%**	**0.0%**
Research	0.0%	0.0%	0.0%	0.0%
Product and policy review	0.0%	0.0%	0.0%	0.0%
Advice and counsel	0.0%	0.0%	0.0%	0.0%
CORPORATE OVERSIGHT (RISK/AUDIT)	**2.0%**	**0.0%**	**0.0%**	**2.0%**
Enterprise-wide standard design	0.0%	0.0%	0.0%	0.0%
Internal exams	2.0%	0.0%	0.0%	2.0%
HR	**3.7%**	**0.0%**	**1.3%**	**4.9%**
Training design and development	0.0%	0.0%	0.0%	0.0%
Training deployment and monitoring	3.7%	0.0%	1.3%	4.9%
MARKETING	**2.3%**	**0.0%**	**0.0%**	**2.3%**
Marketing design and implementation	2.3%	0.0%	0.0%	2.3%
COMPLIANCE	**26.4%**	**0.0%**	**0.0%**	**26.4%**
Regulatory research and gap analysis	2.0%	0.0%	0.0%	2.0%
Policy and procedure design	1.0%	0.0%	0.0%	1.0%
Monitoring and reporting	1.8%	0.0%	0.0%	1.8%
Business advice and counsel	21.2%	0.0%	0.0%	21.2%
External exams	0.3%	0.0%	0.0%	0.3%
TOTAL	**67.8%**	**1.0%**	**31.2%**	

Tier 4B

TABLE 13. FUNCTION/SUB-FUNCTION COMPLIANCE COSTS AS % OF TOTAL COMPLIANCE COSTS

	TYPE OF COST			
FUNCTION / Sub-Function	**Labor Cost**	**Non-labor cost**	**Third party cost**	**TOTAL COST**
OPERATIONS	**1.7%**	**13.8%**	**0.0%**	**15.5%**
Call Centers	0.0%	0.0%	0.0%	0.0%
Fulfillment	0.0%	13.8%	0.0%	13.8%
Back office support	0.0%	0.0%	0.0%	0.0%
Fraud mitigation/Error resolution	1.7%	0.0%	0.0%	1.7%
IT	**0.0%**	**0.0%**	**22.0%**	**22.0%**
Application development and maintenance	0.0%	0.0%	22.0%	22.0%
Infrastructure management	0.0%	0.0%	0.0%	0.0%
RETAIL/FRONT OFFICE	**2.9%**	**0.5%**	**0.0%**	**3.4%**
Distribution	0.0%	0.5%	0.0%	0.5%
Front-line management (FTEs)	0.7%	0.0%	0.0%	0.7%
Product development and management	2.2%	0.0%	0.0%	2.2%
LEGAL	**0.0%**	**0.0%**	**0.0%**	**0.0%**
Research	0.0%	0.0%	0.0%	0.0%
Product and policy review	0.0%	0.0%	0.0%	0.0%
Advice and counsel	0.0%	0.0%	0.0%	0.0%
CORPORATE OVERSIGHT (RISK/AUDIT)	**2.2%**	**0.0%**	**4.5%**	**6.7%**
Enterprise-wide standard design	0.0%	0.0%	0.0%	0.0%
Internal exams	2.2%	0.0%	4.5%	6.7%
HR	**17.8%**	**0.0%**	**1.5%**	**19.3%**
Training design and development	6.9%	0.0%	1.5%	8.4%
Training deployment and monitoring	10.9%	0.0%	0.0%	10.9%
MARKETING	**2.2%**	**0.0%**	**0.0%**	**2.2%**
Marketing design and implementation	2.2%	0.0%	0.0%	2.2%
COMPLIANCE	**27.3%**	**0.0%**	**3.6%**	**31.0%**
Regulatory research and gap analysis	6.0%	0.0%	3.6%	9.6%
Policy and procedure design	3.1%	0.0%	0.0%	3.1%
Monitoring and reporting	5.6%	0.0%	0.0%	5.6%
Business advice and counsel	6.0%	0.0%	0.0%	6.0%
External exams	6.7%	0.0%	0.0%	6.7%
TOTAL	**54.1%**	**14.3%**	**31.6%**	

APPENDIX G: INSIGHTS ON ONE-TIME IMPLEMENTATION COSTS

This Study focused on the ongoing costs of regulations, but relatively recent overdraft amendments to Regulations E and DD provided the Bureau an opportunity to examine *one-time compliance costs*, or the costs to implement new regulations. In 2009, changes to Regulations E and DD caused many banks to change how they enrolled customers in an overdraft program. The Regulation E amendment moved banks from a prevailing practice of “opt out” to an “opt in” regime that required explicit customer consent to charge overdraft fees in certain situations. The Regulation DD amendment added disclosures of overdraft fees to account opening disclosures and periodic statements. Despite a lapse of several years since the effective date of the rule, challenges in standardizing information, and practical constraints on the Study, we were able to obtain useful insights about the impact of one-time regulatory implementation costs.

When the amendments were adopted, five of our seven participants already offered overdraft programs governed by Regulation E. The sixth participant, one of the Tier 3 institutions, implemented an overdraft program for the first time when the amendments were adopted. The seventh participating institution did not have an overdraft program of the type covered by Regulation E before or after the regulation took effect. It incurred no additional regulatory costs with respect to the 2009 changes. During our on-site interviews with the six Study participants offering or implementing overdraft when the amendments took effect, we asked specifically about their experiences in implementing the 2009 changes. Bank responses focused principally on experiences in implementing the Regulation E changes, which may have required more effort than the Regulation DD changes.

During their respective implementation periods, participating banks primarily incurred material one-time costs to (1) operationalize an opt-in functionality and (2) prepare employees and customers for the changes. All banks were given the same period to implement the regulations (nine months from the date of publication of the final rule for Regulation E changes, and 12 months for the Regulation DD changes[91]), but the banks in the Study reported to us widely

[91] The final rule for the Regulation E overdraft opt-in amendment was published on November 19, 2009 with an effective date of January 19, 2010 and mandatory compliance by July 1, 2010. The final rule for the Regulation DD overdraft fee disclosure was published on January 29, 2009 with an effective date of January 1, 2010.

varying implementation periods. The Tier 1 participant's implementation of the new requirement took place over the course of 14 months, while the Tier 2 participants spent about six to nine months. Both Tier 3 participants had implementation periods of three to four months. The smallest Tier 4 institution with a Regulation E overdraft regime implemented the overdraft changes over the course of three months.

In general, the larger financial institutions in the Study began planning for regulatory change before smaller ones (even in advance of the final rule). Smaller banks in the Study were more likely to implement manual processes to comply with the opt-in requirements while waiting for long-term vendor solutions. Executing these short-term manual processes increased labor costs for these banks temporarily.

The Operations and IT functions typically bore the heaviest shares of one-time cost for most of the banks in the Study. Activities in the Operations function at the six participating banks accounted for a median value of 39% of one-time implementation costs, with values ranging from 8% to 84%. These one-time costs within Operations primarily included the costs of outreach (via informational mailings and/or calls) to customers and increased customer inquiries about opt-in to the call center sub-function. Some of these costs may be attributed to institution-specific business decisions. For example, the Tier 4 bank noted the importance of overdraft fees as revenue and incurred the highest proportional cost in Operations (84%) due to its extensive outreach conducted to inform its customers about opting into the service. Conversely, it is notable that the bank incurring the lowest proportional Operations one-time costs (8%) was the Tier 3 bank implementing the overdraft program for the first time. Its Operations implementation costs consisted primarily of printing materials to inform consumers about the new overdraft program.

The IT function incurred one-time costs because of reprogramming or system upgrades necessary to capture and implement the customer's choice. The median value of IT costs relative to overall one-time overdraft implementation costs was 21%, with costs ranging from 0.55% to 61% of one-time cost over the six participants. Banks with larger IT organizations and more complex technology systems (with proprietary or in-house components) incurred higher levels of IT costs.

IT costs for smaller banks in the Study may have been comparatively lower because much of the technological upgrades were vendor-driven as opposed to internally developed. The use of third-party solutions may have allowed for some cost-sharing with other institutions using the same vendor. Dependency on vendor solutions likely caused the smaller institutions in the Study to be more reactive to the rule changes – these banks have little choice other than to wait for a third party in order to both test and begin implementation of the requirements. For the Tier 4 bank offering overdraft coverage, its use of manual processes during the implementation period also created additional work when the bank had to input manually the customer decisions into their new IT system that tracks these decisions.

The Retail and Compliance functions also bore considerable portions of the one-time costs of implementation. Bank personnel from these two functions were primarily responsible for researching the re-design of the overdraft program and ensuring that the service was ultimately compliant with the new rule changes. Retail one-time costs associated with product development comprised about 2% to 52% of total one-time cost (median = 9%) across the six banks. The Compliance function was responsible for less than 1% to 34% of the one-time cost, with expenses concentrated in policy and procedure (re)design and business advice and counsel. At the banks that already operated an overdraft program, the Retail and proportions of Compliance functions' one-time costs were lower than those experienced at the small Tier 3 bank that was implementing the overdraft program for the first time.

The six case studies suggest that one-time expenses for implementing regulatory changes can comprise a substantial share of regulatory costs.[92] The Study did not collect information about ongoing compliance costs in 2010. We can compare only ongoing costs in 2012 with one-time costs in 2010 (in each case as a proportion of total retail deposit operating expense in each respective year). The Tier 1 participant's one-time cost was 1.7% of its 2010 total retail deposit operating expense (while 2012 ongoing costs were 0.9% of 2012 total retail deposit operating expense). The Tier 2 banks had one-time costs of 0.5% and 0.9% of total retail operating expense (compared with ongoing costs of 1.51% and 1.25% in 2012). The relevant banks in the Study incurred costs within time periods ranging from three to fourteen months. The reasons for the wide variation in reported implementation periods are not entirely clear but highlight the importance of defining "implementation" consistently in future research.

Implementation costs reported by the participant banks in the Study depended heavily on their respective business decisions. For example, banks may have chosen to invest relatively more in

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[92] However, in order to compare it with the ongoing costs, the one-time cost is annualized across a number of years (i.e., divided by the number of years between the date of the final rule publication and the effective date of the rule). Otherwise, the one-time cost is not directly comparable to the annualized ongoing cost that is the focus of the Study.

the outreach to customers to get an opt-in agreement for their overdraft programs because of the importance of overdraft fees as revenue. Five of the six participant banks who had overdraft programs at the time of the 2009 Regulation E amendment mentioned this as a factor in their intensity of their outreach. These five banks may have also experienced higher relative costs in the Operations and IT business functions because their systems had long been adapted to the "opt-out" overdraft regime. On the other hand, the one Tier 3 bank that was implementing an overdraft program for the first time had relatively lower portions of cost attributed to Operations and IT. Instead, this bank used in-house expertise to design the new overdraft program and develop new policies and procedures around it. These costs were incurred primarily by the Retail and Compliance functions.

The quality of the information collected varies across the participant banks and was dependent on institutional memory, staff turnover, and availability of documents. Moreover, it appears the banks had different implementation experiences, due in part to differences in organizational complexity and possibly by differences in their experience with overdraft programs. This compounded our limitations in collecting and analyzing information in a standardized manner.

Planning & Development of Methodology

- Develop early hypotheses as to which activities of the firm are affected by the regulations at issue and which parts of the firm perform these activities;
- Establish early *what you already know* and *what you want to know*, and incorporate this into how you approach data collection;
- Decide early which denominator(s) to use for standardizing cost data, how to measure the denominator(s), and how to obtain consistent data for the measure(s);
- Decide early whether the efficiency and effectiveness of the operation (not just its associated monetary costs cost) will be in the scope of the study and, if they will be, how they will be measured; and
- Try to identify "baseline" operations and costs of the institution against which to measure the incremental cost of the regulation at issue.

Executing Data Collection at Financial Institutions

- *(In advance of data collection)* Establish a fundamental understanding of the institution and its potential interviewees through general research and a thorough review of organizational charts;
- *(In advance of data collection)* Conduct a training session for all interviewers and project team to ensure that everyone understands purpose of the Study and has standard, effective approach to data collection;
- Articulate clearly the study goals and design to respondents – including the scope of the operations and costs studied and the difference between compliance costs and baseline costs;
- Provide interviewees with written templates of the information sought before, during, or after the interview (each choice has its benefits and risks);
- Create a spreadsheet or other easy-to-use tool for researchers (or respondents) to record information in the field on a granular and systematic basis, and plan for a systematic way to capture qualitative insights and comments;
- Plan for ways in which you may need to adapt to the methodology to each institution;
- Start with relevant executives and work down the hierarchy through managers and employees;
- Ask interviewees both "top down" questions (identify all the interviewee's responsibilities and narrow them down to the relevant daily activities) and "bottom up" questions (ask interviewees about very specific activities hypothesized to be compliance-related activities);
- Ask employees about hours spent on compliance activities in different ways – both as a proportion of the workweek and in absolute hours;

- Ask what types of documents are available to confirm information, including internal tracking documents and documentation of third-party costs;
- Specify the relevant time frame for respondents and ask about events that might have made that time frame atypical; and
- Send the same interviewers to different institutions or have the interviewers talk and share information frequently during the field phase.

Standardizing & Analyzing Data

- Synthesize information frequently and as quickly as possible after initial collection, and account for potential follow-up with interviewees and/or institutions for quality control;
- Compare data across interviewees and across institutions to identify potentially erroneous or incomplete information that requires follow-up; and
- Validate key information with interviewees and independent experts.

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