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FINANCIAL TECHNOLOGY

Agencies Should Provide Clarification on Lenders' Use of Alternative Data

On March 12, 2019, this report was revised to insert Consumer Financial Protection Bureau and CFPB where we initially referred to the agency as the Bureau of Consumer Financial Protection and BCFP, respectively based on the agency's preferences at the time we released the report.

GAO Highlights

Highlights of GAO-19-111, a report to congressional requesters

Why GAO Did This Study

Fintech refers to the use of technology and innovation to provide financial products and services. Fintech lenders are nonbank firms that operate online and may use nontraditional (also referred to as alternative) data to make loan decisions. CFPB has supervisory authority over some fintech lenders. Fintech lenders that have entered into third-party relationships with banks may also be subject to indirect oversight by federal banking regulators. The three fintech lending segments that GAO reviewed are personal, small business, and student loans.

GAO was asked to review several fintech lending issues. This report, among other things, (1) describes recent trends in fintech lending and (2) examines fintech lenders' use of alternative data and the extent to which federal agencies monitor lenders' use of the data. GAO reviewed literature and agency documents; analyzed relevant federal guidance; conducted interviews with agency officials and industry stakeholders; and collected data from 10 fintech lenders (selected based on size, products offered, and other factors).

What GAO Recommends

GAO recommends that CFPB and the federal banking regulators communicate in writing to fintech lenders and banks that partner with fintech lenders, respectively, on the appropriate use of alternative data in the underwriting process. The agencies each stated that they plan to take action to address GAO's recommendations.

View GAO-19-111. For more information, contact Michael E. Clements at (202) 512-8678 or clementsm@gao.gov.

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What GAO Found

Two recent trends in financial technology (fintech) lending—that is, consumer and small business lending by nonbank technology-based firms—include growth in loan volume and increasing partnerships between fintech lenders and banks.

- Growth. Data from a sample of 10 fintech lenders and literature GAO reviewed indicated that loan volume for fintech lenders has grown in recent years and is expected to continue growing. For example, personal loans provided by lenders GAO interviewed grew sevenfold from 2013 through 2017 (\$2.5 billion to \$17.7 billion). The fintech lenders also reported growth in their small business and student loan portfolios.
- Bank partnerships. Fintech lenders are partnering with banks to originate loans. Generally, loan applicants are evaluated using the fintech lenders' technology-based credit models, which incorporate the banks' underwriting criteria. The fintech lenders then purchase the loans from the banks and sell them to investors or hold them on their balance sheets.

Some of the fintech lenders GAO interviewed said they use alternative data to supplement the traditional data used to make credit decisions or to detect potential fraud. For example, lenders may check the email address provided by a borrower against a list of email addresses that a third party has identified as fraudulent. Federal agencies and stakeholders generally define alternative data as information not traditionally used by the national consumer reporting agencies in calculating a credit score. Some alternative data (such as on-time rent payments) are financial and similar to traditional data, while others are nonfinancial (such as a borrower's educational institution and degree).

Using alternative data in credit decisions presents potential benefits (such as the expansion of credit) and risks (such as the potential for disparate impact and other fair lending issues). The Consumer Financial Protection Bureau (CFPB) and federal banking regulators have monitored fintech lenders' use of alternative data by collecting information and developing reports on alternative data, but they have not provided lenders and banks with specific guidance on using the data in underwriting. For example, CFPB's fair lending examination procedures and the banking regulators' third-party guidance on risk do not clearly communicate the agencies' views on the appropriate use of alternative data. Nine of the 11 fintech lenders GAO interviewed said additional guidance would be helpful to clarify regulatory uncertainty, which some lenders identified as a barrier to further financial innovation in expanding access to credit. Further, federally regulated banks that have partnered with fintech lenders told GAO that clarification on appropriate use of alternative data would help them manage their relationships with those lenders. Federal internal control standards state that agencies should externally communicate the necessary quality information to achieve their objectives. With clear communication from CFPB and the federal banking regulators on appropriate use of alternative data in the underwriting process, fintech lenders would have greater certainty about their compliance with fair lending and other consumer protection laws, and federally regulated banks may be better able to manage the risks associated with partnering with fintech lenders that use these data.

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Abbreviations

CFPB	Consumer Financial Protection Bureau
Dodd-Frank Act	Dodd-Frank Wall Street Reform and Consumer Protection Act
FDIC	Federal Deposit Insurance Corporation
Federal Reserve	Board of Governors of the Federal Reserve System
fintech	financial technology
FTC	Federal Trade Commission
ILC	industrial loan company
NCUA	National Credit Union Administration
000	Office of the Comptroller of the Currency
SBA	Small Business Administration
SEC	Securities and Exchange Commission
SMART	Straightforward Metrics Around Rate and Total Cost
Treasury	Department of the Treasury

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U.S. GOVERNMENT ACCOUNTABILITY OFFICE

441 G St. N.W. Washington, DC 20548

December 19, 2018

The Honorable Sherrod Brown Ranking Member Committee on Banking, Housing, and Urban Affairs United States Senate

The Honorable Jeffrey A. Merkley United States Senate

The Honorable Jeanne Shaheen United States Senate

Financial technology (fintech) refers to the use of technology and innovation to provide financial products and services, and fintech lending is a growing subsector of this field.¹ Fintech lenders typically rely on the Internet to offer a variety of loan types and use different sources of funds than traditional banks.² While these lenders may use traditional means of assessing borrowers' creditworthiness, such as credit scores, their credit models also may analyze large amounts of nontraditional (also referred to as alternative) data on other aspects of borrower characteristics, such as information from bank accounts, to determine creditworthiness.

Policymakers have expressed an interest in better understanding the fintech lending industry and ensuring that consumers and small businesses are protected. In April 2017, we issued a report providing an overview of fintech activities and their oversight, and in March 2018 we

¹Both traditional financial firms, such as banks and investment advisers, and nontraditional financial service providers have begun to offer fintech products. In addition to lending, fintech products and services include, among other things, payments between individuals and businesses and advice on wealth management.

²For purposes of this report, we define fintech lenders broadly to mean online, nonbank lenders that leverage financial technology to provide consumers and small businesses with loans and focus primarily on lending that has evolved from the peer-to-peer and marketplace lending business models, which are discussed more fully later in the report. We do not include payday or mortgage lending within the scope of this report.

issued another report focusing on the regulation of the fintech industry, including fintech lending.³

You asked us to review a variety of fintech lending issues. This report focuses on three fintech lending segments (personal, small business, and student loans) and (1) describes trends in fintech lending and business models used by fintech lenders; (2) describes key regulatory and consumer protection issues in the fintech lending industry; and (3) examines fintech lenders' use of alternative data and the extent to which federal agencies monitor lenders' use of the data.

To identify trends in fintech lending and business models used by fintech lenders, we reviewed reports by industry stakeholders, such as academic institutions and data and analytics providers, that we identified through a literature search.⁴ We also interviewed representatives of fintech lending trade associations, and we interviewed and collected aggregated loan data from 2013 through 2017 from a sample of 10 fintech lenders.⁵ These firms were selected based on size (\$1 billion or more in loans originated or facilitated since the formation of the firm), products offered, and other factors.⁶ We assessed the reliability of the data collected by reviewing them for obvious errors or inaccuracies and interviewing fintech lenders about the systems and methods used to compile the data. We determined that the data included in this report were sufficiently reliable for purposes of estimating loan volume for the selected lenders from 2013 through 2017 and describing characteristics of their loan products. These data and information gathered from our interviews cannot be generalized to all fintech lenders.

To identify key regulatory and consumer protection issues, we reviewed reports by industry stakeholders and federal and state regulators

³GAO, *Financial Technology: Additional Steps by Regulators Could Better Protect Consumers and Aid Regulatory Oversight*, GAO-18-254 (Washington, D.C.: Mar. 22, 2018) and *Financial Technology: Information on Subsectors and Regulatory Oversight*, GAO-17-361 (Washington, D.C.: Apr. 19, 2017).

⁴App. I includes information on the literature we reviewed.

⁵We interviewed 11 fintech lenders and collected data from 10 of these lenders.

⁶The 11 fintech lenders we interviewed are among the largest and most prominent in the United States, according to data we collected and literature we reviewed. At the time we interviewed them, each had originated or facilitated between \$1 billion and \$33 billion in loans in the United States and Canada since formation of the firm, and combined they originated or facilitated over \$102 billion in loans.

(identified through a literature search) and materials from fintech lender conferences and forums (identified through Internet research). We also reviewed 15 fintech lender websites (selected using the same factors cited earlier) to determine what information on fees, interest rates, and loan terms are made available to potential borrowers before they apply for a loan. Additionally, we interviewed officials from the following federal agencies: Consumer Financial Protection Bureau (CFPB), Department of the Treasury (Treasury), Federal Deposit Insurance Corporation (FDIC), Board of Governors of the Federal Reserve System (Federal Reserve), Federal Trade Commission (FTC), National Credit Union Administration (NCUA), Office of the Comptroller of the Currency (OCC), Securities and Exchange Commission (SEC), and the Small Business Administration (SBA). We also interviewed representatives of five state banking regulators (selected based on experience licensing fintech lenders and other factors) and consumer and small business advocacy groups (identified by reviewing literature results and obtaining recommendations from industry stakeholders).

To identify how fintech lenders use alternative data, we reviewed reports by industry stakeholders and federal agencies (identified through a literature search) and reviewed responses to CFPB's request for information on alternative data.⁷ Additionally, we interviewed a sample of 11 fintech lenders and five fintech lending trade associations (selected and identified based on the factors described above). To assess the extent to which federal regulators have monitored the use of alternative data by fintech lenders, we reviewed federal regulators' examination policies, guidance on third-party risk management, and other documents. We also interviewed representatives of federal regulators and other agencies, federally regulated banks, and other industry stakeholders. See appendix I for more detail on our scope and methodology.

We conducted this performance audit from August 2017 to December 2018 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe

⁷On February 21, 2017, CFPB requested information from all interested members of the public on the use or potential use of alternative data and modeling techniques in the credit process. Through this request, CFPB sought to learn more about current and future market developments, including existing and emerging consumer benefits and risks, and how these developments could alter the marketplace and the consumer experience.

that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background	
Evolution of Fintech Lending	Fintech lending originated in the early 2000s as person-to-person (also referred to as peer-to-peer) lending, where individual investors financed loans. ⁸ Generally, the peer-to-peer lending process begins with a prospective borrower applying for a loan on an online platform. The borrower provides credit information, which is then posted on the platform after verification by the platform owner, who serves as an intermediary between prospective borrowers and prospective creditors. Individual investors can then choose which loans on the platform to fund. The platform owner earns revenue from fees imposed on the transacting parties, such as loan origination and loan servicing fees.
	The investor base for peer-to-peer lending subsequently expanded to include institutional investors such as banks, hedge funds, and private equity firms. The term "marketplace lending" arose at this time to reflect that the loans were now funded by institutional investors in addition to individuals, and the platforms that facilitate these loans were now referred to as "marketplace lenders." Some lenders also began partnering with banks to originate loans. A market for the securitization of these loans also emerged in which the lenders can obtain funding for loans by securitizing previously made loans and selling securities backed by the cashflows from the underlying loans. ⁹
	More recently, as business models falling outside of the marketplace lending model have emerged, industry stakeholders have started using the more expansive term "fintech lending." However, because the industry
	⁸ For more information on the origins of fintech lending in the United States, see GAO, <i>Person-to-Person Lending: New Regulatory Challenges Could Emerge as the Industry Grows</i> , GAO-11-613 (Washington, D.C.: July 7, 2011).
	⁹ Securitization is a process by which similar debt instruments—such as loans, leases, or receivables—are aggregated into pools, and interest-bearing securities backed by such pools are then sold to investors. These asset-backed securities provide a source of liquidity for consumers and small businesses because financial institutions can take assets that they would otherwise hold on their balance sheets, sell them as securities, and use the proceeds to originate new loans, among other purposes.

	continues to grow and evolve rapidly, there is no industry consensus on the definition of a fintech lender, and the way that different entities define a fintech lender varies.
Oversight of Fintech Lenders	As we reported in April 2017 and March 2018, some fintech firms, including some fintech lenders, are subject to indirect federal oversight as a result of relationships they have entered into with federally regulated financial institutions. ¹⁰ If a fintech firm partners with a federally regulated financial institution, such as a bank, federal banking regulators (FDIC, the Federal Reserve, or OCC) may conduct examinations of the regulated bank that could include some review of the extent to which the fintech firm may affect the partner bank's adherence to relevant laws and regulations. ¹¹ Regulators conduct these examinations in order to assess the risk to the regulated bank because the failure of the fintech firm to follow such laws and regulations could expose the bank to financial or other risks. As part of the indirect oversight of fintech firms, regulators would expect the bank, under various guidance on third-party relationships issued by these regulators, to assess and mitigate any risks to the institution resulting from their relationships with fintech firms. ¹² Fintech firms that are not partnered with federally regulated financial institutions could be subject to oversight by a federal regulator under certain circumstances. For example, fintech firms that apply for and receive OCC's special-purpose national bank charter or an industrial loan company charter would be subject to routine federal supervision by OCC
	¹⁰ GAO-18-254 and GAO-17-361.
	¹¹ NCUA does not have authority to examine third-party service providers that provide services to credit unions and must rely on credit unions voluntarily providing information on these providers. We have previously submitted a matter for consideration to Congress for it to consider granting NCUA this authority. See GAO, <i>Cybersecurity: Bank and Other Depository Regulators Need Better Data Analytics and Depository Institutions Want More Usable Threat Information</i> , GAO-15-509 (Washington, D.C.: July 2, 2015). As of October

2018, Congress had not acted on this matter.

¹²Third-party relationships include activities that involve networking arrangements, merchant payment processing services, and services provided by affiliates and subsidiaries; joint ventures; and other business arrangements in which a bank has an ongoing third-party relationship or may have responsibility for the associated records. See, for example, Office of the Comptroller of the Currency, *Third-Party Relationships: Risk Management Guidance,* OCC Bulletin 2013-29 (Washington, D.C.: Oct. 30, 2013). or FDIC, respectively.¹³ Fintech companies that receive a special-purpose charter are supervised like similarly situated national banks, which can include capital, liquidity, and financial inclusion commitments, among other requirements.

Further, CFPB has supervisory authority over certain nondepository institutions, including mortgage lenders and servicers, payday and private student loan providers, and "larger participants" in certain consumer financial product and service markets, each of which could include fintech providers. The Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) requires CFPB to define, by rule, the "larger participants" of a market for consumer financial products or services before it can supervise the larger participants' activities.¹⁴ As of September 2018, CFPB had issued final rules defining larger participants of the following markets: international money transfer, automobile financing, student loan servicing, consumer debt collection, and consumer reporting.¹⁵ Fintech service companies that fall within CFPB's supervisory authority over nondepository institutions are subject to examination by CFPB.

In addition, CFPB has supervisory authority over fintech companies that are affiliates of depository institutions subject to the bureau's supervisory authority or that act as service providers to depository and nondepository

¹³As discussed more fully later in the report, OCC announced on July 31, 2018, that it would begin accepting applications for national bank charters from nondepository fintech companies engaged in the business of banking. Industrial loan company charters are also discussed more fully later in the report.

¹⁴See Pub. L. No. 111-203, § 1024(a)(1)(B, (2)); 124 Stat. 1376, 1987 (2010) (codified at 12 U.S.C. § 5514(a)(1)(B)(2)).

¹⁵CFPB has not defined other larger participants specifically for other markets in which fintech firms may be active, but it has been considering a proposed rule to supervise larger participants in the personal loan markets, which might include larger fintech lenders that offer personal loans. See Semiannual Regulatory Agenda, 82 Fed. Reg. 40386, 40387 (Aug. 24, 2017). However, in June 2018, CFPB announced that it would postpone looking at the larger participants rule for personal loans until it completed a reconsideration of previously issued rules, including on payday, vehicle title, and certain high-cost installation loans. Semiannual Regulatory Agency, 83 Fed. Reg. 27234, 27235 (June 11, 2018).

entities subject to CFPB's supervisory authority.¹⁶ CFPB also has supervisory authority over fintech companies that act as service providers to a substantial number of smaller depository institutions that are not subject to CFPB's authority.¹⁷ CFPB may conduct standalone examinations of such fintech service providers, or review a fintech service provider's operations in connection with an examination of the supervised institution to which the fintech company acts as a service provider.¹⁸

In addition, fintech firms that violate federal and state regulations can be subject to enforcement actions by federal and state agencies with such authorities. OCC, the Federal Reserve, and FDIC may have enforcement jurisdiction over fintech firms when the firm is an "institution-affiliated party" under the Federal Deposit Insurance Act or a service company under the Bank Service Company Act.¹⁹ In addition, CFPB can generally take enforcement actions against institutions for noncompliance with federal consumer protection laws, including the Dodd-Frank Act's prohibition against unfair, deceptive, or abusive acts or practices.²⁰ FTC can also generally take enforcement actions against fintech firms not registered or chartered as banks for violations of any federal consumer laws FTC enforces, including the Federal Trade Commission Act's prohibition against unfair or deceptive acts or practices.

Fintech lenders that are not subject to federal supervisory oversight are generally subject to state oversight.²¹ According to staff from the Conference of State Bank Supervisors, all states and the District of Columbia require lending licenses for consumer lenders operating in their

¹⁹See 12 U.S.C. § 1864, § 1861(b)(2).

²⁰See 12 U.S.C. § 5481(14); § 5514; § 5515, § 5516, § 5531.

¹⁶See 12 U.S.C. § 5514(e); 12 U.S.C. § 5515(a)(d). The Dodd Frank Act defined a service provider for CFPB as any person that provides a material service to a covered person in connection with the offering or provision by such covered person of a consumer financial product or service. Pub. L. No. 111-203, § 1002, 124 Stat. 1376, 1955 (2010) (codified at 12 U.S.C. § 5481(26)).

¹⁷See 12 U.S.C. § 5516(e).

¹⁸CFPB can examine the fintech service provider to the same extent as if the services the fintech company performs on behalf of the financial institution were performed by the financial institution on the financial institution's premises. CFPB also has this authority with respect to service providers to a substantial number of small banks that the agency would not be able to independently examine.

²¹Fintech lenders may also be subject to oversight by both federal and state regulators.

states. State regulators in these jurisdictions examine the firms that hold licenses to assess their compliance with safety and soundness and various other requirements.²²

Finally, SEC regulates the offer and sale of securities to investors through disclosure requirements and antifraud provisions that can be used to hold companies liable for providing false or misleading information to investors. In some instances, fintech lenders may issue securities-for example, to raise capital to finance operations or as notes funded by investors who receive a stream of payments directly linked to the performance of a loan. The Securities Act of 1933 generally requires issuers that make a public offering of securities to register the offer and sale of their securities with SEC and provide investors with disclosures that include information about the company issuing securities, such as risk factors and financial information.²³ According to SEC staff, certain transactions may be exempt from the registration requirements of the Securities Act of 1933 depending on the particular facts of their securities offerings.²⁴ At the state level, state securities regulators are generally responsible for registering certain securities products and, along with SEC, investigating securities fraud. Table 1 provides examples of federal laws and regulations relevant to fintech lending.

²²State regulatory issues that affect fintech lenders are discussed more fully later in the report and in GAO-18-254.

²³15 U.S.C. §§ 77e, 77f, 77g.

²⁴For example, transactions involving private securities offerings may be exempt from registration requirements. See 15 U.S.C. § 77d(a)(2). According to SEC officials, many fintech lenders offer private securities and do not register their filings with SEC.

Table 1: Exam	ples of Federal Laws	and Regulations	Relevant to	Fintech Lending

Law or regulation	Example of relevant requirements or provisions	Federal agencies with regulatory or enforcement authority
Bank Service Company Act	Provides the federal banking agencies with the authority to regulate and examine the performance of certain services by a third-party service provider for a depository institution (or for any subsidiary or affiliate of a depository institution that is subject to examination by that agency) "to the same extent as if such services were being performed by the depository institution itself on its own premises."	FDIC, Federal Reserve, OCC
Electronic Fund Transfer Act (Regulation E)	Provides certain consumer rights regarding the electronic transfer of funds to and from consumers' bank accounts. Requires disclosure of terms and conditions of electronic transfers, limits consumer liability for unauthorized transfers, and establishes procedures for preauthorizing transfers and error resolution procedures.	CFPB, FDIC, Federal Reserve, FTC, NCUA, OCC
Equal Credit Opportunity Act (Regulation B) ^a	Prohibits creditors from discriminating against any applicant with respect to any aspect of a credit transaction on the basis of race, color, religion, national origin, sex or marital status, or age (provided the applicant has the capacity to contract), because all or part of the applicant's income derives from any public assistance program or because the applicant has in good faith exercised any right under the federal Consumer Credit Protection Act. Authorizes disparate treatment and disparate impact claims. Requires creditors to provide applicants with notice of action taken on their application for credit and a statement of the reasons for any adverse action.	CFPB, FDIC, Federal Reserve, FTC, NCUA, OCC, SEC
Fair Credit Reporting Act (Regulation V)	Requires a permissible purpose to obtain a consumer credit report and subjects persons reporting information to credit bureaus to certain accuracy requirements; imposes disclosure requirements on creditors who take adverse action on credit applications based on information contained in a credit report; and requires creditors to develop and implement an identity-theft prevention program.	CFPB, FDIC, Federal Reserve, FTC, NCUA, OCC, SEC
Truth in Lending Act (Regulation Z)	Requires creditors to provide meaningful disclosures concerning certain terms and conditions of certain loan and credit transactions with consumers; intended to help consumers understand the cost of credit and compare credit options.	CFPB, FDIC, Federal Reserve, FTC, NCUA, OCC
Investment Advisers Act of 1940	Requires investment advisers to meet recordkeeping, custodial, reporting, and other regulatory responsibilities. Persons who engage, for compensation, in the business of advising others as to matters involving securities meet the definition of investment adviser under the Investment Advisers Act of 1940.	SEC
Securities Act of 1933 (Public Offerings and Private Offerings)	Public Offerings: Requires companies engaged in the public offering of securities to register the securities offerings with SEC, unless the securities or offerings are exempt from the registration requirements of the Securities Act of 1933.	SEC
	Private Offerings: Allows companies to engage in private offerings of their securities, including offerings made in reliance on the safe harbors in Regulation D (rules governing the limited offer and sale of securities without registration).	

Law or regulation	Example of relevant	t requirements or provisions	Federal agencies with regulatory or enforcement authority
Dodd-Frank Wall Street Reform and Consumer Protection Act	Prohibits unfair, dece	ptive, or abusive acts or practices by those who ts or services to consumers.	
Section 5 of the Federal Trade Commission Act	partnerships, or corp	ceptive acts or practices by all persons, orations (except those persons or entities hat are engaged in commerce.	FDIC, Federal Reserve, FTC, NCUA, OCC
Title V of the Gramm-Leach-Bliley Financial Modernization Act (Regulation P)	Limits when a financial institution may disclose a consumer's "nonpublic personal information" to nonaffiliated third parties; requires financial institutions to notify their customers about their information-sharing practices and to tell consumers of their right to "opt out" if they do not want their information shared with certain nonaffiliated third parties.		CFPB, FDIC, Federal Reserve, FTC, NCUA, OCC
Legend:			
CFPB: Consumer Finan			
FDIC: Federal Deposit In			
	of Governors of the Fede	eral Reserve System	
FTC: Federal Trade Con	nmission		
NCUA: National Credit L	Inion Administration		
OCC: Office of the Com	otroller of the Currency		
SEC: Securities and Exc	hange Commission		
Source: GAO and Department o	f the Treasury. GAO-19-111		
		Note: This table is not exhaustive, and other federal I	aws and regulations may apply.
		^a CFPB officials indicated that they are currently reexa requirements.	amining Equal Credit Opportunity Act

Fintech Lending Has Grown in Recent Years, and Many Lenders Are Partnering with Banks

Fintech Lending Has Grown Over the Last Few Years and Is Expected to Continue Growing

While fintech lending remains small relative to credit extended by traditional banks, loan volume for fintech lenders has grown in recent years, according to data we collected and literature we reviewed. All of the fintech lenders we collected data from, for example, indicated that they saw significant overall growth in the last 3 to 5 years. Specifically, in

2017, personal loans provided by these lenders totaled about \$17.7 billion, up from about \$2.5 billion in 2013.²⁵ In addition, these lenders' small business loans and lines of credit grew from about \$582 million in 2013 to \$4.2 billion in 2017, and their student loans and student loan refinancing grew from about \$3.4 billion in 2015 to \$7.8 billion in 2017 (see fig. 1).²⁶

²⁵Loan volume data are aggregated across all selected lenders. Eight lenders we collected data from offer loans or lines of credit in one of the lending segments we reviewed (personal, small business, or student loans). Two offer loans in more than one lending segment.

²⁶Although loan origination declined to some degree in 2016, it started to recover by 2017. According to an industry report, many fintech lenders experienced a decline in originations over the first two quarters of 2016 because questions about underwriting standards and the sustainability of the industry, among other factors, led institutional investors to limit their investing while waiting for reassurances from the industry. See S&P Global Market Intelligence, *December 2016 U.S. Digital Lending Landscape* (2016). Two recent reports indicate that lenders have taken some steps, including tightening underwriting standards, to address these issues. See S&P Global Market Intelligence, *2017 U.S. Digital Lending Landscape* (2017), and Department of the Treasury, *A Financial System That Creates Economic Opportunities: Nonbank Financials, Fintech, and Innovation* (Washington, D.C.: July 2018).





Source: GAO analysis of 2013-2017 aggregated loan data from a sample of 10 fintech lenders. | GAO-19-111

Note: Data represent collective responses from a sample of fintech lenders. Data for years and lending segments in which fewer than three fintech lenders responded are not provided. ^aWe received too few responses in this lending segment to report for 2013 and 2014.

As a whole, the nonmortgage fintech lending market has experienced similar growth, according to literature we reviewed.²⁷ For example, one

²⁷Cambridge Centre for Alternative Finance and Chicago Booth Polsky Center, *The 2017 Americas Alternative Finance Industry Report: Hitting Stride* (2017); Bank for International Settlements and the Financial Stability Board, *FinTech Credit: Market Structure, Business Models and Financial Stability Implications* (May 2017); and Morgan Stanley, *Global Marketplace Lending: Disruptive Innovation in Financials* (May 2015). Mortgage fintech lending has also experienced growth, according to a Federal Reserve Bank of New York study. Specifically, the study found that technology-based lenders increased their market share of U.S. mortgage lending from 2 percent to 8 percent from 2010 through 2016. The study also found that mortgage fintech lenders—defined as lenders that enabled a mortgage applicant to obtain a preapproval online—process mortgage applications about 20 percent faster than other lenders. The study's analysis of Home Mortgage Disclosure Act data identified Quicken, LoanDepot.com, and Guaranteed Rate as the three largest mortgage fintech lenders in 2016. Federal Reserve Bank of New York, *The Role of Technology in Mortgage Lending* (February 2018).

academic study found that total loan volume for U.S. consumer and business loans provided by fintech lenders increased to about \$31.7 billion in 2016, up from \$10.4 billion in 2014 and \$26 billion in 2015.²⁸ Fintech lenders have also increased their share of the personal loan market over the last few years, according to TransUnion.²⁹

Several factors may be driving the growth of the fintech lending industry, according to literature we reviewed:

- **Continued financial innovation.** Fintech lenders may make greater use of technological innovations than traditional banks, such as automating more processes and making use of new data sources. These innovations can result in borrowers experiencing faster response times, loan approvals, and funding.
- **Consumer and business demand.** Some market segments, such as small businesses seeking out small-dollar loans and consumers without established credit histories, may be underserved by traditional banks, which may encourage these borrowers to seek out fintech lenders. As discussed more fully later in the report, fintech lenders' use of alternative data may facilitate credit provision to these types of borrowers.
- Lower interest rates on outstanding debt. Fintech lenders may offer lower interest rates than traditional banks to some borrowers wanting to consolidate outstanding debt, such as high-interest credit

²⁹TransUnion is one of the nation's largest consumer reporting agencies.

²⁸Cambridge Centre for Alternative Finance and Chicago Booth Polsky Center, *The 2017 Americas Alternative Finance Industry Report.* The study reviewed market volume for several online alternative finance models: marketplace consumer lending, balance sheet consumer lending, marketplace business lending, balance sheet business lending, marketplace property lending (secured against the respective property), equity-based crowdfunding, real estate crowdfunding, reward-based crowdfunding, and donation-based crowdfunding. We only report the total U.S. loan volumes for marketplace consumer lending, and balance sheet business lending, which are within the scope of our review.

card or student loan debt.³⁰ Fintech lenders may also offer a lowercost alternative to payday lenders for some borrowers.³¹

- Increased investor base. An increase in institutional investors may also be contributing to continued growth by expanding the funding base available for lending activity. For example, some investors may view fintech loans as an alternative asset class that can help diversify their portfolios.
- **Competitive advantage due to regulatory requirements.** Fintech lenders do not face the same capital requirements or routine examinations as traditional state- or federally chartered banks. These differences in regulatory requirements reduce their lending costs and may provide them with a potential competitive advantage over traditional banks.

Industry reports estimate that fintech lending will continue growing. For example, some market monitors estimate that annual fintech loan origination volume could range from \$90 billion to \$122 billion by 2020.³² Another analysis estimates that 15 of the most prominent U.S. fintech lenders will have a 16.5 percent compound annual growth rate from 2017 to 2021, and will have originated \$319.12 billion in total loans since their respective inceptions by the end of 2021.³³

Notwithstanding some estimates of continued growth in the fintech lending industry, there are factors that could limit the pace and scale of the growth, according to literature we reviewed. For example, fintech lenders have not experienced a full credit cycle, and their loan losses could be worse than expected in the event of an economic downturn, which might limit their future growth.³⁴ Further, traditional banks are

³²S&P Global Market Intelligence, *An Introduction to Fintech: Key Sectors and Trends* (October 2016) and FinXtech, *Fintech Intelligence Report: Marketplace Lending* (2017).

³³S&P Global Market Intelligence, 2017 U.S. Digital Lending Landscape.

³⁴A credit cycle is the expansion and contraction of access to credit by borrowers over a period of time.

³⁰However, borrowers who refinance federal student loans can lose access to significant benefits, such as loan forgiveness under Income-Driven Repayment plans and the Public Service Loan Forgiveness program, which may outweigh the benefit of a lower interest rate for some borrowers. Further, as discussed more fully later in the report, some borrowers may end up receiving loans with higher interest rates than loans from traditional banks.

³¹Generally, a payday loan is a single payment, short-term loan based on a personal check held for future deposit or electronic access to a personal checking account.

starting to launch their own digital lending services, potentially eroding fintech lenders' technological advantages. Finally, the potential for future regulatory requirements may limit fintech lenders' competitive advantages by bringing their regulatory compliance costs more in line with those faced by traditional banks.

The current size of the fintech lending industry limits its present impact on the stability of the financial system, but continued growth and a significant increase in overall market share could have a range of financial stability implications in the future, according to the Financial Stability Board and other market observers.³⁵ Some aspects of fintech lending growth could provide additional stability in an economic downturn. For example, fintech lending has diversified the approach to underwriting, increasing access to credit for some consumers and small businesses. Furthermore, some fintech lenders (such as peer-to-peer lenders, who rely on individual investors) are funded by sources of capital that may respond differently to their exposure to risk in a downturn. On the other hand, fintech lenders could potentially amplify swings in credit availability in several ways, according to literature we reviewed:

- Funding sources. If the investors that fund many fintech lending products are more willing than banks to fund loans during market upturns or less willing to fund loans during market downturns, credit bubbles or crunches could be exacerbated, according to the Financial Stability Board.
- Untested underwriting models. To the extent that fintech lenders use alternative approaches to underwriting and experience worse loan losses than expected during economic downturns, the exit of fintech lenders in a downturn could contribute to a credit contraction.
- Limited prudential oversight. A consequence of the limited prudential regulation of fintech lenders is that they are not subject to capital requirements and other policy measures designed to protect lenders in economic downturns. Particularly if fintech lenders crowd out traditional bank lending in some sectors during good times, credit availability in those sectors might be severely contracted in a downturn.

³⁵See Financial Stability Board, *Financial Stability Implications from FinTech: Supervisory and Regulatory Issues that Merit Authorities' Attention* (June 2017); Bank for International Settlements and the Financial Stability Board, *Fintech Credit;* and World Economic Forum, *The Role of Financial Services in Society: Understanding the Impact of Technology-Enabled Innovation on Financial Stability* (April 2016).

Because fintech lending has grown and evolved rapidly and has not experienced a full credit cycle yet, it is difficult to anticipate what overall effect fintech lending's stabilizing and destabilizing features will have on the financial system and the economy as a whole in the event of an economic downturn.

Fintech Lenders We Reviewed Use Various Business Models, but Nearly All Have Partnered with Federally Regulated Banks

The fintech lenders we reviewed used various business models to fund loans for consumers and small businesses, but most of them partnered with banks to originate loans.³⁶ The lenders' business models can generally be grouped into two broad categories, bank partnership or direct lender.³⁷ Generally, under the bank partnership model, prospective borrowers apply for a loan on the fintech lender's website. The application is then evaluated using the fintech lender's technology-based credit model, which incorporates the bank partner's underwriting criteria. Partnering with a bank to originate loans allows the fintech lender to use the bank's charter (instead of state lending licenses) to charge interest uniformly across the country and at rates that may not be permitted for direct lenders with state licenses due to state interest-rate limits.³⁸ Eight of the 11 fintech lenders we interviewed use this model to originate loans. Following origination, these fintech lenders may purchase the loans from the bank and then sell them to investors through a variety of channels (such as fractional loans to retail investors or whole loans to institutional investors) or purchase them from the bank and hold them on their balance sheets. According to literature we reviewed, the bank partnership model is one of the most prevalent business models used by fintech

³⁶The fintech lenders we interviewed told us that their operations were funded through various sources, such as equity or venture capital, revenue, publicly traded shares, or corporate credit facilities.

³⁷Some fintech lenders use both of these models. Other types of partnerships between banks and fintech lenders are described more fully later in the report.

³⁸According to the fintech lenders we interviewed, obtaining state lending licenses can be costly and onerous due to varying state requirements. State usury laws are typically designed to express interest rate caps applicable to loans and other financial products within the state. The National Bank Act provides for preemption of certain state consumer financial laws by national banks and specifically details how interest rates may be utilized by national banks without regard to state usury limits except for that of the state where the national bank is located. 12 U.S.C. § 25b, 85. In addition, federal courts have determined that the national bank can export the interest rate from the state where the bank is located. See Marquette Nat'l Bank v. First of Omaha Service Corp., 439 U.S. 299 (1978). Similar preemption authority is provided to state-chartered banks through the Federal Deposit Insurance Act. 12 U.S.C. § 1831d(a).

lenders in the United States.³⁹ Figure 2 illustrates the general flow of funds for a typical fintech lender that uses a bank partnership model to originate loans that are then sold to investors.⁴⁰



Source: GAO analysis of Congressional Research Service and Department of the Treasury information. | GAO-19-111

Three of the 11 fintech lenders with whom we spoke originate loans directly rather than partnering with a bank as an intermediary. These firms obtain lending licenses from multiple states and fund the loans through warehouse lines of credit, loan sales to institutional investors, or loan securitizations.⁴¹ Figure 3 illustrates the general flow of funds for a typical direct lender that originates its own loans.

³⁹See Bank for International Settlements and the Financial Stability Board, *Fintech Credit* and Department of the Treasury, *Nonbank Financials, Fintech, and Innovation.*

⁴⁰As discussed earlier, institutional investors can include banks, hedge funds, and private equity firms.

⁴¹Some direct lenders may also fund loans by issuing equity to institutional investors. See GAO-17-361.



Figure 3: Illustration of a Direct Lender Model

Source: GAO analysis of information from a sample of fintech lenders, Congressional Research Service, and Department of the Treasury. | GAO-19-111

The greatest variation among the business models used by the fintech lenders we interviewed occurred after the loans were originated. Two lenders securitized their loan portfolios or the underlying receivables of the loans, one lender held the loans on its balance sheet to collect interest, another sold whole loans to investors, and the remaining seven lenders used some combination of these approaches.⁴²

In addition to partnering with banks to originate loans, fintech lenders are partnering with banks in other ways. For example, 4 of the 11 fintech lenders we interviewed partner with banks to offer white label or cobranded loan products.⁴³ Two lenders engage in referral relationships in which banks or lending associations direct customers that are denied credit by traditional banks to the fintech lenders. Another 5 fintech lenders we interviewed service loans for their bank partners. According to literature we reviewed, these different types of partnerships have become increasingly common throughout the fintech lending industry.

Other trends we observed include fintech lenders' expansion into other lending segments and products. Specifically, although nine of the fintech lenders we interviewed offer loans in just one of the three fintech lending segments we reviewed, two offer loans in more than one segment and have also expanded into new segments, such as mortgages and auto

⁴²Two fintech lenders held at least some loans on their balance sheets.

⁴³Under a white label partnership, a bank uses a fintech lender's technology platform to provide a loan product under the bank's brand name. According to one fintech lender we interviewed, in a white label partnership the fintech lender often provides technology, underwriting, and support services to the bank, but does not typically purchase (and is not assigned) any portion or interest in the bank's loan products.

loan refinancing.⁴⁴ In addition, three of the fintech lenders we interviewed offer other products, including credit cards, wealth management products, and payment services. Two of these lenders also told us they plan to roll out new products, such as deposit products in partnership with a bank.

Fintech Lending Raises Regulatory and Consumer Protection Issues

Fintech Lenders and Other Stakeholders Cited Regulatory Challenges, Including Varying State Regulations and Other Issues

According to fintech lenders and other stakeholders we interviewed and literature we reviewed, the most significant regulatory challenges affecting the fintech lending industry are complying with varying state regulations. Lenders also cited concerns related to litigation about the "valid when made" doctrine, true lenders, and other issues.

Variation in state laws and regulations. Nine fintech lenders indicated that the variation in state licensing requirements and state enforcement priorities created a significant compliance challenge and made it difficult for them to operate in multiple states.⁴⁵ One lender stated that when doing business across all states, keeping track of varying requirements is difficult and imposes a significant compliance cost on the lender's operations. Another lender stated that since each state has different rules on disclosures and interest rates, the firm is required to change its lending model on a state-by-state basis. Four lenders said that variation in state laws is a factor that leads fintech lenders to partner with a bank to originate loans instead of pursuing state lending licenses. However, two state regulators with whom we spoke expressed concerns that fintech lenders were using bank partnerships to avoid state regulations, such as interest-rate limits.

⁴⁴For information on the characteristics of the loans provided by the fintech lenders we interviewed and their borrowers, see app. II.

⁴⁵Most of the fintech lenders we interviewed were not required to obtain state lending licenses because they partnered with banks to originate loans, but all the lenders held multiple state licenses in other areas, such as servicing and debt collection.

The state regulators expressed similar concerns about OCC's specialpurpose national bank charter.⁴⁶

Fintech lenders suggested streamlining regulations to make them more consistent between states and introducing passporting regimes as potential ways to reduce their compliance burden.⁴⁷ Nine lenders discussed efforts to streamline regulations between the states, such as the Conference of State Bank Supervisors' efforts, as positive steps. According to officials from the Conference of State Bank Supervisors, these efforts are designed to identify opportunities for addressing challenges in state licensing and supervision of nonbanks.⁴⁸ In general, state regulators with whom we spoke recognized the difficulties faced by lenders in operating in multiple jurisdictions and supported efforts to streamline regulations among states. Further, in its July 2018 report Treasury indicated its support for state regulators' efforts to build a more unified licensing regime and supervisory process across the states and recommended that Congress take action to encourage greater uniformity in lending regulations should the states not act.⁴⁹ However, state regulators we spoke with said that the states were better positioned than federal agencies to regulate fintech lending activities, as the states are closest to the lending activities and most familiar with the state lending markets.⁵⁰ On the other hand, OCC has stated that the option to apply for a national bank charter allows fintech companies to choose the best business model and regulatory structure for their business and

⁴⁶As discussed more fully later in the report, the OCC special-purpose national bank charter may allow fintech firms to preempt certain state regulations. According to some industry stakeholders we interviewed, the charter may provide fintech firms a more efficient and standardized regulatory regime, improving the firms' efficiency and reducing their state licensing and regulatory costs.

⁴⁷Passporting would entail states harmonizing licensure and supervision laws and regulations, creating a system whereby a licensee in one state could have its home state's license accepted, or passported, to other states within the reciprocity pact. See Department of the Treasury, *Nonbank Financials, Fintech, and Innovation*.

⁴⁸The Conference of State Bank Supervisors has launched an initiative known as Vision 2020 whose purpose is to encourage state regulators to transform the licensing process, harmonize supervision, engage fintech companies, assist state banking departments, make it easier for banks to provide services to nonbanks, and make supervision more efficient for third parties.

⁴⁹See Department of the Treasury, *Nonbank Financials, Fintech, and Innovation*.

⁵⁰For example, according to the Conference of State Bank Supervisors, state banking regulators have led the way in promoting and implementing innovative financial products in the past and thus are best positioned to do so in the future.

strategic goals, which can help firms meet the needs of their customers.

- "Valid when made" doctrine. Three fintech lenders with whom we spoke and literature we reviewed cited the Madden v. Midland Funding, LLC, decision as a source of uncertainty, particularly for lenders that partner with banks to originate loans. In 2015, the Second Circuit held that a nonbank that had been transferred loans originated by a national bank was not entitled to the federal preemption of state usury laws provided to national banks under federal law.⁵¹ This decision called into guestion the doctrine that loans are "valid when made" and do not become invalid when they are assigned to a third party, a doctrine that has served as court precedent for decades, according to literature we reviewed.⁵² According to Treasury's July 2018 report, the decision discourages lenders from purchasing, collecting interest on, selling, or securitizing loans made in the states in the Second Circuit because the lenders risk litigation asserting violations of state usury laws. Further, if the decision were adopted more broadly, it could impact other credit markets, such as debt collection and loan securitization activities.⁵³ Treasury recommended that Congress codify the "valid when made" doctrine to preserve lenders' ability to buy and sell validly made loans without the risk of coming into conflict with state interest-rate limits. In February 2018, the House of Representatives passed a bill to codify the "valid when made" doctrine, but as of November 2018, the bill had not been passed by the Senate.⁵⁴
- **True lender issues.** Another key issue has been raised by litigation that calls into question who the "true lender" is for loans originated under bank partnership models, according to four fintech lenders and literature we reviewed.⁵⁵ Some of these court decisions have found

⁵²Chapman and Cutler LLP, *The Regulation of Marketplace Lending: A Summary of the Principal Issues: April 2018 Update* (April 2018). The loans did not violate the state usury laws applicable to these loans at the time they were made.

⁵³Department of the Treasury, *Nonbank Financials, Fintech, and Innovation.* Further, OCC stated that the decision has already impacted financial markets, particularly those in the Second Circuit.

⁵⁴Protecting Consumers Access to Credit Act of 2017. H.R. 3299, 115th Cong. (2018).

⁵⁵See for example, Department of the Treasury, *Nonbank Financials, Fintech, and Innovation* and Chapman and Cutler LLP, *The Regulation of Marketplace Lending.*

⁵¹Madden v. Midland Funding, LLC., 786 F. 3d 246 (2nd Cir. 2015).

the fintech lender to be the true lender, which can then subject it to litigation for not following state requirements, such as interest-rate limits and licensing requirements.⁵⁶ These cases create uncertainty for lenders that partner with banks, particularly state banks, and may, according to Treasury's July 2018 report, pressure these lenders to alter their partnership arrangements based upon nonmarket factors.⁵⁷ In that report, Treasury recommended that Congress codify that relationships between a bank and third parties (including a fintech lender) do not affect the role of the bank as the true lender of loans it makes. Further, Treasury recommended that federal banking regulators reaffirm that the bank remains the true lender under such partnership arrangements—for example, through additional clarification of applicable compliance and risk-management requirements.⁵⁸

 Industrial Loan Company Charters. According to literature we reviewed, the possibility of fintech lenders pursuing industrial loan company (ILC) charters has received attention recently.⁵⁹ The benefit of pursuing an ILC charter is that ILCs can provide most types of financial products and services, but they may be owned by nonbanks without the company becoming a bank holding company subject to regulation under the federal Bank Holding Company Act.⁶⁰ As a result,

⁵⁶See Department of the Treasury, *Nonbank Financials, Fintech, and Innovation* and Chapman and Cutler LLP, *The Regulation of Marketplace Lending.*

⁵⁷Department of the Treasury, *Nonbank Financials, Fintech, and Innovation.*

⁵⁸Department of the Treasury, *Nonbank Financials, Fintech, and Innovation.*

⁵⁹According to the National Association of Industrial Bankers, California, Colorado, Hawaii, Indiana, Minnesota, and Utah permit ILCs but the majority operate in Utah and Nevada.

⁶⁰Regulation under the Bank Holding Company Act entails, among other things, consolidated supervision of the holding company by the Federal Reserve and restricts the activities of the holding company and its affiliates to those that are closely related to banking or, for qualified financial holding companies, activities that are financial in nature. By virtue of being exempt from the Bank Holding Company Act, the ILC's owner can engage in commercial and other activities that are not otherwise permissible for bank holding companies and financial holding companies. The Dodd-Frank Act requires the company that directly or indirectly controls an insured depository institution, such as an ILC, serve as a "source of strength" and thus provide financial assistance to such insured depository institution in the event of financial distress. For additional information on ILCs and the Bank Holding Company Act, see GAO, Bank Holding Company Act: Characteristics and Regulation of Exempt Institutions and the Implications of Removing the Exemptions, GAO-12-160 (Washington, D.C.: Jan. 19, 2012) and Industrial Loan Corporations: Recent Asset Growth and Commercial Interest Highlight Differences in Regulatory Authority, GAO-05-621 (Washington, D.C.: Sept. 15, 2005).

a fintech lender that obtains an ILC charter would be able to operate in multiple states based on the regulations of its chartering state, potentially eliminating the need for a bank partner. State regulators we interviewed that issue ILC charters stated they would support an application from a fintech lender if it could satisfy the requirements for such a charter.⁶¹ One regulator also noted that obtaining an ILC charter would subject the lender to more direct prudential regulatory oversight (by FDIC or state regulators) than it would otherwise receive as a partner of an existing bank.⁶²

In addition, fintech lenders and other stakeholders we interviewed and literature we reviewed discussed a number of federal issues that affect the fintech lending industry. These included emerging federal initiatives, coordination among federal regulators, changing priorities, and federal enforcement actions.

 OCC's special-purpose national bank charter. On July 31, 2018, OCC announced it would begin accepting applications for a specialpurpose national bank charter that would allow fintech firms to operate nationally under OCC supervision.⁶³ Like all national bank charters, the special-purpose national bank charter would allow fintech firms that receive it to preempt certain state laws, such as interest-rate

⁶¹One lender we interviewed applied for an ILC but subsequently withdrew its application. Another lender's ILC application is pending.

⁶²However, GAO has previously reported that there are disagreements between federal regulators over the adequacy of existing ILC regulations, with FDIC and OCC viewing such regulations as adequate and the Federal Reserve and Treasury viewing such regulations as lacking. See GAO-12-160.

⁶³See Office of the Comptroller of the Currency, OCC Begins Accepting National Bank Charter Applications from Financial Technology Companies, News Release, 2018-74 (July 31, 2018); Comptroller's Licensing Manual Supplement: Considering Charter Applications from Financial Technology Companies (July 2018); and Policy Statement on Financial Technology Companies' Eligibility to Apply for National Bank Charters (July 31, 2018).

caps.⁶⁴ In its July 2018 report, Treasury said the charter may provide fintech firms a more efficient and standardized regulatory regime, improving the firms' efficiency and reducing their state licensing and regulatory costs.⁶⁵ Six fintech lenders with whom we spoke generally supported the charter, but none identified any plans to pursue one.⁶⁶ State regulators and consumer groups we interviewed opposed the special-purpose charter.⁶⁷ Their concerns included that OCC lacks the legal authority to grant it and that state regulators were in the best position to protect consumers because they were more familiar than federal regulators with how fintech firms operate.⁶⁸

 Coordination among regulators. Nine fintech lenders expressed concern about fragmentation and insufficient coordination between existing federal regulators.⁶⁹ For example, some representatives of

⁶⁴According to OCC officials, not all state laws would be preempted. State laws that address antidiscrimination, fair lending, debt collection, taxation, zoning, crime, and torts all generally apply to national banks and would also apply to special-purpose national banks as defined in the Comptroller's Licensing Manual Supplement published on July 31, 2018. State laws that prohibit unfair or deceptive acts or practices, such as business conduct laws that address concerns such as material misrepresentations and omissions about products and services in billing, disclosure, and marketing materials, also generally apply to national banks, including special-purpose national banks. In addition, to the extent that a state law prohibiting unfair or deceptive acts or practices applies to a national bank and authorizes the state attorney general to bring an action in court against a national bank, the state attorney general could bring an action in court against a specialpurpose national bank for violations of the law.

⁶⁵See Department of the Treasury, *Nonbank Financials, Fintech, and Innovation*.

⁶⁶As of October 5, 2018, no fintech firms had applied for OCC's special-purpose charter.

⁶⁷OCC was not yet accepting applications for the charter at the time of our discussions with the fintech lenders, state regulators, and consumer groups.

⁶⁸Following OCC's July 2018 statement on the charter, the Conference of State Bank Supervisors and New York State's Department of Financial Services reaffirmed their concerns about the charter and their position that OCC lacks the legal authority to create it. OCC stated it does have the authority to issue such charters under the National Bank Act, and the New York Department of Financial Services and the Conference of State Bank Supervisors separately subsequently filed lawsuits in September 2018 and October 2018, respectively, challenging OCC's authority. Vullo v. OCC, No. 1:18cv8377 (S.D.N.Y. filed Sept.14, 2018); Conference of State Bank Supervisors v. OCC, No. 1:18cv2449 (D.C. filed October 25, 2018). OCC has publicly indicated its intent to defend the lawsuit filed by New York State.

⁶⁹However, we have previously reported that federal agencies have begun to collaborate on fintech regulatory issues through formal interagency working groups. For example U.S. prudential regulators have discussed issues related to potential risks of fintech lending through the Financial Stability Oversight Council. See GAO-18-254. the lenders with whom we spoke told us that regulators did not share enough with each other and sometimes requested the same information. These concerns were consistent with our previous observations that having multiple financial institution regulators can cause inconsistencies and inefficiencies in the oversight of these institutions.⁷⁰ For example, as we previously reported in February 2016, fragmentation in safety and soundness and consumer protection oversight has delayed regulatory action on matters of emerging risk because of difficulties regulators face in reaching agreement and the time it takes for them to coordinate their efforts.⁷¹ We also made several recommendations related to improving federal interagency coordination on fintech issues, including fintech lending.⁷²

CFPB "no-action letter" policy. To reduce potential regulatory uncertainty for innovative products that promise substantial consumer benefits, CFPB developed a policy that allows companies to apply for a statement referred to as a no-action letter. This letter provides a statement that, subject to any conditions or limitations, CFPB staff reviewed the company's application and have no present intention to recommend initiation of enforcement or supervisory action with respect to the particular aspects of a company's product under the specific identified provisions and applications of statutes or regulations that are subject to the no-action letter policy. As of July 2018, CFPB had issued one no-action letter to a fintech lender concerning the use of alternative data in underwriting decisions.⁷³ Fintech lenders we interviewed generally supported the no-action letter policy. However, they cited concerns that the process to obtain the letter was too time consuming and did not reflect the pace of

⁷⁰GAO, *Financial Regulation: Complex and Fragmented Structure Could Be Streamlined to Improve Effectiveness*, GAO-16-175 (Washington, D.C.: Feb. 25, 2016).

⁷¹GAO-16-175.

⁷²We recommended, among other things, that financial regulators engage in collaborative discussions with other relevant financial regulators in a group that includes all relevant stakeholders and has defined agency roles and outcomes to address issues related to consumers' use of account aggregation services. We also recommended that the Federal Reserve invite NCUA to participate in the Interagency Fintech Discussion Forum. The agencies agreed with our recommendations. The Federal Reserve has implemented our recommendations in part, and the other agencies have described steps they would take to implement the other recommendations. GAO-18-254.

⁷³The letter was issued to Upstart Network, Inc., on September 14, 2017. Available at https://www.consumerfinance.gov/about-us/newsroom/cfpb-announces-first-no-action-lett er-upstart-network/.

financial innovation. For example, these firms noted that the lender's application had taken more than 2 years to process. Moreover, these firms cited concerns that the letter applied only to CFPB and not to other regulators. Lenders suggested that these letters would be more helpful in reducing regulatory uncertainty if they were binding on other regulators.

- CFPB changes in priorities and reorganization. Two state regulators with whom we spoke and some consumer groups raised concerns about the impact of recent changes in priorities and reorganization at CFPB on federal oversight of fintech lenders and the resulting impact on state regulatory efforts. These statements were consistent with literature we reviewed, which suggested that if regulatory activity diminished on a federal level there would be increased state regulatory activity. However, it is not yet clear what impact CFPB's changing priorities will have on its oversight of fintech lenders.⁷⁴ Additionally, these changes are occurring at the same time as other federal initiatives such as OCC's special-purpose national bank charter, which may also affect federal oversight of fintech lenders. In September 2018, CFPB announced one of the first actions of the Office of Innovation-a proposal to create a "Disclosure Sandbox."⁷⁵ According to CFPB, the proposed disclosure sandbox is intended to allow certain companies, such as fintech lenders, to more efficiently test new ways to inform consumers.
- Recent enforcement actions. State and federal regulators also discussed certain enforcement actions that had been taken against fintech lenders or partner banks related to the misrepresentation of information provided to borrowers. For example, in April 2018 FTC filed a complaint alleging that Lending Club misrepresented to consumers that its loans contain "no hidden fees" when it actually deducted hundreds of dollars in hidden up-front fees from the loan proceeds.⁷⁶ Additionally, in October 2018 FTC announced the proposed settlement of an action against SoFi and a subsidiary for

⁷⁴In July 2018, CFPB announced that it had created the Office of Innovation to focus on encouraging consumer-friendly innovation, which was now a key priority for the bureau. According to CFPB, the work that was being done under its Project Catalyst, which included the no-action letter policy discussed above, was transitioned to this new office.

⁷⁵83 Fed. Reg.45,574 (Sept. 10, 2018).

⁷⁶For additional information, see Federal Trade Commission, *FTC Charges Lending Club with Deceiving Consumers*, press release (Apr. 25, 2018), accessed Dec. 3, 2018, https://www.ftc.gov/news-events/press-releases/2018/04/ftc-charges-lending-club-deceiving-consumers-0.

	making allegedly false advertising claims about consumers' savings as a result of the companies' student refinance loans. ⁷⁷ In March 2018, FDIC reached a settlement with Cross River Bank (a bank that partners with several fintech lenders), in which FDIC determined that the bank and its fintech partner had engaged in unfair and deceptive practices related to the marketing and origination of an unsecured debt consolidation loan product. In this case, the bank was fined \$641,750 and required to make restitution payments, among other actions. ⁷⁸
Consumer Protection Issues Include Transparency of Loan Terms and High Interest Rates	Certain consumer protection issues were identified related to fintech lending, including the extent of transparency about loan terms and conditions, data privacy concerns, and the potential for high interest rates.
Transparency in Lenders' Websites	Our review of 15 fintech lender websites indicated that information provided to borrowers about loan terms prior to submitting loan applications was not always transparent. ⁷⁹ Six of the 15 websites we reviewed did not provide transparent information on interest rates, fees, and repayment terms. ⁸⁰ All of these websites were for lenders engaged in student or small business lending, rather than personal loans.
	⁷⁷ See Federal Trade Commission, <i>Online Student Loan Refinance Company SoFi Settles FTC Charges, Agrees to Stop Making False Claims About Loan Refinancing Savings,</i> press release (Oct. 29, 2018), accessed Dec. 3, 2018, https://www.ftc.gov/news-events/press-releases/2018/10/online-student-loan-refinance-company-sofi-settles-ftc-charges.
	⁷⁸ See Federal Deposit Insurance Corporation, <i>FDIC Announces Settlement with Cross</i> <i>River Bank, Teaneck, New Jersey, and Freedom Financial Asset Management, LLC, San</i> <i>Mateo, California, for Unfair and Deceptive Practices,</i> (Washington, D.C.; Mar. 28, 2018).
	⁷⁹ We reviewed the websites of 15 fintech lenders, including firms in the segments of personal, small business, and student loans.
	⁸⁰ For purposes of determining "transparency," we utilized FTC guidance titled ".com Disclosures: How to Make Effective Disclosures in Digital Advertising" as examples of best practices. This guidance states that to be effective, required disclosures should be clear and conspicuous, including by being readily noticeable to consumers and not requiring scrolling; should use the same size and font as other text; and should be located near the advertising claims they qualify. Federal Trade Commission, <i>.com Disclosures: How to Make Effective Disclosures in Digital Advertising</i> (March 2013).

The information most commonly missing (in 5 of the 15 websites) was the interest rate that would be charged for the loan. When interest-rate information was clearly provided, it was presented in such a wide range that it may not be useful for comparison shopping. Some websites we reviewed showed that annual percentage rates for loans could range anywhere from 6 percent to 36 percent, but potential borrowers are not provided their actual interest rate until after they have submitted a loan application and underwriting activities have been undertaken, limiting the consumer's ability to readily compare interest rates.⁸¹ In their 2016 review of lender websites, FTC staff found that the number of clicks required to find key loan terms like annual percentage rate and fees—often considered a measure of the transparency—varied greatly.⁸²

Transparency in Small Business Lending Small business advocacy organizations and one state regulator with whom we spoke stated that they were particularly concerned about the transparency of information in small business lending. According to these stakeholders, small businesses may not fully understand loan terms and may accept loans they cannot afford. We have previously reported that fintech lenders offer great variation in small business loan types and terms, and that it can be difficult to understand and compare loan terms such as total cost of capital or annual percentage rate.⁸³ Further, according to a 2015 Federal Reserve survey, one area in which small businesses were dissatisfied with online lenders was transparency.⁸⁴

> Current federal laws and regulations that provide borrower protections generally apply to consumer loans and not small business loans or other commercial loans, regardless of whether the loans are provided by fintech

⁸²Federal Trade Commission, Office of Technology Research and Investigation, *A Survey of 15 Marketplace Lenders' Online Presence*, (June 9, 2016).

⁸³GAO-17-361.

⁸⁴Federal Reserve Bank of Cleveland, *Click, Submit: New Insights on Online Lender Applications from the Small Business Credit Survey* (Cleveland, Ohio: Oct. 12, 2016). Our analysis of fintech lender websites found that interest-rate information was not provided on three of the five small business lender websites we reviewed. As a result, it may be difficult for small business owners to estimate their total loan costs by reviewing lender websites. Further, in one case the cost of capital was expressed as a fee for borrowing funds and not as an interest rate, which may make comparison shopping between lenders difficult.

⁸¹Comparison shopping may be more useful for comparing repayment terms and fees. For example, 14 of 15 fintech lenders' websites we reviewed listed their loan repayment terms, and 13 of 15 websites listed information on additional fees.

lenders or traditional banks. For example, the Truth in Lending Actwhich, among other things, requires the lender to show the cost and terms to the borrower-does not apply to small business loans.⁸⁵ According to a May 2016 Treasury report, small business loans under \$100,000 share common characteristics with consumer loans but do not receive the same protections.⁸⁶ However, other laws and regulations may apply. For example, the Federal Trade Commission Act, which prohibits deceptive and unfair practices, applies to the advertising and provision of small business loans. Treasury's May 2016 report also notes that small business loans may receive protection under the enforcement of fair lending laws under the Equal Credit Opportunity Act. At the state level, in September 2018, California enacted a law requiring providers that facilitate commercial financing in the state, including small business loans, to disclose certain information to applicants at the time an offer of credit is extended.⁸⁷ The disclosure must include, among other things, the total amount of funds provided, information related to the payments to be made, and the total dollar cost of the financing.88

Some small business fintech lenders and industry groups have taken action to address issues around transparency. The Marketplace Lending Association, a fintech lender industry group, requires that its members disclose transparent prices to its borrowers, including annual percentage rate for personal loans, annualized interest rates for commercial loans, and any fees or scheduled charges for a loan, including any effective prepayment penalty.⁸⁹ In addition, two lenders we interviewed use the Straightforward Metrics Around Rate and Total Cost (SMART) Box tool, a

⁸⁵12 C.F.R. § 226.1; 12 C.F.R. § 1026.1.

⁸⁶Department of the Treasury, *Opportunities and Challenges in Online Marketplace Lending* (Washington, D.C.: May 10, 2016).

⁸⁷See California SB-1235 (2018). Provider is defined as a person who extends a specific offer of commercial financing to a recipient. Provider also includes a nondepository institution that enters into a written agreement with a depository institution to arrange for the extension of commercial financing by the depository institution to a recipient via an online lending platform administered by the nondepository institution.

⁸⁸The law will be effective January 1, 2019. According to CFPB officials, California is the first state to establish a disclosure law for commercial loans.

⁸⁹According to Federal Reserve officials, the way that some products, such as merchant cash advances, are structured may result in there being no savings from prepayment as the finance charges are charged up front. See Board of Governors of the Federal Reserve System, *Browsing to Borrow: "Mom and Pop" Small Business Perspectives on Online Lenders* (Washington, D.C: June 2018).

standardized disclosure of information to help small businesses understand and assess the cost of their finance options.⁹⁰ The tool provides total cost of capital, annual percentage rate calculations, and average monthly payment amounts, among other metrics.⁹¹ Some small business lenders have created a small business borrowers' "bill of rights" that calls on small business lenders to, among other things, provide disclosures that include transparent information on interest rates and fees, are written in plain English, and allow easy comparison among lender offers.
Data Accuracy and Privacy
One consumer advocacy group we spoke with expressed concerns about data accuracy and privacy issues related to the data fintech lenders use. We have previously reported that some fintech firms may pose privacy concerns because they may collect more consumer data than traditional

firms.⁹² For example, fintech lenders that use alternative data in underwriting may have sensitive information such as consumers'

educational background or utility payment information, and according to certain stakeholders, these data may contain errors that cannot be

disputed by consumers under the Fair Credit Reporting Act.⁹³ In addition, a Federal Reserve Board Governor has stated that consumers may not know what specific information alternative credit scoring systems use and how to improve the credit scores produced by these models.⁹⁴ Further, because loan terms generally are not available until after applying,

⁹²GAO-18-254.

⁹³Further, fintech lenders having access to small business transactional data may raise concerns about the privacy of consumer transaction information that is collected by small businesses. In addition, a concern was raised about who ultimately owns transactional data. For example, it is unclear whether the data are owned by the small business or the bank that processes the transaction. The federal Fair Credit Reporting Act promotes the accuracy, fairness, and privacy of information in the files of consumer reporting agencies.

⁹⁴Lael Brainard, *The Opportunities and Challenges of Fintech*, remarks at the Conference on Financial Innovation at the Board of Governors of the Federal Reserve System (Washington, D.C.: Dec. 2, 2016).

⁹⁰The SMART Box was developed by the Innovative Lending Platform Association and released in June 2016. According to the association, the SMART Box is intended to serve as a supplemental disclosure that presents key pricing information in a uniform fashion and helps to flag certain product features or policies for small businesses in plain English.

⁹¹However, the SMART Box is generally not available until after a customer has submitted an application and provided the lender with application information.

borrowers may need to share their financial information with multiple firms to effectively comparison shop.⁹⁵

In addition, one consumer group we interviewed raised concerns about the privacy implications of third-party data collected by fintech lenders.⁹⁶ One stakeholder noted that these data can contain sensitive personal information, such as that related to the borrower's health history. Further, some data aggregators may hold consumer data without disclosing what rights consumers have to delete the data or prevent the data from being shared with other parties. However, each of the fintech lenders we interviewed told us that information they collect is not shared or sold except under specific circumstances, such as when a loan is sold to another party, and only as permissible by law. Those firms told us that when they do share private information, it is primarily to investors and the information is generally anonymized.

Potential for High Cost Loans Some fintech lenders specialize in offering credit to traditionally underserved small businesses—such as those needing relatively small loans—which can expand these businesses' access to credit but not always at affordable rates. A study by the Federal Reserve Bank of Cleveland indicated that firms that obtained fintech financing were more likely to have characteristics associated with being denied credit by traditional banks, such as being in business for a short amount of time.97 Further, the fintech small business lenders we interviewed and two other industry stakeholders told us that traditional banks (unlike fintech lenders) are less willing to lend smaller amounts due to the fixed costs involved in underwriting loans, making them less economically viable than larger dollar business loans to banks that rely on traditional underwriting. Literature we reviewed similarly noted that these issues are challenges faced by small businesses in obtaining traditional financing. For example, in 2016 Treasury reported that small business lending has traditionally had higher transaction and underwriting costs than other types of lending

⁹⁵The 15 fintech lender websites we reviewed disclosed the types of information collected from an applicant, typically through a privacy policy on the website.

⁹⁶For example, some small business fintech lenders told us they require borrowers to provide access to third-party accounts, such as shipping records, which the lender monitors to determine adjustments to the borrower's credit limit.

⁹⁷Mark Schweitzer and Brett Barkley, *Is 'Fintech' Good for Small Business Borrowers? Impacts on Firm Growth and Customer Satisfaction*, Federal Reserve Bank of Cleveland (Cleveland, Ohio: January 2017).
and that lending at relatively small amounts has significant fixed costs that make such loans more expensive.⁹⁸ As such, small business fintech lenders may need to lend at higher rates for small dollar small business loans to be economically feasible.

On the other hand, since this is a segment of the market that fewer institutions serve, those who do provide small dollar loans to small businesses may be charging higher rates not only due to the risk and costs involved but also because they do not face adequate competitive pressure. Four consumer and small business advocacy groups we interviewed raised concerns about fintech loans' high interest rates, particularly for small business lending.⁹⁹ Further, according to a 2017 survey of the Federal Reserve Bank of New York, 52 percent of dissatisfied small business applicants that applied for loans with fintech lenders reported high interest rates as the primary reason for their discontent.¹⁰⁰ In 2017, the small business fintech lenders we interviewed offered loans with maximum annual percentage rates that ranged from 35.98 percent to 99.9 percent, with the average rate for each lender ranging from 15.82 percent to 43.7 percent. Determining whether these rates were appropriate or excessive in relation to the risk and cost of the loan was beyond the scope of our work.

⁹⁸Department of the Treasury, *Opportunities and Challenges in Online Marketplace Lending.*

⁹⁹The advocacy groups also raised concerns about payday lending interest rates. However, payday lending is not within the scope of this report. As stated earlier, generally a payday loan is a single payment, short-term loan based on a personal check held for future deposit or electronic access to a personal checking account.

¹⁰⁰Federal Reserve Bank of New York, *2017 Small Business Credit Survey* (New York City, N.Y.: 2018).

Fintech Lenders Use
Alternative Data in
Various Ways and
Agencies Perform
Some Monitoring, but
Guidance for Lenders
and Banks Is Limited

Fintech Lenders Use Alternative Data to Supplement Traditional Underwriting or Verify Information Five of the 11 fintech lenders we interviewed said they use alternative data to supplement traditional data when making a credit decision. In addition, one fintech lender used alternative data exclusively in its underwriting decisions.¹⁰¹ As defined by federal agencies and industry stakeholders, alternative data is any information not traditionally used by the three national consumer reporting agencies when calculating a credit score.¹⁰² Some of the information defined as alternative data is financial in nature and has characteristics similar to those of traditional data used by consumer reporting agencies. For example, on-time mortgage payments factor into credit scores, but on-time rental payments do not and are therefore considered alternative data. Other alternative data are nonfinancial. For example, two fintech lenders we interviewed consider the applicant's educational institution and degree when underwriting or pricing a loan. See figure 4 for more examples of traditional and alternative data.

¹⁰¹At least one lender in each of the three fintech lending segments (personal, small business, and student loans) we reviewed in this report stated that they use alternative data when making credit decisions.

¹⁰²Consumer reporting agencies, also known as credit reporting companies and credit bureaus, collect information on consumers that is commonly used to determine eligibility for credit, employment, and insurance, including credit scores. Credit scores are typically calculated using information such as on-time mortgage payments, unpaid debt, number and type of loans, debt collection history, and bankruptcy. The three national consumer reporting agencies are Equifax, Experian, and TransUnion.



Figure 4: Examples of Traditional and Alternative Data Used by Fintech Lenders

Source: GAO analysis of the Consumer Financial Protection Bureau, Federal Reserve System, and Department of the Treasury information. | GAO-19-111

Note: Examples of alternative data listed in the figure are not exclusively used for underwriting purposes. Fintech lenders may also use alternative data to price loans or verify a borrower's identity.

According to the fintech lenders we interviewed that use some form of alternative data in making underwriting decisions, the data may be obtained from the borrower, data aggregators, national databases, or other sources. For example, one lender stated that it makes credit decisions using information from multiple credit bureaus in conjunction with alternative data provided by the borrower on educational background, work history, occupation, and employer. Four lenders said that the addition of alternative data helps them better determine a potential borrower's credit risk.

Three lenders told us they use alternative data for fraud prevention purposes. For example, two of these lenders told us they verify a borrower's identity using information collected from the borrower's Internet browser. One lender also discussed checking the email address provided by a borrower against a list of email addresses that a third party has identified as fraudulent.

All 11 of the fintech lenders we interviewed stated that they take steps to test their underwriting model for accuracy or compliance with fair lending laws. Specifically, 10 discussed testing the accuracy of their credit model, and all 11 discussed testing to ensure their credit model does not discriminate against protected classes. Lending practices that result in unequal treatment based on race and sex, among other borrower characteristics, would be a violation of the Equal Credit Opportunity Act.¹⁰³ Two lenders said they use CFPB's report on fair lending analysis to test for potential discriminatory impacts of their model, and one used the federal banking regulators' model risk management guidance to review its model.¹⁰⁴ In addition, four lenders said they use third parties, including consulting and law firms specializing in fair lending issues, to test their model for compliance with fair lending laws.

¹⁰³The Equal Credit Opportunity Act, which prohibits discrimination by race, sex, and certain other borrower characteristics (see 15 U.S.C. § 1691), has two principal theories of liability: disparate treatment and disparate impact. Disparate treatment occurs when a creditor treats an applicant differently based on a prohibited basis such as race or national origin. See 12 C.F.R. pt. 1002, supp. I, § 1002.4. Disparate impact occurs when a creditor employs facially neutral policies or practices that have an adverse effect or impact on a member of a protected class unless they meet a legitimate business need that cannot reasonably be achieved by means that are less disparate in their impact. See 12 C.F.R. pt. 1002, 6.

¹⁰⁴CFPB's 2014 report outlines the model used by its Office of Research and Division of Supervision, Enforcement, and Fair Lending to conduct a fair lending analysis. Consumer Financial Protection Bureau, *Using Publicly Available Information to Proxy for Unidentified Race and Ethnicity* (Washington, D.C.: 2014).

Stakeholders and Literature Identified Both Benefits and Risks of Using Alternative Data

Industry stakeholders (those we interviewed and those that submitted comments to CFPB's request for information on alternative data) and literature we reviewed identified several potential benefits and risks associated with fintech lenders' use of alternative data.¹⁰⁵ Potential benefits include expansion of credit availability and faster credit decisions, among others.

- **Expansion of credit.** Several industry stakeholders and literature we reviewed noted that alternative data could potentially be used to allow fintech lenders to offer loans to borrowers whose traditional credit history may have been insufficient for banks to extend them credit. As we reported in March 2018, CFPB officials stated that using alternative data could expand responsible access to credit, particularly for some borrowers who are among the estimated 45 million people who lack traditional credit scores due to the lack of a credit history or an insufficient credit history, including borrowers with a "thin" credit file.¹⁰⁶
- **Improved pricing of products.** Two industry stakeholders and literature we reviewed discussed how using alternative data may enhance the assessment of a borrower's creditworthiness. As a result, the borrower may be placed in a better credit classification and receive lower-priced credit than would be available using traditional data alone.
- **Faster credit decision.** Two industry stakeholders and literature discussed how using alternative data may potentially allow fintech lenders to reach credit decisions more quickly than traditional banks and improve borrowers' convenience. For example, lenders can utilize alternative data sources to verify application information, including borrower identity, almost immediately.

¹⁰⁵In February 2017, CFPB issued a request for information on the use of alternative data and modeling techniques in the credit process. The comments respond to a number of topics raised by the request for information, including types of alternative data that may be used by fitnech lenders and potential risks and benefits of using alternative data and nontraditional modeling techniques.

¹⁰⁶GAO-18-254 and Consumer Financial Protection Bureau, *Data Point: Credit Invisibles* (Washington, D.C.: May 2015). According to this publication, there are an estimated 26 million consumers who do not have a credit history with one of the national credit reporting companies. An additional 19 million consumers were estimated to have "unscorable" credit files, which means either that their file is thin and they have insufficient credit history (9.9 million) or that they have stale files and lacked any recent credit history (9.6 million).

• **Fraud prevention.** As identified by five industry stakeholders and as discussed earlier, fintech lenders can use alternative data to verify borrowers' identities, which helps prevent fraud.

Potential risks identified by industry stakeholders (those we interviewed and those that submitted comments to CFPB) and literature we reviewed include the potential for disparate impact and cybersecurity concerns, among others.

- **Disparate impact and other fair lending issues.** Five industry stakeholders and literature discussed the potential for certain types of alternative data to be correlated with characteristics protected by fair lending laws. Accordingly, the use of alternative data in credit decisions raises concerns that borrowers who are part of protected classes may be adversely affected by the data's use. For example, according to a Federal Reserve newsletter, it has been reported that some lenders consider whether a consumer's online social network includes people with poor credit histories, which can raise concerns about discrimination against those living in disadvantaged areas. The newsletter noted that instead of expanding access to responsible credit, the use of data correlated with race or national origin could serve to entrench or even worsen existing inequities in financial access.¹⁰⁷
- Transparency of use. Seven industry stakeholders and literature expressed concerns that there may be a lack of transparency about what alternative data is being used and how it is used in the credit decision. Further, it may be unclear whether the borrower has the ability to dispute the information used.
- **Reliability of data.** Six industry stakeholders stated that ensuring many forms of alternative data are accurate without validation of the reliability of the data sources is difficult.

¹⁰⁷Federal Reserve System, *Consumer Compliance Outlook*, 2nd issue 2017. In addition, a study that looked at mortgage discrimination based on race found that among approved loans, ethnic-minority borrowers pay higher rates of interest with both traditional and fintech lenders. For example, they found that for 30-year fixed purchase loans between 2008 and 2012, African-American and Hispanic borrowers were charged 0.08% higher interest rate than other borrowers. This study classified lenders as "fintech lenders" based on their focus on online and algorithmic underwriting practices. Robert Bartlett, Adair Morse, Richard Stanton, and Nancy Wallace, *Consumer-Lending Discrimination in the FinTech Era*, UC Berkeley Public Law Research Paper (Mar. 19, 2018).

- **Performance during credit cycle.** As mentioned previously, fintech lending, including the use of alternative data in underwriting decisions, has not been tested in an economic downturn.
- **Cybersecurity.** As identified by Treasury, recent cybersecurity breaches illustrate the potential for security risks, which may become a growing concern as lenders expand beyond traditional borrower data.¹⁰⁸

Federal Agencies Have Taken Some Steps to Monitor Use of Alternative Data, but Existing Guidance Is Limited

Federal agencies have taken some steps to monitor the use of alternative data by collecting information about alternative data from industry stakeholders and developing reports and other publications.¹⁰⁹

• **Treasury.** In July 2015, Treasury issued a request for information on expanding access to credit through online lending and subsequently issued a white paper summarizing the responses received.¹¹⁰ The white paper noted that data-driven algorithms may expedite credit assessments and reduce costs but also carry the risk of disparate impact in credit outcomes and the potential for fair lending violations. More recently, in July 2018, Treasury issued a report on fintech and nonbank financial institutions, which included a discussion and recommendations to financial regulators on fintech lending and the use of alternative data.¹¹¹ Treasury officials stated that the agencies

¹⁰⁸As discussed in the Comptroller General's July 2018 testimony to Congress, cybersecurity breaches pose serious challenges to privacy and to economic, national, and personal security. Examples discussed include the March 2018 cyberattack on the city of Atlanta, Georgia, which affected the applications consumers use to pay bills and access court related information, and the July 2017 breach at Equifax, which resulted in the loss of personal information of an estimated 148 million U.S. consumers. *High-Risk Series: Urgent Actions Are Needed to Address Cybersecurity Challenges Facing the Nation*, GAO-18-645T (Washington, D.C.: July 25, 2018).

¹⁰⁹FDIC officials told us they consider banks' underwriting criteria, including the types of data used, when reviewing banks' underwriting processes during both safety and soundness and consumer compliance examinations. Officials also cited outreach efforts intended to help them monitor and better understand the banking industry, which could include fintech lending and potential use of alternative data. Among the efforts cited were the Advisory Committee on Economic Inclusion, the Advisory Committee on Community Banking, and a May 2018 forum discussing the use of technology in banking.

¹¹⁰Department of the Treasury, *Opportunities and Challenges in Online Marketplace Lending.*

¹¹¹Department of the Treasury, *Nonbank Financials, Fintech, and Innovation*. Among other things, the report recommended that state and federal regulators provide regulatory clarity for the use of new data and modeling techniques and that they further enable testing of new credit models and data sources.

are not required to adopt the report's recommendations, but they coordinate with the agencies on issues related to Treasury's work, including tracking its recommendations.

- Federal Reserve. In 2017, the Federal Reserve issued a newsletter containing questions about the use of alternative data that banks, including those partnering with fintech lenders, may want to consider.¹¹² Further, in March and April 2018, the Federal Reserve Banks of Chicago and Philadelphia issued working papers discussing the impact of a fintech lender's use of alternative data.¹¹³
- **CFPB.** As discussed earlier, in February 2017, CFPB issued a request for information on the use of alternative data and modeling techniques in the credit process. In response, CFPB received 109 comments, which were made public on regulations.gov and could be accessed via the agency's website. CFPB has also issued a no-action letter to a fintech lender related to the lender's credit model and use of alternative data. CFPB officials stated that as part of this process, they are monitoring that lender's use of alternative data.¹¹⁴

CFPB and the federal banking regulators have also issued guidance that broadly provides information on the examination procedures applicable to fintech lenders and their banking partners. However, as discussed in the following examples, the guidance does not specifically address the appropriate use of alternative data, such as issues to consider when assessing whether use of alternative data and methods may be consistent with fair lending laws.

¹¹⁴When issuing the no-action letter, CFPB noted that the letter was specific to the facts and circumstances of the particular company and did not serve as an endorsement of the use of any particular variables or modeling techniques.

¹¹²Specifically, the newsletter included an article that offered financial institutions and fintech firms general guideposts for evaluating unfair and deceptive practices and fair lending risk related to fintech, with a focus on alternative data. It suggests that financial institutions interested in using alternative data to make credit decisions consider questions related to both the basis for considering the data and how the data are going to be used. Federal Reserve System, *Consumer Compliance Outlook*, 2nd issue 2017. In July 2018, the Federal Reserve hosted a webinar covering similar material.

¹¹³Specifically, one working paper used data from Lending Club to compare the pricing and performance of loans when alternative versus only traditional data were used at origination. A second working paper used Lending Club data to examine whether fintech firms expand the availability of credit in areas that may be underserved by traditional banks. Federal Reserve Banks of Chicago and Philadelphia, *Do Fintech Lenders Penetrate Areas That Are Underserved by Traditional Banks?* (Philadelphia, Pa.: March 2018) and *The Roles of Alternative Data and Machine Learning in Fintech Lending: Evidence from the Lending Club Consumer Platform* (Philadelphia, Pa.: April 2018).

- Fair lending examination procedures. CFPB has developed fair lending examination procedures that discuss identifying and detecting potential fair lending violations related to credit models.¹¹⁵ According to CFPB officials, although the procedures do not expressly discuss alternative data, they can be applied to all credit models, including those incorporating alternative data. However, CFPB has not issued any procedures or guidance specifically discussing what the agency considers to be appropriate use of alternative data.
- Third-party or vendor management guidance. The federal banking regulators have each provided third-party or vendor management guidance to depository institutions, which describes the risk assessment, due diligence and risk monitoring, and oversight that banks should engage in when working with third parties, including fintech lenders.¹¹⁶ However, the guidance does not specifically mention fintech lending activities or provide specific information on how bank management should monitor a third party's use of alternative data and any associated risks.

¹¹⁵Consumer Financial Protection Bureau, Supervision and Examination Manual (Washington, D.C.: August 2018). Additionally, as discussed earlier, CFPB's 2014 report titled Using Publicly Available Information to Proxy for Unidentified Race and Ethnicity outlines the model used by its Office of Research and Division of Supervision, Enforcement, and Fair Lending to conduct a fair lending analysis. Further, OCC, FDIC, the Federal Reserve and other member agencies of the Federal Financial Institutions Examination Council have developed Interagency Fair Lending Examination Procedures. FDIC officials told us that they use these procedures, which include guidance on how to evaluate automated underwriting and credit scoring models, to conduct fair lending reviews. See Federal Financial Institutions Examination Council, Interagency Fair Lending Examination Procedures (Washington, D.C.: August 2009).

¹¹⁶For example, OCC's Third-Party Relationships Risk Management Guidance says that a bank should adopt risk-management processes commensurate with the level of risk and complexity of its third-party relations and ensure comprehensive risk management and oversight of third-party relationships involving critical activities through the lifecycle of the relationship. Office of the Comptroller of the Currency, Third-Party Relationships, OCC Bulletin 2013-29. FDIC's Guidance for Managing Third-Party Risk provides four main elements of an effective third-party risk management process: (1) risk assessment, (2) due diligence in selecting a third party, (3) contract structuring and review, and (4) oversight. Federal Deposit Insurance Corporation Financial Institution Letters 44-2008, Guidance For Managing Third-Party Risk (Washington, D.C.: June 6, 2008). The Federal Reserve's Guidance on Managing Outsourcing Risk states that financial institutions should consider several types of risk, including compliance risk, before entering into and while managing outsourcing arrangements and also describes the core elements that should be included in effective service provider risk management programs. Board of Governors of the Federal Reserve System, Guidance on Managing Outsourcing Risk (Washington, D.C.: Dec. 5, 2013).

• **Supplemental information.** The federal banking regulators have also taken some steps to supplement the existing third-party guidance with more information that may be applied to banks' relationships with fintech lenders. However, these efforts do not include clarification on the regulators' views on alternative data. For example, in July 2016, FDIC issued proposed third-party lending guidance that outlines the risks that may be associated with third-party lending, as well as the expectations for a risk-management program, supervisory considerations, and relevant examination procedures.¹¹⁷ However, the proposed guidance does not specifically address alternative data. Further, FDIC has not finalized the guidance and, as of October 2018, had not identified plans to do so.

Additionally, in June 2017, OCC issued a list of frequently asked questions to supplement its third-party risk management guidance.¹¹⁸ The list of frequently asked questions specifies that relationships between fintech lenders and banks may be subject to the third-party guidance, but it does not provide additional information about OCC's views on appropriate use of alternative data. OCC also issued a bulletin on small-dollar lending which states that policies and procedures specific to short-term, small-dollar installment lending would generally include analyses of internal and external data sources that could facilitate sound underwriting for credit offered to consumers who have the ability to repay but do not meet traditional credit standards.¹¹⁹ While OCC officials noted that this bulletin alludes to the use of alternative data, the bulletin does not provide further information on what OCC considers to be appropriate use of such information or examples of what would be considered reasonable practices.

We reported in March 2018 that fintech lenders may face challenges because agencies with authorities related to consumer protection and fair lending have not issued guidance on the use of alternative data and

¹¹⁷Federal Deposit Insurance Corporation, Financial Institution Letters 50-2016, *Proposed Guidance on Third-Party Lending* (Washington, D.C.: July 29, 2016).

¹¹⁸Office of the Comptroller of the Currency, *Frequently Asked Questions to Supplement OCC Bulletin 2013-29*, OCC Bulletin 2017-21 (Washington, D.C.: June 2017).

¹¹⁹Office of the Comptroller of the Currency, *Installment Lending: Core Lending Principles for Short-Term, Small-Dollar Installment Lending,* OCC Bulletin 2018-14 (Washington, D.C.: May 2018).

modeling.¹²⁰ Further, nine of the fintech lenders we interviewed stated that additional guidance on what constitutes appropriate use of alternative data would be helpful to clarify regulatory uncertainty. For example, one lender stated that guidance that clarified the appropriate use of alternative data and outlined steps lenders should take to ensure compliance with fair lending laws would be helpful. Another lender said it would be helpful for federal regulators to develop additional guidance clarifying how to incorporate different types of data in lending decisions. Additionally, three fintech lenders stated that the uncertainty surrounding the use of alternative data arising from the lack of clear guidance acts as a barrier to further financial innovation and potential expansion of access to credit.

Similarly, federally regulated banks that have partnered with fintech lenders told us that clarification on appropriate use of alternative data by federal regulators would help them manage their relationships with those lenders. For example, representatives of one bank said that a partner fintech lender's use of alternative data may be attractive from an innovation and business perspective, but the bank would likely hesitate to agree to using these data due to regulatory uncertainty. Bank representatives stated that more guidance would therefore be helpful to clarify what is and is not permissible in terms of alternative data.

Federal internal control standards state that agencies should externally communicate the necessary quality information to achieve their objectives.¹²¹ According to the standards, agencies' selection of the appropriate methods to communicate with external parties can contribute to their ability to communicate quality information. Some factors to consider when selecting the appropriate communication include intended recipients of the communication, its purpose, and whether the information is readily available when needed. Additionally, federal internal control standards identify the consideration of expectations from external parties as a key element of collecting information to achieve the agencies' objectives. We have also previously identified interagency collaboration practices that can enhance the public value resulting from the agencies' efforts, which include defining and articulating common outcomes and

¹²⁰In that report, industry stakeholders we interviewed stated that the lack of clarity on fair lending and use of alternative data and modeling creates uncertainty for fintech lenders, leading some fintech lenders to forgo use of alternative data since they do not know if it will produce outcomes that violate fair lending laws and regulations. GAO-18-254.

¹²¹GAO, *Standards for Internal Control in the Federal Government*, GAO-14-704G (Washington, D.C.: September 2014).

establishing compatible policies and procedures.¹²² For CFPB and the federal banking regulators, clear, consistent communication with regulated entities is necessary for effective oversight.¹²³ CFPB's responsibilities include providing oversight and enforcement of fair lending laws in order to strengthen industry compliance programs and ensure fair, equitable, and nondiscriminatory access to credit for individuals and communities.¹²⁴ Additionally, federal banking regulators expect financial institutions to assess and mitigate any risks to the institution resulting from relationships with fintech firms and have issued third-party guidance to help banks address these risks.

However, CFPB has not clearly communicated its views on the appropriate use of alternative data to fintech lenders under its supervision, nor have the federal banking regulators communicated this information to federally regulated banks that partner with these lenders. CFPB officials told us that they have not issued any communication on the use of alternative data because CFPB's Office of Innovation was only recently established and is still setting its agenda. However, they are considering actions related to the use of alternative data and modeling techniques through various channels, including the bureau's market-monitoring activity, no-action letter policy, and recently created Office of Innovation. Federal Reserve officials told us that they have not publicly disclosed any plans to issue guidance related to the appropriate use of alternative data.¹²⁵ FDIC and OCC officials told us they did not have plans

¹²²Results-Oriented Government: Practices That Can Help Enhance and Sustain Collaboration among Federal Agencies, GAO-06-15 (Washington, D.C.: Oct. 21, 2005).

¹²³As previously discussed, CFPB regulates the offering and provision of consumer financial products or services under federal consumer financial laws. CFPB also supervises certain institutions, including some fintech lenders, and as part of this supervision has issued fair lending examination guidance. Further, FDIC, the Federal Reserve, and OCC are responsible for overseeing banks, including those that partner with fintech lenders.

¹²⁴CFPB's strategic plan also identifies the provision of tools and resources to support compliance with fair lending laws as a key strategy to support its objective of facilitating access and innovation among financial products. Consumer Financial Protection Bureau, *Consumer Financial Protection Bureau Strategic Plan FY 2018-2022* (Washington, D.C.: Feb. 12, 2018).

¹²⁵Federal Reserve officials also noted that an issue of *Consumer Compliance Outlook* published in 2016 includes a list of laws and regulations potentially applicable to fintech activities, along with a list of Federal Reserve guidance potentially relevant to fintech firms and their bank partners. Federal Reserve System, *Consumer Compliance Outlook*, 3rd issue 2016.

to provide additional information on the appropriate use of alternative data because they believed their existing guidance sufficiently addresses this issue as it can be applied to the use of both traditional and alternative data.¹²⁶ However, as previously discussed, our review of the banking regulators' existing guidance found that, with the exception of a newsletter issued by the Federal Reserve, the guidance does not specifically address alternative data, and steps have not been taken to clarify how existing guidance can be applied to its use.¹²⁷ Further, a firm with experience testing lenders' credit modeling and use of alternative data for compliance with fair lending laws explained that fintech lenders face challenges when applying fair lending laws to the use of alternative data, determining what sufficient testing of credit models that use alternative data entails, and documenting how they use alternative data for potential regulatory review. Finally, officials at two banks we interviewed discussed regulatory uncertainty surrounding the use of alternative data, particularly as it relates to compliance with fair lending laws, and said that additional information about the appropriate use of alternative data would help them better manage their relationships with fintech lenders.

With communication from CFPB on the appropriate use of alternative data in the underwriting process, fintech lenders subject to CFPB's supervisory authority would have greater certainty about their compliance with fair lending or other laws when using alternative data. Moreover, with increased certainty about the appropriate use of alternative data, lenders may be able to pursue innovative uses of alternative data that may expand responsible access to credit. Similarly, with clear communication from banking regulators, banks partnering with fintech lenders may be better able to effectively manage all the risks associated with the

¹²⁶FDIC officials stated that based on their monitoring of emerging technologies, their existing guidance serves as an effective resource for financial institutions. According to officials, relevant guidance includes *Supervisory Guidance on Model Risk Management*, *Interagency Fair Lending Examination Procedures*, and *Interagency Guidance Regarding Unfair or Deceptive Credit Practices*.

¹²⁷For example, the previously discussed third-party risk management guidance issued by banking regulators establishes that banks' monitoring activities include ensuring third parties, such as fintech lenders, comply with applicable laws, rules, and regulations. However, it does not provide any reference to alternative data. In addition, FDIC's Compliance Examination Manual provides a series of examples in which hypothetical lending decisions result in violations of the Equal Credit Opportunity Act, but none of these examples discuss potential implications of the use of alternative data in the hypothetical lending decision. Federal Deposit Insurance Corporation, *Compliance Examination Manual* (Washington, D.C.: September 2016).

relationship, including ensuring compliance with fair lending and other consumer protection laws. Further, fintech lenders interested in pursuing partnerships with banks may better understand what federal banking regulators require of them to comply with relevant laws.

Conclusions	Using alternative data in credit decisions presents potential benefits (such as the expansion of credit) and risks (such as the potential for disparate impact and other fair lending issues). CFPB and federal banking regulators monitor fintech lenders' use of alternative data through information gathering and analysis, but they have provided lenders and banks limited communication on the appropriate use of such data in the underwriting process. Specifically, although CFPB has developed fair lending examination procedures, the agency has not communicated what it considers to be appropriate use of alternative data or steps firms may take to determine whether their use of this data complies with fair lending laws. In addition, while FDIC, the Federal Reserve, and OCC have issued third-party guidance on due diligence and risk monitoring that can be used by banks that partner with fintech lenders, this guidance does not clearly communicate the regulators' views on the appropriate use of alternative data. Clear, consistent communication on alternative data can help provide fintech lenders with greater assurance that they are complying with fair lending laws when using these data in their credit decisions. It can also help the lenders' bank partners effectively manage the risks associated with partnering with firms that use these data. Additionally, this communication may allow fintech lenders and their bank partners to innovate and expand access to credit through the responsible use of alternative data.
Recommendations for Executive Action	We are making a total of four recommendations, one each to CFPB, the Federal Reserve, FDIC, and OCC. Specifically: The Director of the Consumer Financial Protection Bureau should, in coordination with the federal banking regulators and with input from relevant stakeholders, communicate in writing to fintech lenders on the appropriate use of alternative data in the underwriting process, including issues to consider when selecting types of alternative data to use. (Recommendation 1)
	The Chair of the Board of Governors of the Federal Reserve System should, in coordination with the other federal banking regulators and the Consumer Financial Protection Bureau and with input from relevant

	stakeholders, communicate in writing to banks that engage in third-party relationships with fintech lenders on the appropriate use of alternative data in the underwriting process, including issues to consider when selecting types of alternative data to use. (Recommendation 2) The Chairman of the Federal Deposit Insurance Corporation should, in coordination with the other federal banking regulators and the Consumer
	Financial Protection Bureau and with input from relevant stakeholders, communicate in writing to banks that engage in third-party relationships with fintech lenders on the appropriate use of alternative data in the underwriting process, including issues to consider when selecting types of alternative data to use. (Recommendation 3)
	The Comptroller of the Currency should, in coordination with the other federal banking regulators and the Consumer Financial Protection Bureau and with input from relevant stakeholders, communicate in writing to banks that engage in third-party relationships with fintech lenders on the appropriate use of alternative data in the underwriting process, including issues to consider when selecting types of alternative data to use. (Recommendation 4)
Agency Comments, Third-Party Views, and Our Evaluation	We provided a draft of this report to CFPB, FDIC, the Federal Reserve, FTC, NCUA, OCC, SBA, SEC, and Treasury. We received written comments from CFPB, FDIC, the Federal Reserve, NCUA, and OCC, which are reprinted in appendixes III–VII. CFPB, FDIC, the Federal Reserve, FTC, OCC, and SEC provided technical comments, which we incorporated as appropriate. We also provided report excerpts to the fintech lenders we collected data from for their review and comment. Four of the 10 fintech lenders provided technical comments, which we incorporated as appropriate.
	CFPB, FDIC, the Federal Reserve, and OCC indicated in their comment letters that they planned to take action to address our recommendations. The agencies also outlined some of their efforts to monitor the use of alternative data.
	• CFPB stated that it has looked at and continues to look at the benefits and risks of using alternative data by, for example, issuing a request for information on the use of alternative data and seeking comments from the public on current and future market developments.

- FDIC stated that it monitors the use of alternative data through the examination process by reviewing banks' underwriting processes for both safety and soundness and consumer compliance.
- The Federal Reserve outlined its efforts to provide information on fintech issues to industry stakeholders, including an article in its consumer compliance publication that provided information on fair lending risk related to fintech and alternative data.
- OCC stated that it has taken steps to encourage responsible innovation by fintech firms engaged in third-party relationships with banks and has ongoing outreach efforts to allow it to monitor and better understand innovative trends in financial services, including fintech lending and the potential use of alternative data. OCC also stated that it is committed to maintaining open and ongoing communication with banks and fintech lenders regarding supervisory expectations, to continuing to improve its understanding of industry use of alternative data, and to evaluating OCC guidance, as appropriate.

CFPB stated that it intends to continue its work related to the use of alternative data and is committed to providing information on alternative data in the future. FDIC, the Federal Reserve, and OCC each stated that they planned to work collaboratively with each other and CFPB to determine the type of communication that would most effectively serve the purpose of addressing the recommendations.

In its comment letter, NCUA stated that it recognized that fintech, including the use of alternative data in lending, continues to be a growing area in the financial services industry and that it has established an internal working group and participates in various interagency working groups and forums to explore fintech-related issues.

We are sending copies of this report to the appropriate members of Congress, CFPB, FDIC, the Federal Reserve, FTC, NCUA, OCC, SBA, SEC, Treasury, and other interested parties. In addition, this report will be available at no charge on GAO's website at http://www.gao.gov.

If you or your staff have any questions about this report, please contact me at (202) 512-8678 or clementsm@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix VIII.

Sincerely yours,

Michael Clements

Michael E. Clements Director, Financial Markets and Community Investment

Appendix I: Objectives, Scope, and Methodology

This report focuses on three financial technology (fintech) lending segments (personal, small business, and student loans) and (1) describes trends in fintech lending and business models used by fintech lenders; (2) describes key regulatory and consumer protection issues in the fintech lending industry; and (3) examines fintech lenders' use of alternative data and the extent to which federal agencies monitor lenders' use of the data. For purposes of this report, we defined "fintech lender" broadly to mean online, nonbank lenders that leverage financial technology to provide consumers and small businesses with loans. However, we did not include payday or mortgage lending within the scope of this report. Instead, we focused primarily on fintech lending that evolved from the peer-to-peer and marketplace lending business models, which initially relied on individual investors to fund loans.

To identify trends in fintech lending and business models used by fintech lenders, we reviewed reports by industry stakeholders, such as academic institutions and data and analytics providers that we identified through a literature search.¹ We also conducted semistructured interviews and collected aggregated loan data for years 2013–2017 from a sample of fintech lenders: Avant, College Ave, CommonBond, Funding Circle, Kabbage, Lending Club, OnDeck, Prosper, Upstart, SoFi, and Square Capital.² We selected these firms based on their size (\$1 billion or more in loans originated or facilitated), products offered (firms that provide loans in one or more of the three fintech lending segments we reviewed), inclusion in a report that described characteristics of the fintech lending industry, and recommendations by industry stakeholders.

²We collected data from 10 of the 11 lenders.

¹Bank for International Settlements and the Financial Stability Board, *FinTech Credit: Market Structure, Business Models and Financial Stability Implications* (May 2017); Cambridge Centre for Alternative Finance and Chicago Booth Polsky Center, *The 2017 Americas Alternative Finance Industry Report: Hitting Stride* (2017); Federal Reserve Bank of New York, *The Role of Technology in Mortgage Lending* (February 2018); Financial Stability Board, *Financial Stability Implications from FinTech: Supervisory and Regulatory Issues that Merit Authorities' Attention* (June 2017); FinXtech, *Fintech Intelligence Report: Marketplace Lending* (2017); Morgan Stanley, *Global Marketplace Lending: Disruptive Innovation in Financials* (May 2015); S&P Global Market Intelligence, *An Introduction to Fintech: Key Sectors and Trends* (October 2016); S&P Global Market Intelligence, *2017 U.S. Digital Lending Landscape* (2017); Department of the Treasury, *A Financial System That Creates Economic Opportunities: Nonbank Financials, Fintech, and Innovation* (Washington, D.C.: July 2018); and World Economic Forum, *The Role of Financial Services in Society: Understanding the Impact of Technology-Enabled Innovation on Financial Stability* (April 2016).

To collect data from the lenders, we developed a data collection instrument that we then pretested with one firm to ensure clarity and understandability. To assess the reliability of the loan data we collected, we reviewed the data for obvious errors or inaccuracies by comparing the data to publicly available data from the lenders' websites and data published in industry reports (to the extent available). We also interviewed representatives of these firms with knowledge of the systems and methods used to produce these data.³ We determined that the data we included in the report were sufficiently reliable for purposes of estimating loan volume for these selected lenders and identifying loan characteristics for their loan products. Data collected from the lenders and information gathered through interviews cannot be generalized to all fintech lenders. Additionally, we interviewed five fintech lending trade associations (Marketplace Lending Association, Innovative Lending Platform Association, Responsible Business Lending Coalition, Center for Financial Services Innovation, and the Online Lending Policy Institute) that we identified by conducting Internet research, reviewing literature search results, and obtaining recommendations from initial interviews.

To identify key fintech lending regulatory and consumer protection issues, we reviewed reports by industry stakeholders and federal and state regulators (identified through a literature search), as well as materials from fintech lender conferences and forums (identified through Internet research). We also reviewed 15 fintech lender websites to determine what information on fees, interest rates, and loan terms were made available to borrowers prior to applying for a loan and how transparent this information was. We selected these firms based on the same factors cited earlier. In reviewing the transparency of these websites we applied key aspects of Federal Trade Commission guidance titled ".com Disclosures: How to Make Effective Disclosures in Digital Advertising" as examples of best practices.⁴ To conduct the website review, we documented and assessed the transparency of, among other things, (1) interest rates disclosed, (2) loan term and duration offered, (3) fees charged, and (4) disclosures about information collected from the

³We obtained information about the systems and methods used to produce the data from 9 of the 10 lenders that submitted data to us.

⁴This guidance states that to be transparent, disclosures should, among other things, be clear and conspicuous, be readily noticeable to consumers and not require scrolling, use the same size and font as other text, and be located next to an offer being made. Federal Trade Commission, *.com Disclosures: How to Make Effective Disclosures in Digital Advertising* (March 2013).

borrower. One analyst reviewed each website and assessed its transparency by applying elements of the Federal Trade Commission guidance. A second analyst independently reviewed each website to verify the accuracy of information collected by the first analyst. The analysts followed a protocol to help ensure consistency of observations and completed a data collection instrument for each website. Any discrepancies between the two analysts were identified, discussed, and resolved by referring to the source websites. We collected data from April 12, 2018, through May 23, 2018. Information gathered from this review cannot be generalized to all fintech lender websites.

Additionally, we interviewed officials from the federal banking regulators and other agencies—Consumer Financial Protection Bureau, Department of the Treasury, Federal Deposit Insurance Corporation, Board of Governors of the Federal Reserve System. Federal Trade Commission. National Credit Union Administration, Office of the Comptroller of the Currency, Securities and Exchange Commission, and the Small Business Administration. To obtain state-level perspectives, we interviewed representatives from the Conference of State Bank Supervisors and five state banking regulators (California Department of Business Oversight, Georgia Department of Banking and Finance, Illinois Department of Financial and Professional Regulation, New York State Department of Financial Services, and Utah Department of Financial Institutions). The state regulators were selected based on experience licensing fintech lenders, published work or research on fintech lenders, and recommendations from industry stakeholders. We also obtained perspectives from a sample of fintech lenders (described earlier), and from consumer and small business advocacy groups, which we identified by reviewing literature search results and obtaining recommendations from industry stakeholders. The views of the state regulators, fintech lenders, and consumer and small business advocacy groups cannot be generalized to all members of each group.

To identify how fintech lenders use alternative data, we reviewed reports by industry stakeholders and federal agencies (identified by a literature search). We also reviewed over 100 responses to the Consumer Financial Protection Bureau's request for information on alternative data. Additionally, we interviewed a sample of fintech lenders and fintech lending trade associations (selected and identified based on the factors described above). To assess the extent to which federal regulators have monitored the use of alternative data by fintech lenders, we reviewed federal regulators' examination policies, guidance on third-party risk management, and examination reports for three federally regulated banks that are known to have partnerships with fintech lenders. We selected the federally regulated banks based on the borrower segment served and recommendations from industry stakeholders. Additionally, as discussed earlier, we interviewed officials from the federal banking regulators and other agencies, federally regulated banks, and other industry stakeholders.

We conducted this performance audit from August 2017 to December 2018 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix II: Loan and Borrower Characteristics for Selected Fintech Lenders

The loan amounts, repayment terms, and rates for the loans offered by the 10 fintech lenders from which we collected data varied, with the most significant variation occurring with loan rates. This variation can be driven by a number of factors, including the borrower's creditworthiness. As shown in the tables below, this variation was seen across the three fintech lending segments we reviewed.

Table 2: Ranges for Personal Loan Repayment Terms, Loan Amounts, and Annual Percentage Rates, 2013–2017

	2013	2014	2015	2016	2017
Minimum Repayment Term	12–36	12–36	12–36	24–36	24–36
(months)					
Maximum Repayment Term	48–60	36–60	60–84	60–84	60–84
(months)					
Average Repayment Term	21–47	35–50.4	36.36–67.2	39.75–64.8	36–62.4
(months)					
Minimum Loan Amount (dollars)	1,000–2,000	500–3,000	1,000–5,000	1,000–5,000	1,000–5,000
Maximum Loan Amount (dollars)	12,000–35,000	20,000-40,000	35,000–100,000	35,000–100,000	35,000–100,000
Average Loan Amount (dollars)	2,816–14,296	4,073–21,093	7,423–37,258	7,043–34,915	5,392–32,119
Minimum Annual Percentage Rate	6.11–28.89	4.97–18.99	4.14–9.95	3.98–9.95	5.02-9.95
Maximum Annual Percentage Rate	29.99–104.56	29.96–96.85	10.74–65.85	14.49–36	14.49–36
Average Annual Percentage Rate	18.15–55.14	8.09-42.40	8.31–30.74	10.13–30.20	10.32–30.06

Source: GAO analysis of 2013–2017 aggregated loan data from a sample of fintech lenders. | GAO-19-111

Note: These data represent collective responses from a sample of fintech lenders. Not all fintech lenders provided data for each data point requested. Data points where fewer than three fintech lenders responded are not provided. Information from this table cannot be generalized to all fintech lenders.

Table 3: Ranges for Small Business Loan Repayment Terms, Loan Amounts, and Annual Percentage Rates, 2013–2017

	2013	2014	2015	2016	2017
Minimum Repayment Term	_	3–12	3–12	3–12	3–12
(months)					
Maximum Repayment Term		24–60	36–60	36–60	36–60
(months)					
Average Repayment Term	_	9.7–42.55	10.7–39.85	11.4–42.08	10.9–46.05
(months)					
Minimum Loan Amount (dollars)		5,000-25,000	1,000–25,000	1,000–25,000	1,000–25,000
Maximum Loan Amount (dollars)		250,000–500,000	300,000–500,000	300,000–500,000	300,000-500,000
Average Loan Amount (dollars)		45,618–124,738	53,895–140,209	32,577–139,790	36,742–134,374
Minimum Annual Percentage Rate		_	0–6.43	0–7.35	0–6
Maximum Annual Percentage Rate		_	28.27–99.99	33.65–99.9	35.98–99.9
Average Annual Percentage Rate		_	18.23–44.5	16.60–41.4	15.82–43.7

Legend: — = We received too few responses to report.

Source: GAO analysis of 2013–2017 aggregated loan data from a sample of fintech lenders. | GAO-19-111

Note: These data represent collective responses from a sample of fintech lenders. Not all fintech lenders provided data for each data point requested. Data points where fewer than three fintech lenders responded are not provided. Information from this table cannot be generalized to all fintech lenders.

Table 4: Ranges for Refinanced Student Loan Repayment Terms, Loan Amounts, and Annual Percentage Rates, 2013–2017

	2013	2014	2015	2016	2017
Minimum Repayment Term	_	_	60	60	60
(months)					
Maximum Repayment Term	_	_	180–240	180–240	180–240
(months)					
Average Repayment Term	_	_	113–137	118–132	118–142
(months)					
Minimum Loan Amount (dollars)	_	_	_	_	_
Maximum Loan Amount (dollars)	_	_	_	_	_
Average Loan Amount (dollars)	_	_	42,310–77,571	50,361–79,404	52,700-80,119
Minimum Annual Percentage Rate	_	_	2.15–2.50	2.15–4.38	2.42-3.60
Maximum Annual Percentage Rate	_	_	6.13–7.74	7.99–9.13	7.50–8.38
Average Annual Percentage Rate	_	_	3.82-4.94	4.92–5.40	5.37–5.60

Legend: - = We received too few responses to report.

Source: GAO analysis of 2013–2017 aggregated loan data from a sample of fintech lenders. | GAO-19-111

Note: These data represent collective responses from a sample of fintech lenders. Not all fintech lenders provided data for each data point requested. Data points where less than three fintech lenders responded are not provided. Information from this table cannot be generalized to all fintech lenders.

According to the 11 fintech lenders we interviewed, borrowers used their loans for various purposes, such as consolidating existing debt (personal loans), upgrading or expanding business locations or hiring employees (small business loans), or refinancing their loans to receive lower rates (student loan refinancing). Fintech lenders typically charged personal and small business loan borrowers an origination fee. Other fees included late fees and check return fees.¹

Some reports indicate that some fintech lenders may be expanding access to credit to markets that lack access to capital from traditional

¹Not all fintech lenders we interviewed charge origination or other fees.

banks, such as small businesses seeking small-dollar loans.² Data we collected from a sample of 10 fintech lenders similarly showed that at least some fintech lenders may be offering loans to borrowers with lower credit scores. For example, the minimum FICO score (credit scores created by Fair Isaac Corporation) required for personal loans by fintech lenders who use FICO scores as part of their credit decision-making process had a range of 580–620 in 2016 and 600–650 in 2017 (subprime and near-prime credit scores).³ However, the average FICO scores for borrowers during these same years were higher (677–730 in 2016 and 679–737 in 2017) and were considered prime and super prime credit scores.

²See Department of the Treasury, *A Financial System That Creates Economic Opportunities: Nonbank Financials, Fintech, and Innovation* (Washington, D.C.: July 2018); Bank for International Settlements and the Financial Stability Board, *FinTech Credit: Market Structure, Business Models and Financial Stability implications* (May 2017); and Federal Reserve Bank of Cleveland, *Alternative Lending through the Eyes of "Mom & Pop" Small-Business Owners: Findings from Online Focus Groups* (August 2015).

³According to FICO's website, FICO scores are the most widely used credit scores. Not all fintech lenders we collected data from used FICO scores in their credit decision-making process.

Appendix III: Comments from the Consumer Financial Protection Bureau



The Bureau recognizes that alternative data and modeling techniques are changing the way that some financial service providers, including fintech lenders, conduct business, and that these changes hold the promise of potentially significant benefits for some consumers but also present certain potentially significant risks. Through consumer and industry outreach and its own market research, the Bureau has and continues to look into the promises and pitfalls of the use of alternative data. For instance, as the report notes, on February 21, 2017, the Bureau issued a request for information (RFI) regarding alternative data, seeking comments from the public on, among other things, current and future market developments, including existing and emerging consumer benefits and risks, and how these developments could alter the marketplace and the consumer experience. In September 2018, the Bureau hosted a symposium entitled "Building a Bridge to Credit Visibility," which featured a panel discussion on the role alternative data and modeling techniques can play in expanding access to traditional credit. Finally, the Bureau recently established an Office of Innovation to focus on encouraging consumer-friendly innovation, a key priority of the Bureau. The Bureau intends to continue its work related to the use of alternative data and looks forward to working with GAO as it monitors the Bureau's progress in implementing this recommendation. Sincerely biff Mick Mulvaney Acting Director consumerfinance.gov 2

Appendix IV: Comments from the Federal Deposit Insurance Corporation

Federal Deposit Insurance Corporation	Division of Dist. Management Community
550 17th Street NW, Washington, D.C. 20429-9990	Division of Risk Management Supervision Division of Depositor and Consumer Protection
	November 28, 2018
Michael Clements	
Director Financial Markets and Community Inves	tment
U.S. Government Accountability Office 441 G Street, NW	
Washington, D.C. 20548	
Dear Mr. Clements:	
he GAO draft report Financial Technolo Use of Alternative Data (Report) (GAO-	orporation (FDIC) appreciates the opportunity to review gy - Agencies Should Provide Clarification on Lenders' 19-111). The Report describes (1) recent trends in lenders' use of alternative data and the extent to which the data, among other things.
other regulators. The Report recommend the other federal banking regulators and the nput from relevant stakeholders, commu- elationships with fintech lenders on the	endation to the FDIC, along with recommendations to Is that the Chairman of the FDIC, in coordination with the Bureau of Consumer Financial Protection and with nicate in writing to banks that engage in third-party appropriate use of alternative data in the underwriting in selecting types of alternative data to use.
ound understanding of fair lending and olans to work collaboratively with the otl	tion, the FDIC recognizes the importance of promoting a other consumer protection laws. Accordingly, the FDIC her federal banking regulators and the Bureau of ine what type of communication would most effectively
critical part of that process is the FDIC's his data regularly through the examination or both safety and soundness and consum- underwriting criteria (and therefore, the t he criteria or data are considered tradition credit underwriting, loan documentation, Guidelines Establishing Standards for Sa FDIC's Rules and Regulations). Also, if isk management practices. Examiners a	ne agencies monitor lenders' use of alternative data. A examination function. The FDIC monitors the use of on process by reviewing banks' underwriting processes ner compliance. Such reviews consider the ypes of data) utilized by the bank, regardless of whether nal or nontraditional. Examiners assess the adequacy of and asset quality in accordance with Interagency fety and Soundness (Appendix A to Part 364 of the relevant, examiners will assess the adequacy of model lso evaluate underwriting processes for compliance with conclusion of each examination, the FDIC issues a

Mr. Clements, Director Report of Examination (ROE) to the bank to summarize examination findings. Examination findings and supervisory recommendations related to credit underwriting practices, including the use of alternative data, if relevant, are communicated in writing to the bank. Thank you for your efforts and if you have any questions or need additional follow-up information, please do not hesitate to contact us. Sincerely, gardlin, Doreen R. Eberley Director Division of Risk Management Supervision Mark Pearce Director Division of Depositor and Consumer Protection

Appendix V: Comments from the Board of Governors of the Federal Reserve System

BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM Washington, D.C. 20551
Eric S. Belsky Director Division of Consumer and Community Affair:
November 27, 2018
Michael Clements Director Financial Markets and Community Investment United States Government Accountability Office 441 G Street, NW Washington, DC 20548
Dear Mr. Clements:
Thank you for providing the Board of Governors of the Federal Reserve System ("Federal Reserve") with an opportunity to review the final draft of the Government Accountability Office ("GAO") report entitled: <i>Financial Technology: Agencies Should Provide Clarification on Lenders'</i> <i>Use of Alternative Data</i> (GAO-19-111). The GAO's report reviews recent trends in fintech lending, including business models and the use of alternative data, and describes important consumer protection issues. The report notes that the Federal Reserve has published an article in its consumer compliance publication that "offered financial institutions and fintech firms general guideposts for evaluating unfair and deceptive practices and fair lending risk related to fintech, with a focus on alternative data," as well as a related webinar. ¹ The report further notes other Federal Reserve efforts, including an article that provided information on consumer protection laws and regulations applicable to fintech lending and several working papers that explored various facets of fintech lending, including the use of alternative
¹ Carol A. Evans, "Keeping Fintech Fair: Thinking About Fair Lending and UDAP Risks," Federal Reserve System, <i>Consumer Compliance Outlook</i> , (Philadelphia, Pa.: Second Issue 2017). https://www.consumercomplianceoutlook.org/2017/second-issue/keeping-fintech-fair-thinking-about-fair-lending-and-udap-risks/ and https://consumercomplianceoutlook.org/outlook-live/2018/keeping-fintech-fair-thinking-about-fair-lending-and-udap-risks/.

data and the potential benefits to consumers.² We appreciate the report's recognition of the Federal Reserve's efforts to provide information on fintech issues to industry and other stakeholders. The GAO's report makes one recommendation to the Federal Reserve: The Chair of the Board of Governors of the Federal Reserve System should, in coordination with the other federal banking regulators and the Bureau of Consumer Financial Protection and with input from relevant stakeholders, communicate in writing to banks that engage in third-party relationships with fintech lenders on the appropriate use of alternative data in the underwriting process, including issues to consider when selecting types of alternative data to use. With respect to this recommendation, the Federal Reserve recognizes the importance of promoting a sound understanding of fair lending and other consumer protection laws. Accordingly, the Federal Reserve plans to work collaboratively with the other federal banking regulators and the Bureau of Consumer Financial Protection to determine what type of communication would most effectively serve this purpose. We appreciate the GAO's review of fintech lending, for their professional approach to the review, and for the opportunity to comment. Sincerely, Eus S. Belday ² "Laws, Regulations, and Supervisory Guidance," Federal Reserve System, Consumer Compliance Outlook, (Philadelphia, Pa.: Third Issue 2016). https://www.consumercomplianceoutlook.org/2016/thirdissue/laws-regulations-and-supervisory-guidance/. Julapa Jagtiani, "The Roles of Alternative Data and Machine Learning in Fintech Lending: Evidence from the Lending Club Consumer Platform' (Philadelphia, Pa.: April 2018). https://www.philadelphiafed.org/-/media/research-anddata/publications/working-papers/2018/wp18-15.pdf

Appendix VI: Comments from the National Credit Union Administration

Ś	National Credit Union Administration Office of the Executive Director
	November 20, 2018
SENT B	Y EMAIL
U.S. Gov 441 G St	Director Markets and Community Investment rernment Accountability Office
Dear Mr.	Medina:
Provide C recognize continues of fintech working g	reviewed the GAO's draft report entitled <i>Financial Technology: Agencies Should</i> <i>Clarification on Lenders' Use of Alternative Data (GAO-19-111).</i> The NCUA is that financial technology (fintech), including the use of alternative data in lending, to be a growing area in the financial services industry. Facilitating credit unions' use is a priority of the agency. Accordingly, the agency has established an internal group, and participates in various interagency working groups and forums, to explore lated issues.
service pr Lack of a	ally, the report acknowledges that NCUA does not have authority over third-party roviders, unlike the federal banking regulators under the Bank Service Company Act. uthority over third-party service providers does limit the extent to which the NCUA can and supervise the risks to credit unions posed by fintech companies.
Thank yo	u for the opportunity to comment.
	Sincerely,
	Mark Tran
	Mark Treichel Executive Director

Appendix VII: Comments from the Office of the Comptroller of the Currency

Office of the Comptroller of the Currency
Washington, DC 2021
November 28, 2018
Mr. Michael E. Clements Director, Financial Markets and Community Investment U. S. Government Accountability Office Washington, DC 20548
Dear Mr. Clements:
Thank you for providing the Office of the Comptroller of the Currency (OCC) an opportunity to review the Government Accountability Office's (GAO) draft report titled "Financial Technology: Agencies Should Provide Clarification on Lenders' Use of Alternative Data" (Report). The Report discusses recent trends in financial technology (fintech) lending, examines the use of alternative data, and describes important regulatory and consumer protection issues.
The OCC has already taken many steps to encourage responsible innovation by national banks and federal savings associations (banks), as well as the fintech firms engaged in third-party relationships with these banks. In October 2016, the OCC issued a paper on the OCC's Responsible Innovation Framework. ¹ The paper describes a formal framework developed by the OCC to improve its ability to identify, understand, and respond to financial innovation affecting the federal banking system. The OCC also established an Office of Innovation dedicated to implementing that framework.
As noted in the Report, the OCC's ongoing outreach efforts allow it to monitor and better understand innovative trends in financial services, including fintech lending and the potential use of alternative data. The Office of Innovation also offers technical assistance to banks and nonbanks, including fintech lenders, to clarify the OCC's expectations regarding safe and sound operations, providing fair access to financial services, treating customers fairly, and the laws and regulations that may apply.
When talking with banks and nonbanks that have questions regarding appropriate management of lending relationships, including those using alternative data, the OCC highlights relevant and appropriate written guidance, which includes:
• Third-party risk management guidance. ² This bulletin describes the components of an effective risk management process, including risk assessment, due diligence and risk
¹ Office of the Comptroller of the Currency, <i>Recommendations and Decisions for Implementing a Responsible Innovation Framework</i> , OCC News Release 2016-135 (October 26, 2016).
² Office of the Comptroller of the Currency, <i>Third-Party Relationships: Risk Management Guidance</i> , OCC Bulletin 2013-29 (October 30, 2013).

monitoring, and oversight, when banks work with third parties, including fintech lenders. In 2017, the OCC issued a list of frequently asked questions (FAQs) to supplement existing third-party risk management guidance.3 The FAQs address the possibility that banks may partner with fintech companies to offer credit, including marketplace lending arrangements, and discuss what banks should consider when entering into such arrangements. Examination information on the use of credit scoring models for underwriting and administering all forms of retail credit.⁴ This document includes a detailed appendix discussing safety and soundness and the principles the OCC applies in addressing fair lending issues that arise when using credit scoring models. Interagency model risk management guidance,⁵ which articulates principles for the effective risk management when using quantitative models in bank decision making, including credit underwriting. A recently issued bulletin on installment lending.⁶ This bulletin states that reasonable policies and procedures specific to short-term, small-dollar installment lending would generally include analysis using internal and external data sources, which could facilitate sound underwriting for credit offered to consumers who have the ability to repay but do not meet traditional credit standards. Revisions to the interagency questions and answers regarding the Community Reinvestment Act.7 The questions and answers address underwriting standards that use alternative credit histories, such as utility or rent payments, in an effort to evaluate lowor moderate- income individuals who lack sufficient conventional credit histories and who would be denied credit under an institution's traditional underwriting standards. Risk management guidance when offering new, modified, or expanded products and services.8 This bulletin provides that, consistent with prudent risk management of thirdparty relationships, management at banks that partner or contract with fintech companies to offer new products or services should understand the technologies that these ³Office of the Comptroller of the Currency, Third Party Relationships: Frequently Asked Questions to Supplement OCC Bulletin 2013-29, OCC Bulletin 2017-21 (June 7, 2017). ⁴ Office of the Comptroller of the Currency, Credit Scoring Models: Examination Guidance, OCC Bulletin 1997-24 (May 20, 1997). ⁵ Office of the Comptroller of the Currency, Sound Practices for Model Risk Management: Supervisory Guidance on Model Risk Management, OCC Bulletin 2011-12 (April 4, 2011). ⁶ Office of the Comptroller of the Currency, Installment Lending: Core Lending Principles for Short-Term, Small-Dollar Installment Lending, OCC Bulletin 2018-14 (May 23, 2018). ⁷ Office of the Comptroller of the Currency, Agencies Release Final Revisions to Interagency Questions and Answers Regarding Community Reinvestment, OCC News Release 2016-82; Community Reinvestment Act; Interagency Questions and Answers Regarding Community Reinvestment: Guidance, 81 FR 48506 (July 25, 2016). ⁸ Office of the Comptroller of the Currency, New, Modified, or Expanded Bank Products and Services: Risk Management Principles, OCC Bulletin 2017-43 (October 20, 2017). 2

companies offer, risk and controls associated with those technologies, and the effect that the new delivery channel will have on existing operational controls. As part of the Report, the GAO makes one recommendation for the OCC: The Comptroller of the Currency should, in coordination with the other federal banking regulators and the Bureau of Consumer Financial Protection and with input from relevant stakeholders, communicate in writing to banks that engage in third-party relationships with fintech lenders on the appropriate use of alternative data in the underwriting process, including issues to consider when selecting types of alternative data to use. To address this recommendation, the OCC plans to work collaboratively with the other federal banking regulators and the Bureau of Consumer Financial Protection to determine what type of communication would most effectively serve this purpose. The OCC is committed to maintaining open and ongoing communication with banks and fintech lenders regarding supervisory expectations, to continue to improve its understanding of industry use of alternative data, and to evaluate OCC guidance, as appropriate. We appreciate the opportunity to comment on the Report. If you need additional information, please contact Beth Knickerbocker, at (202) 649-7820. Sincerely, Stace E. Dailey Grace E. Dailey Senior Deputy Comptroller for Bank Supervision Policy and Chief National Bank Examiner 3

Appendix VIII: GAO Contact and Staff Acknowledgments

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Staff Acknowledgments	In addition to the contact named above, Harry Medina (Assistant Director), Erika Navarro (Analyst in Charge), Namita Bhatia-Sabharwal, Abigail Brown, Adrianne Cline, Farrah Graham, Robert Lowthian, Jessica Sandler, and Jennifer Schwartz made key contributions to this report. Also contributing to this report were Tim Bober, Melissa Emrey-Arras, Tranchau (Kris) Nguyen, Dawn Simpson, and Jena Sinkfield.

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