

July 17, 2018

**Proposed Decision of the Financial Stability Oversight Council
Regarding the Appeal by ZB, N.A.
Under Section 117 of the Dodd-Frank Act**

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*Note: Redactions of confidential information submitted to the Council
by ZB, N.A. are indicated by “[•].”*

1. OVERVIEW

On the basis of the analysis set forth below, the Financial Stability Oversight Council (Council) has made a proposed decision to grant, subject to the conditions set forth below, the appeal of ZB, N.A. (ZB) under section 117 of the Dodd-Frank Wall Street Reform and Consumer Protection Act¹ (Dodd-Frank Act) such that, upon the merger of Zions Bancorporation with and into ZB, ZB shall not be treated as a nonbank financial company that the Council has determined shall be supervised by the Board of Governors of the Federal Reserve System (Board of Governors).

2. INTRODUCTION

2.1 Process for Requests Under Section 117 of the Dodd-Frank Act

Section 117 of the Dodd-Frank Act applies to any entity that was a bank holding company with total consolidated assets of at least \$50 billion as of January 1, 2010, and that received financial assistance under or participated in the Capital Purchase Plan established under the Troubled Asset Relief Program, and to any successor entity to such a bank holding company. Under section 117, if an entity subject to section 117 ceases to be a bank holding company, it will be treated as a nonbank financial company supervised by the Board of Governors as if the Council had made a determination under section 113 of the Dodd-Frank Act with respect to that entity.

However, section 117 provides that an entity may request an opportunity for a written or oral hearing before the Council to appeal its treatment as a nonbank financial company supervised by the Board of Governors. After receiving a request, the Council must hold a written hearing (or, at the Council's discretion, an oral hearing) regarding the appeal. The Council may grant an appeal under section 117 by a vote of at least two-thirds of the voting members of the Council then serving, including an affirmative vote by the Chairperson of the Council. In making its decision regarding an appeal under section 117, the Council is required to consider whether the company meets the Dodd-Frank Act's standards for a nonbank financial company determination under section 113 of the Dodd-Frank Act and the definition of the term "nonbank financial company" under section 102 of the Dodd-Frank Act. The standards for a Council determination under section 113 are whether material financial distress at the company, or the nature, scope, size, scale, concentration, interconnectedness, or mix of the activities of the company, could pose a threat to U.S. financial stability.

2.2 Overview of ZB's Petition to the Council

ZB is a national bank headquartered in Salt Lake City, Utah, and a wholly owned subsidiary of Zions Bancorporation, a Utah corporation and a registered bank holding company and financial holding company. ZB has entered into an agreement with Zions Bancorporation pursuant to which Zions Bancorporation will merge with and into ZB (Merger). Upon the completion of the Merger, ZB will succeed to all the assets and liabilities of Zions Bancorporation. ZB's assets

¹ 12 U.S.C. § 5327.

comprise 99.7 percent of the total consolidated assets of Zions Bancorporation,² and ZB's revenues account for 99.7 percent of the revenues of Zions Bancorporation.³ Accordingly, in the analysis below, references to Zions Bancorporation are also relevant to ZB, and ZB and Zions Bancorporation are collectively referred to as "Zions."

On April 26, 2018, ZB submitted a request for a written hearing before the Council pursuant to section 117 of the Dodd-Frank Act. ZB did not request an oral hearing. The Council directed the company to submit all written materials by May 26, 2018, which was set as the hearing date for purposes of section 117. ZB, pursuant to the Council Hearing Procedures, submitted a written statement to the Council (Zions Submission) and also submitted a copy of the Agreement and Plan of Merger of Zions Bancorporation and ZB, dated as of April 5, 2018 (Merger Agreement).⁴

In its written submission, ZB requested that the Council issue a determination that ZB will, upon the consummation of the Merger, not be treated as a nonbank financial company supervised by the Board of Governors. ZB provided the Council with information about Zions and the Merger and an analysis of ZB following the Merger using the framework used by the Council to evaluate nonbank financial companies under section 113 of the Dodd-Frank Act. In its analysis, the company discussed the three transmission channels identified by the Council as most likely to facilitate the transmission of the negative effects of a nonbank financial company's material financial distress or activities to other financial firms and markets (described below in section 2.3.1). ZB argued that material financial distress at the company would not pose a risk to U.S. financial stability under any of these three transmission channels. ZB emphasized its relatively small size, lack of complexity, and low levels of interconnectedness compared to the U.S. global systemically important banks (G-SIBs) and other banks with \$50 billion or more in total consolidated assets. ZB also described its role as a source of credit for low-income, minority, or underserved communities; its complexity and resolvability; assets under management; and the degree of regulatory scrutiny to which it will be subject after consummation of the Merger.

Under the Merger Agreement submitted by ZB to the Council, the key terms of the Merger are as follows:

- Zions Bancorporation will merge with and into ZB, with ZB as the surviving entity.
- All of the common and preferred shareholders of Zions Bancorporation will become common and preferred shareholders of the bank in identical proportions. Each outstanding warrant to purchase common stock of Zions Bancorporation will be converted automatically into a warrant to purchase common stock of ZB.
- All of the property of Zions Bancorporation and of ZB will become property of ZB.

² ZB Call Report as of December 31, 2017, p. 14, and Zions Bancorporation, Annual Report on Form 10-K for the year ended December 31, 2017, p. 88.

³ Calculated based on the net interest income and non-interest income of ZB and of Zions Bancorporation. ZB Call Report as of December 31, 2017, pp. 5-6, and Zions Bancorporation, Annual Report on Form 10-K for the year ended December 31, 2017, p. 89.

⁴ Zions Bancorporation, Current Report on Form 8-K filed April 10, 2018, Exhibit 2.1.

- All of the liabilities of Zions Bancorporation and of ZB will become liabilities of ZB.

In connection with the Merger, [•] will be [•], and Amegy Holdings Texas, Inc., another wholly owned subsidiary of Zions Bancorporation, will become a wholly owned subsidiary of ZB.⁵

The Merger, as the merger of a national bank with a nonbank affiliate, is subject to the approval of the Office of the Comptroller of the Currency (OCC) under the National Bank Act.⁶ The OCC issued an approval of the Merger on July 6, 2018, conditioned on the Merger being consummated within six months of the date of approval and on ZB ceasing or conforming to applicable law certain activities that do not currently conform to the National Bank Act. In addition, the Merger, as the merger of a noninsured institution into an insured depository institution, is subject to the approval of the Federal Deposit Insurance Corporation (FDIC) under the Bank Merger Act.⁷ The FDIC issued an approval of the Merger on July 9, 2018, subject to the requirement that the Merger be consummated within six months of the approval date.

In its submission, ZB presented financial information as of December 31, 2017. Except as otherwise noted, financial information referred to herein is presented as of December 31, 2017, and on the basis of GAAP.

2.3 Overview of the Committee’s Analysis

2.3.1 Consideration of the Transmission Channels

Consistent with the Dodd-Frank Act and the Council’s interpretive guidance regarding determinations under section 113 of the Dodd-Frank Act⁸ (Interpretive Guidance), the Council evaluated the extent to which Zions’ material financial distress could be transmitted to other financial firms and markets and thereby pose a threat to U.S. financial stability primarily through the following three transmission channels: (1) the exposures of counterparties, creditors, investors, and other market participants to Zions; (2) the liquidation of Zions’ assets, which could trigger a fall in asset prices and thereby could significantly disrupt trading or funding in key markets or cause significant losses or funding problems for other firms with similar holdings; and (3) the inability or unwillingness of Zions to provide a critical function or service relied upon by market participants and for which there are no ready substitutes. Based on the analysis below, there is not a significant risk that material financial distress at Zions could pose a threat to U.S. financial stability through the exposure, asset liquidation, or critical function or service transmission channel.

Exposure Transmission Channel

Under the exposure transmission channel, the Council considers the exposures that a company’s creditors, counterparties, investors, or other market participants have to the company. The two

⁵ Zions Submission, Annex 2, p. 7.

⁶ 12 U.S.C. § 215a-3.

⁷ 12 U.S.C. § 1828(c)(1)(A).

⁸ Financial Stability Oversight Council, Authority to Require Supervision and Regulation of Certain Nonbank Financial Companies, 12 C.F.R. part 1310, appendix A.

primary types of financial exposures to Zions are the exposures of its capital markets counterparties and of its depositors. Exposures to Zions do not appear to contribute materially to the threat that the company's material financial distress or its activities could pose to U.S. financial stability.

The Council assessed various types of capital markets exposures to Zions, including exposures arising from Zions' debt, federal funds purchased, repurchase agreements (repo), derivatives, and credit-default swaps (CDS). In general, market participants' capital markets exposures to Zions are small, measured both by amount and relative to the size of the counterparties.

The Council also assessed the risks posed by depositors' exposures to Zions. While material financial distress at Zions could potentially expose some of its depositors to losses, the absence of large financial institutions among its depositors and the mitigation provided by deposit insurance reduce the potential for the company's material financial distress to impair financial market participants or financial market intermediation.

Asset Liquidation Transmission Channel

Under the asset liquidation transmission channel, the Council considers whether a nonbank financial company holds assets that, if liquidated quickly, could significantly disrupt the operation of key markets or cause significant losses or funding problems for other firms with similar holdings. The amount and nature of Zions' assets that it could be forced to sell in the event of its material financial distress do not appear to contribute materially to the threat that the company could pose to U.S. financial stability.

In its analysis of Zions under the asset liquidation transmission channel, the Council assessed the liquidity of the company's liabilities, the liquidity of the company's assets, and the potential impact on other firms and markets of a liquidation of the company's assets. With respect to the liquidity of the company's liabilities, the Council assessed potential short-term liquidity demands on the company using assumptions underlying the liquidity coverage ratio (LCR), historical examples of runs on deposits, and Zions' internal liquidity stress test. With respect to the liquidity of the company's assets, the Council assessed the amount and nature of the company's assets, including its highly liquid assets and its loans. The Council evaluated the impact of a rapid liquidation of the company's assets on financial markets by assessing the sizes of the relevant asset markets compared to the volumes of assets Zions could be forced to sell. The Council also evaluated the impact of a rapid liquidation of the company's assets on other financial institutions by assessing the effect of such a liquidation on the balance sheets of other firms holding the same or similar assets. In general, the quantity of Zions' runnable liabilities is relatively low, and the impact of a fire sale of Zions' assets on other institutions or markets would likely be small.

Critical Function or Service Transmission Channel

Under the critical function or service transmission channel, the Council considers whether a nonbank financial company may no longer be able or willing to provide a critical function or service that is relied upon by market participants or customers and for which there are no ready substitutes. The Council assessed Zions' market share in key markets and the industry

concentration in those markets to determine whether material financial distress at Zions could pose a threat to U.S. financial stability. Zions does not appear to have a large enough share of any key market to cause a significant disruption in the provision of services if it is unable or unwilling to provide services.

The most significant functions that Zions provides to its customers include taking deposits and making loans. Although Zions has a large deposit market share in certain states, it does not appear that the state and regional product-specific markets in which it has a large presence are sufficiently sizeable or interconnected with the broader financial system such that the negative effects on those markets from material financial distress at Zions would pose risks to U.S. financial stability. Zions' deposits represent a small share of total U.S. commercial bank deposits, and the market for accepting deposits is competitive. In addition, Zions does not issue a significant share of loans in the markets that it operates in, including commercial real estate (CRE) loans and commercial and industrial (C&I) loans.

Zions plays a minimal role in other critical services performed by the financial sector. For example, the company has a minimal role in payments, clearing, and settlement, and it represents a small share of the U.S. asset custody and underwriting businesses.

2.3.2 Complexity and Resolvability

The Council assessed the degree to which material financial distress at Zions may be mitigated or aggravated by the company's complexity, the opacity of its operations, and its resolvability. If the company were to experience material financial distress, it does not appear to have features that would lead to a disorderly resolution that could pose a threat to U.S. financial stability.

The failure of ZB would rank among the largest U.S. bank failures. However, the framework for the resolution of the company following consummation of the Merger would be relatively straightforward. As a standalone insured depository institution, ZB would be resolved by the FDIC under the Federal Deposit Insurance Act if it were to fail.

2.3.3 Existing Regulatory Scrutiny

The Council considered Zions' regulatory scrutiny, including the company's regulation and supervision if the Council grants the company's appeal. The Council considered factors including applicable capital and liquidity requirements, regulators' authority to bring enforcement actions, and the nature of the company's regulatory reporting obligations. As a national bank, Zions is subject to extensive regulation and supervision.

3. LEGAL FRAMEWORK

3.1 ZB and Zions Bancorporation Under the Statutory Criteria

Section 117 of the Dodd-Frank Act applies to:

1. any entity that was a bank holding company with total consolidated assets of at least \$50 billion as of January 1, 2010, and received financial assistance under or participated in

the Capital Purchase Plan (CPP) established under the Troubled Asset Relief Program authorized by the Emergency Economic Stabilization Act of 2008; and

2. any successor entity (as defined by the Board of Governors, in consultation with the Council) to such a bank holding company.

If any such entity ceases to be a bank holding company, it will be treated as a nonbank financial company supervised by the Board of Governors unless the Council grants the entity's request under section 117.

Zions Bancorporation was a bank holding company with approximately \$51 billion in total consolidated assets as of January 1, 2010.⁹ Zions Bancorporation participated in the CPP, pursuant to which the U.S. Department of the Treasury purchased 1.4 million shares of Zions Bancorporation's Fixed Rate Cumulative Perpetual Preferred Stock, Series D, and warrants to purchase up to approximately 5.8 million shares of Zions Bancorporation's voting common stock at an exercise price of \$36.27 per share, for an aggregate purchase price of \$1.4 billion.¹⁰ Zions Bancorporation repurchased \$700 million of the preferred stock in March 2012 and the remaining \$700 million of preferred stock in September 2012, in each case at face value.¹¹ Zions Bancorporation paid the Treasury Department a total of \$253 million in dividends on the CPP preferred stock.¹² On December 5, 2012, the Treasury Department sold its warrants in a public offering for \$7.8 million.¹³

On February 26, 2018, the Board of Governors, after consulting with the Council, determined that, pursuant to section 117, ZB would be the successor entity to Zions Bancorporation upon consummation of the Merger. The Board of Governors made this determination based on the structure and facts and circumstances of the Merger as presented to the Board of Governors by ZB.

3.2 Scope of Permissible Applicants

3.2.1 Consideration of Appeal Pending Transaction

As noted above, if any bank holding company that meets the conditions in section 117 of the Dodd-Frank Act (and any successor) ceases to be a bank holding company, it will be treated as a nonbank financial company subject to Board of Governors supervision unless the Council grants the entity's request under section 117. The Council has determined that the statute allows the Council to consider and make a determination with respect to an appeal by such an entity, even if the entity has not yet ceased to be a bank holding company, if the Council considers it appropriate under the circumstances.

⁹ Zions Bancorporation, Annual Report on Form 10-K for the year ended December 31, 2009, p. 134.

¹⁰ Zions Bancorporation, Current Report on Form 8-K filed Nov. 17, 2008.

¹¹ Zions Bancorporation, Current Report on Form 8-K filed Nov. 17, 2008; Zions Bancorporation, Current Report on Form 8-K filed Sept. 26, 2012, Exhibit 99.1; Treasury Department, Press Release, "Zions Bancorporation Repays in Full its Remaining \$700 Million in TARP Funds" (Sept. 26, 2012).

¹² Zions Bancorporation, Current Report on Form 8-K filed Sept. 26, 2012, Exhibit 99.1; Treasury Department, Press Release, "Zions Bancorporation Repays in Full its Remaining \$700 Million in TARP Funds" (Sept. 26, 2012).

¹³ Zions Bancorporation, Current Report on Form 8-K filed Dec. 5, 2012.

Section 117 provides that “an entity” may appeal “its treatment” under the statute as a nonbank financial company supervised by the Board of Governors. The reference to “an entity” encompasses any entity that meets the criteria in section 117 (an entity that was a bank holding company with at least \$50 billion in total consolidated assets as of January 1, 2010, and that received financial assistance under or participated in the CPP, and any successor entity), regardless of whether the entity has ceased to be a bank holding company.¹⁴ In addition, the statutory reference to “its treatment” can be interpreted to encompass an entity’s treatment as a nonbank financial company subject to Board of Governors supervision that would result by operation of law under section 117 if the entity were to cease being a bank holding company in the future. Thus, this phrase can refer either to an entity that is being, or to an entity that as a matter of law will be, treated as a nonbank financial company supervised by the Board of Governors under section 117.

Further, the Council believes it is appropriate in the circumstances presented in this case for the Council to grant an appeal under section 117 by an entity that has not yet consummated the transaction pursuant to which it will cease to be a bank holding company. The Council’s consideration of such an appeal can permit the entity to receive the Council’s decision under section 117 without requiring the entity to consummate a potentially costly, burdensome, and disruptive transaction that it might not undertake if the company were to remain subject to supervision by the Board of Governors. At the same time, it may not be appropriate to consider or grant an entity’s appeal to the Council that is predicated on a speculative or uncertain transaction. In this case, ZB submitted to the Council as part of its appeal a binding written agreement between Zions Bancorporation and ZB to engage in a transaction the consummation of which will result in an entity that is not a bank holding company; publicly announced the restructuring and intent to file the appeal; filed separately required applications with its bank regulators; and took initial steps to implement the restructuring prior to submission of the appeal to the Council. Further, the consolidated entity that will exist immediately upon consummation of the Merger is largely identical to Zions Bancorporation as a consolidated company as of the time of the appeal to the Council, which further reduces the extent to which the appeal is speculative. Under these circumstances, the Council is able to evaluate the applicant based on the specific terms of the transaction. This evaluation is based on the expectation that the Merger will be consummated in accordance with the terms of the Merger Agreement and that it will be completed within a short period of time after the Council’s final decision.

3.2.2 Successors That Are Not Bank Holding Companies

Under section 117 of the Dodd-Frank Act, if a subject entity “ceases” to be a bank holding company, it is treated as a nonbank financial company subject to Board of Governors supervision. The Council is interpreting this statutory language to apply to any successor entity of a bank holding company that is not a bank holding company, regardless whether the successor entity itself was previously a bank holding company. Section 117 applies both to certain bank holding companies (under section 117(a)(1)) and to “any successor entity” to those

¹⁴ The statutory reference in section 117(c)(1) to “an entity” contrasts to the narrower reference in section 117(b) to “an entity [that] ceases to be a bank holding company.”

bank holding companies (under section 117(a)(2)).¹⁵ The plain reading of “any” in section 117(a)(2) makes clear that it applies to a successor entity even if that entity has never been a bank holding company. Any entity’s treatment under section 117 is based on whether it falls within the scope of section 117(a)(1) or (2); therefore, even a successor entity that has not been a bank holding company is within the statutory scope. Further, even if there were any ambiguity in the statutory language, interpreting the statute as limited to successor entities that were previously bank holding companies would lead to absurd results. Under that interpretation, section 117 would apply if a bank holding company is succeeded by another bank holding company that then ceases to be a bank holding company, but section 117 would not apply if a bank holding company ceases to be a bank holding company and is then succeeded by another non-bank holding company. Differentiating between these two scenarios would be irrational and would frustrate the purposes of section 117;¹⁶ indeed, any entity could structure a transaction in this way, rendering section 117 meaningless.

3.3 Status as a Nonbank Financial Company

Section 117 of the Dodd-Frank Act requires the Council to consider whether a company that submits an appeal meets the definition of the term “nonbank financial company” under section 102 of the Dodd-Frank Act. The definition of “nonbank financial company” generally includes companies that are “predominantly engaged” in financial activities.¹⁷ A company is predominantly engaged in financial activities if at least 85 percent of the company’s and all of its subsidiaries’ annual gross revenues are derived from, or at least 85 percent of the company’s and all of its subsidiaries’ consolidated assets are related to, “activities that are financial in nature” as defined in section 4(k) of the Bank Holding Company Act of 1956, as amended (Bank Holding Company Act)¹⁸ and, if applicable, the ownership or control of one or more insured depository institutions.¹⁹ The Board of Governors’ regulation governing the determination of whether a company is predominantly engaged in financial activities, as defined in section 102 of the Dodd-Frank Act, includes as financial activities the activities of an insured depository institution or any subsidiary of an insured depository institution.²⁰ ZB is an insured depository institution, so 100 percent of its revenues are derived from, and all of its assets are related to, the activities of an insured depository institution or its subsidiaries. ZB is therefore predominantly engaged in financial activities and is thus a nonbank financial company under section 102 of the Dodd-Frank Act.

3.4 Standard of Review

Section 117(c)(2)(C) of the Dodd-Frank Act provides that, in evaluating an appeal under section 117, the Council is required to consider whether the company meets the standards for a Council

¹⁵ Dodd-Frank Act section 117(a), 12 U.S.C. § 5327(a).

¹⁶ See S. Rep. No. 176-111, at 50 (2010) (stating that section 117 “is intended to ensure that a bank holding company that could pose a risk to U.S. financial stability if it experienced material financial distress would remain supervised by the Board of Governors and subject to the prudential standards authorized under this title even if it sells or closes its bank.”).

¹⁷ Dodd-Frank Act section 102(a)(4), 12 U.S.C. § 5302(a)(4).

¹⁸ 12 U.S.C. § 1843(k).

¹⁹ Dodd-Frank Act section 102(a)(6), 12 U.S.C. § 5302(a)(6); see also 12 C.F.R. part 242.

²⁰ 12 C.F.R. § 242.3(b)(2).

determination regarding a nonbank financial company under section 113 of the Dodd-Frank Act. Section 113 includes two determination standards. The first determination standard is if material financial distress at a nonbank financial company could pose a threat to U.S. financial stability. The second determination standard is if the nature, scope, size, scale, concentration, interconnectedness, or mix of the activities of a nonbank financial company could pose a threat to U.S. financial stability. Under section 113, the Council may determine that a nonbank financial company will be subject to Board of Governors supervision and enhanced prudential standards if either the first or second determination standard is met. Section 113 lists 10 considerations that the Council must take into account in making such a determination; the Council may also consider any other risk-related factors it deems appropriate.²¹

In evaluating ZB, the Council has considered both determination standards under section 113. The Council has applied the Council's Interpretive Guidance in evaluating ZB, while tailoring the analysis in light of the differences between bank holding companies and nonbank financial companies. Accordingly, the Council has analyzed ZB by reference to the three transmission channels described in the Interpretive Guidance, as well as analyzing the company's degree of regulatory scrutiny and its complexity and resolvability.

As the Interpretive Guidance noted, there likely will be significant overlap between the outcome of an assessment of a nonbank financial company under the first and second determination standards.²² Although many aspects of this analysis focus on the first determination standard, during its evaluation of ZB's appeal, no factors were identified that would indicate that ZB meets the second determination standard.²³

²¹ Dodd-Frank Act section 113(a), 12 U.S.C. § 5323(a).

²² Interpretive Guidance at II.c.

²³ For example, the Council considered the nature, scope, size, scale, concentration, interconnectedness, and mix of activities of Zions in its analysis of measures of the systemic importance of Zions and its peers in section 4.2; Zions' scope, interconnectedness, and mix of activities were considered by the Council in its analysis of the exposure transmission channel in section 5.2; and Zions' scope and concentration were considered as part of the analysis of the critical function or service transmission channel in section 5.4.

4. OVERVIEW OF ZIONS BANCORPORATION AND ZB

Zions Bancorporation, through its subsidiary ZB, provides banking and related services in Arizona, California, Colorado, Idaho, Nevada, New Mexico, Oregon, Texas, Utah, Washington, and Wyoming. ZB accounts for approximately 99.7 percent of the total consolidated assets²⁴ and 99.7 percent of the revenues²⁵ of Zions Bancorporation. ZB had 433 branches as of December 31, 2017, and approximately 10,000 full-time-equivalent employees.²⁶ ZB's primary services and activities are small and medium-sized business and corporate banking; CRE and residential mortgage lending; retail banking; treasury cash management services; trust and wealth management; and limited capital markets and investment management activities.

4.1 Assets and Liabilities²⁷

Zions has \$66 billion of total consolidated assets and \$59 billion of total liabilities. Select financial information of Zions is provided in Table 1, and the company's consolidated balance sheet is provided in Appendix A.

Table 1: Zions Select Financial Information (\$ Millions)

Total Assets	66,288
Loans	44,262
Total Liabilities	58,609
Total Deposits	52,621
Long-Term Debt	383
Short-Term Borrowings	4,976
Common Equity Tier 1 Ratio	12.1%
Tier 1 Leverage Ratio	10.5%

Source: Zions Bancorporation Annual Report on Form 10-K for the year ended December 31, 2017. "Loans" are net of unearned income and fees and less allowance for loan losses. "Short-Term Borrowings" include FHLB advances, federal funds purchased, repurchase agreements, and securities sold but not yet purchased. "Common Equity Tier 1 Ratio" and "Tier 1 Leverage Ratio" are calculated under regulations implementing the Basel III regulatory framework.

Assets

Most of the company's assets consist of loans and investment securities. Loans held for investment (less loan-loss provisions and unearned income) constitute 67 percent of its total assets, or \$44 billion. CRE loans²⁸ are the largest component of the company's loan portfolio, at

²⁴ ZB Call Report as of December 31, 2017, p. 14, and Zions Bancorporation, Annual Report on Form 10-K for the year ended December 31, 2017, p. 88.

²⁵ Calculated based on the net interest income and non-interest income of ZB and of Zions Bancorporation. ZB Call Report as of December 31, 2017, pp. 5-6, and Zions Bancorporation, Annual Report on Form 10-K for the year ended December 31, 2017, p. 89.

²⁶ Zions Bancorporation, Annual Report on Form 10-K for the year ended December 31, 2017, pp. 5-6.

²⁷ Except as otherwise noted, figures in section 4.1 are from Zions Bancorporation Federal Reserve Form Y-9C as of December 31, 2017.

²⁸ CRE loans include construction and development loans; loans secured by multifamily properties; and loans secured by nonfarm, nonresidential real estate.

42 percent of the total. C&I loans and residential mortgage loans²⁹ comprise 25 and 22 percent of the total loan portfolio, respectively. Consumer loans, agricultural loans, and other loans and leases make up the remaining 11 percent of the company's loan portfolio.

Investment securities constitute 24 percent of Zions' total assets, or \$16 billion. Of this portfolio, 61 percent are agency mortgage-backed securities (MBS), 25 percent are securities issued by U.S. government agencies and government-sponsored enterprises, and 13 percent are municipal securities. The remainder of the company's assets primarily consist of cash and balances due from depository institutions, federal funds sold, securities purchased under agreements to resell, and goodwill.

Liabilities

Zions' total liabilities are \$59 billion, of which deposits constitute 90 percent (\$53 billion) of the total, mostly in non-transaction accounts. The company's ratio of loans to total deposits is 84 percent. Of total deposits at ZB, 76 percent are money market deposits, 10 percent are other savings deposits, 8.5 percent are transaction deposits, and 5.9 percent are time deposits.³⁰ Individuals, partnerships, and corporations provide ZB with 97 percent of its total deposits, while U.S. states, political subdivisions, and depository institutions hold the balance.³¹

Of the remaining \$6.0 billion of Zions' liabilities, short-term advances from the Federal Home Loan Bank System (FHLB System) total \$3.6 billion; federal funds purchased total \$0.9 billion; repo and securities sold and not yet purchased total \$0.4 billion; and long-term debt, reserves for unfunded lending commitments, and other liabilities total \$1.0 billion.³²

Zions' gross leverage ratio (measured by total assets to total equity) is 8.6x. The company's common equity tier 1 capital ratio is 12.1 percent, and its tier 1 leverage ratio is 10.5 percent.

4.2 Measures of Systemic Importance

In July 2015, the Board of Governors adopted a rule establishing criteria for identifying U.S. G-SIBs for purposes of applying, among other things, a risk-based capital surcharge.³³ Under the final rule, U.S.-based top-tier bank holding companies that qualify as advanced approaches Board of Governors-regulated institutions (those with \$250 billion or more in total consolidated assets or \$10 billion or more in consolidated total on-balance-sheet foreign exposures) are required to calculate an overall measure of systemic importance that is determined by reference to 12 financial indicators. The indicators reflect the size of these institutions, their interconnectedness, the lack of readily available substitutes or financial institution infrastructure for the services they provide, their global (cross-jurisdictional) activity, and their complexity. Table 2 lists each category of systemic importance used to identify a bank holding company as a G-SIB, individual indicators within each category, and the weighting of each indicator in the institution's systemic importance score under the rule.

²⁹ Mortgage loans include home equity lines of credit, junior liens, and other loans secured by residential real estate.

³⁰ ZB Call Report as of December 31, 2017, pp. 28-29.

³¹ ZB Call Report as of December 31, 2017, p. 28.

³² Zions Bancorporation Annual Report on Form 10-K for the year ended December 31, 2017, pp. 88, 131.

³³ 12 C.F.R. part 217.

Table 2: Systemic Importance Indicators

Category	Individual Indicator	Weight
Size	Total exposures (Basel III leverage ratio definition)	20%
Interconnectedness	Intra-financial system assets	6.67%
	Intra-financial system liabilities	6.67%
	Securities outstanding	6.67%
Substitutability	Payments activity	6.67%
	Assets under custody	6.67%
	Underwritten debt and equity transactions	6.67%
Complexity	Over-the-counter derivatives notional	6.67%
	Level 3 assets	6.67%
	Trading and available-for-sale securities	6.67%
Cross-jurisdictional activity	Cross-jurisdictional claims	10%
	Cross-jurisdictional liabilities	10%

Source: 12 C.F.R. § 217.404. Level 3 assets are assets whose accounting valuations are derived from valuation techniques in which one or more significant inputs or significant value drivers are unobservable.

Although only bank holding companies that qualify as advanced approaches institutions are required to compute this score under the rule, data from the Board of Governors' Banking Organization Systemic Risk Report (FR Y-15) allow for an assessment of systemic importance across a broader set of U.S. banking institutions. FR Y-15 is used to collect systemic risk data from U.S. bank holding companies, savings and loan holding companies, and intermediate holding companies with \$50 billion or more of total consolidated assets. As shown in Table 3, among the 40 institutions that filed an FR Y-15 as of December 31, 2016, Zions ranked 40th in overall systemic importance. Appendix B lists all 40 filers assessed under this methodology, together with the indicator-based scores and overall systemic importance score of each.

Table 3: Zions' Ranking of Systemic Importance

Category	Subcategory	(\$ Millions)	Rank Among the 40 FR Y-15 Filers
Size	Total Exposures	70,908	40
Interconnectedness	Intra-Financial System Assets	2,685	31
	Intra-Financial System Liabilities	2,941	34
	Securities Outstanding	12,533	36
Substitutability	Payments	459,067	29
	Assets Under Custody	5,687	30
	Underwriting	38	32
Complexity	Over-the-counter Derivatives	6,209	38
	Trading and Available-for-sale Securities	2,277	32
	Level 3 Assets	149	26
Cross-Jurisdictional Activity	Cross-Jurisdictional Claims	169	39
	Cross-Jurisdictional Liabilities	0	38
Overall Score			40

Source: Federal Reserve Form Y-15 as of December 31, 2016; Office of Financial Research analysis.

Zions' ranking in each of these categories indicates that the nature, scope, size, scale, concentration, interconnectedness, and mix of the activities of Zions would not pose a threat to U.S. financial stability.³⁴

³⁴ There are a number of other analyses that market participants use for measuring the importance and impact of certain firms. For example, one commonly used metric is S-risk, which has been used by a number of researchers as it combines key characteristics of systemic risk, including size, leverage, and interconnectedness. In one S-risk analysis, Zions ranked 37th among U.S. financial institutions as of year-end 2017. See New York University Stern Volatility Institute: The Volatility Laboratory, available at <https://vlab.stern.nyu.edu/analysis/RISK.USFIN-MR.MES>.

5. TRANSMISSION CHANNEL ANALYSIS

5.1 Overview

As described in the Interpretive Guidance, the Council has identified three transmission channels as most likely to facilitate the transmission of the negative effects of a nonbank financial company's material financial distress or activities to other financial firms and markets. These transmission channels are similarly relevant to an analysis of an institution under section 117 of the Dodd-Frank Act:

- *Exposure.* A nonbank financial company's creditors, counterparties, investors, or other market participants have exposure to the nonbank financial company that is significant enough to materially impair those creditors, counterparties, investors, or other market participants and thereby pose a threat to U.S. financial stability.
- *Asset liquidation.* A nonbank financial company holds assets that, if liquidated quickly, would cause a fall in asset prices and thereby significantly disrupt trading or funding in key markets or cause significant losses or funding problems for other firms with similar holdings.
- *Critical function or service.* A nonbank financial company is no longer able or willing to provide a critical function or service that is relied upon by market participants and for which there are no ready substitutes.

5.2 Exposure Transmission Channel

As noted above, under the exposure transmission channel, the Council considers the exposures that a company's creditors, counterparties, investors, or other market participants have to the company.

The two primary types of financial exposures to Zions are the exposures of its capital markets counterparties and of its depositors. Based on the analysis below, these exposures to Zions do not appear to contribute materially to the threat that the company's material financial distress or its activities could pose to U.S. financial stability.

5.2.1 Exposures Arising from Zions' Capital Markets Activities

Direct and indirect exposures of financial market participants to a nonbank financial company experiencing material financial distress can impair those market participants or the financial markets in which they participate and thereby pose a threat to financial stability. Even if individual exposures are relatively small, the direct and indirect exposures can be large enough in the aggregate for a company's material financial distress to have a destabilizing effect on

financial markets. At Zions, these capital markets exposures, which include the company's outstanding debt, derivatives, and repo, are minimal (see Table 4).³⁵

Table 4: Summary of Capital Markets Exposures to Zions (\$ Millions)

Long-Term Debt	383
Short-Term Debt	3,600
Federal Funds Purchased	927
Repurchase Agreements	354
Derivatives (Gross Notional)	6,824
Derivatives (Liabilities at Fair Value)	40
CDS as a Reference Entity	<133

Source: Zions Bancorporation Annual Report on Form 10-K for the year ended December 31, 2017; The Depository Trust & Clearing Corp. (DTCC) Trade Information Warehouse as of December 29, 2017. "CDS as Reference Entity" is gross CDS outstanding for which the company is a reference entity; data available through DTCC's Trade Information Warehouse include companies that are reported as a top 1,000 reference entity, and Zions is not listed (the smallest reference amount is \$133 million). "Derivatives (Liabilities at Fair Value)" accounts for counterparty netting and cash collateral.

Debt

A financial company's outstanding debt provides one means by which the negative effects of the company's material financial distress could be transmitted to other market participants. If Zions were to experience material financial distress, holders of its outstanding debt could experience immediate mark-to-market losses and could lose principal and interest payments in the event of a default.

Zions has \$4.0 billion in debt outstanding, a small amount relative to other large bank holding companies (see Table 5). This amount consists of \$3.6 billion in short-term borrowings from the FHLB System and \$0.4 billion in long-term debt.

³⁵ Zions' shareholders would be expected to incur losses in the event of the company's material financial distress. However, losses arising from a decrease in the value of Zions' common equity, by themselves, would not generally constitute a threat to financial stability. Zions Bancorporation's market capitalization was \$10 billion as of year-end 2017 (Bloomberg, L.P.).

Table 5: Total Debt Issued by U.S. Bank Holding Companies (\$ Billions)

Rank by Total Assets	Company	Total Debt
1	JPMorgan Chase	362
2	Bank of America	260
3	Wells Fargo	239
4	Citigroup	281
5	Goldman Sachs	289
6	Morgan Stanley	204
7	US Bancorp	48
8	PNC	57
9	Bank of New York Mellon	34
10	Capital One	60
...
25	Zions Bancorporation	4

Source: Company SEC filings as of December 31, 2017. “Total Debt” excludes securities lending and repurchase agreements.

Limited data are available regarding the identity of the beneficial owners of Zions’ outstanding debt securities. Based on available data, nine investors hold more than \$10 million of Zions’ debt, with the largest investor holding \$30 million (see Table 6). The largest holders of Zions’ outstanding debt include insurance companies, traditional asset managers, trust companies, and pensions, indicating a generally diffuse investor base. Debt issued by Zions represents a very small percentage of total assets managed by these investors. In light of the small size of individual and aggregate holdings of Zions’ debt, these liabilities do not appear to contribute materially to the threat the company’s material financial distress could pose to U.S. financial stability.

Table 6: Top Known Holders of Debt Issued by Zions (\$ Millions)

Lincoln National Group	30.0
Manulife Financial Corp.	25.1
First Trust	23.7
Flaherty & Crumrine, Inc.	23.5
TransAmerica Financial Life Insurance Co.	18.5
TIAA-CREF	17.2
Alliance Bernstein	16.7
Macquarie Group	11.1
OneAmerica Financial Partners, Inc.	10.4

Source: Bloomberg, L.P. as of December 31, 2017.

Derivatives

Derivatives constitute another channel through which material financial distress at a company could be transmitted to other market participants. In particular, a company’s derivatives

counterparties could experience losses if the company were unable to meet its obligations under those transactions.

Zions has approximately \$6.8 billion in gross notional derivatives positions.³⁶ Measured at fair value, the company has \$40 million in gross derivatives liabilities.³⁷ No Zions counterparty has more than \$[•] of derivatives exposure to the company based on gross notional amount, or more than \$[•] based on fair value.³⁸

Zions' \$6.8 billion in gross notional amount of derivatives consist of \$5.9 billion of interest rate swaps and \$0.9 billion of foreign exchange derivatives.³⁹ Central clearing helps to mitigate the risks to counterparties from a potential default by Zions; as shown in Table 7, \$[•] of the gross notional amount of interest rate exposures to Zions is cleared through central counterparties.

Table 7: Interest Rate Derivatives Exposures of Dealers and Central Counterparties to Zions (\$ Millions)

Counterparty	Notional Amount
[•]	[•]
Total	[•]

Source: Zions Submission, Item A1.

G-SIBs' aggregate gross notional interest rate derivatives exposure to Zions totals only \$[•].⁴⁰ These positions are nearly fully collateralized on a mark-to-market basis, with aggregate net liabilities to these institutions totaling \$[•].⁴¹ While the value of these positions could change quickly, the small sizes of these positions and their high degree of collateralization mitigate the potential risks to these counterparties.

Measured on a gross notional basis, [•] U.S. G-SIBs have a combined \$[•] in foreign exchange derivatives exposure to Zions.⁴² As with the company's interest rate derivatives, the small sizes of these positions and their high degree of collateralization mitigate the potential risks to these counterparties.

Short-Term Wholesale Funding

Exposures arising from the provision of short-term wholesale funding to a financial institution could facilitate the transmission of stress from material financial distress at that financial institution to its counterparties and other market participants. Essentially all of Zions' short-term wholesale funding consists of advances from the FHLB System, repo, and federal funds purchased.

³⁶ Zions Bancorporation Annual Report on Form 10-K for the year ended December 31, 2017, p. 128.

³⁷ Zions Bancorporation Annual Report on Form 10-K for the year ended December 31, 2017, p. 128.

³⁸ Zions Submission, p. 19.

³⁹ Zions Bancorporation Annual Report on Form 10-K for the year ended December 31, 2017, p. 128.

⁴⁰ Zions Submission, Item A1.

⁴¹ Zions Submission, Item A1.

⁴² Zions Submission, Item A1.

Federal Home Loan Bank Advances

The FHLB System allows member banks to borrow against their eligible loans and securities to satisfy liquidity and funding requirements. ZB is a member of the FHLB of Des Moines. Zions is generally subject to the risk that the FHLB lender will declare all advances due and payable or increase the haircuts assigned to collateral.

As of December 31, 2017, Zions had \$3.6 billion of short-term FHLB borrowings outstanding, up substantially from \$0.5 billion at the end of 2016.⁴³ Of the \$3.6 billion in total advances, \$[•] matures in 30 days or less, \$[•] matures between 31 and 60 days, and \$[•] matures between 61 and 90 days.⁴⁴ As of December 31, 2017, Zions had pledged loans with a carrying value of \$[•] to the FHLB of Des Moines as collateral for current and potential borrowings.⁴⁵ [•].⁴⁶

Zions' current borrowings from the FHLB of Des Moines, \$3.6 billion, constitute a growing proportion of the company's short-term wholesale funding and total liabilities, mirroring a recent trend at other U.S. financial institutions. Zions' amount currently available for additional FHLB advances is \$8.9 billion, representing an additional potential exposure of the FHLB to Zions.⁴⁷ At the same time, the large amount of collateral Zions has pledged to the FHLB of Des Moines relative to Zions' potential future borrowing significantly mitigates the risks that Zions' material financial distress could pose to the lender.

Repurchase Agreements

Zions has \$354 million and \$287 million in outstanding repo and reverse repo, respectively.⁴⁸ Individual counterparties' exposures to Zions under repo agreements are listed in Table 8. [•] is Zions' largest repo counterparty in each direction; calculated based on gross amounts (prior to netting in accordance with Federal Accounting Standards Board (FASB) Interpretation no. 41), [•] has \$[•] in repo and reverse repo with Zions.⁴⁹ Zions has pledged \$[•] of U.S. Treasury bills to collateralize its repo obligations to [•].⁵⁰ Due to the relatively small size of this position and the liquidity and credit quality of the collateral posted, compared to the liquidity resources available to [•], Zions' failure to satisfy its obligations under these transactions would not pose a significant risk to [•].

Zions' two next largest repo counterparties are [•] and [•]. Zions has pledged highly liquid U.S. agency securities to these counterparties, and the market value of these pledged securities exceeds the amount of cash borrowed in each case. Repo exposure to Zions represents less than 1.5 percent of the total assets of the [•]⁵¹ and less than 1.2 percent of the total equity of [•].⁵² The

⁴³ Zions Bancorporation Annual Report on Form 10-K for the year ended December 31, 2017, p. 131.

⁴⁴ Zions Submission, Annex 2, p. 5.

⁴⁵ Zions Response to OFR Information Request (June 7, 2018), p. 2.

⁴⁶ Zions Response to OFR Information Request (June 7, 2018), p. 2.

⁴⁷ Zions Bancorporation Annual Report on Form 10-K for the year ended December 31, 2017, p. 131.

⁴⁸ Zions Bancorporation Annual Report on Form 10-K for the year ended December 31, 2017, p. 94, 131.

⁴⁹ Zions Submission, Annex 2, pp. 1-2.

⁵⁰ Zions Response to OFR Request (June 7, 2018), p. 3.

⁵¹ [•]

⁵² [•]

relatively small size of these positions, as well as the amount, liquidity, and credit quality of the collateral pledged against them, substantially mitigates the risk that material financial distress at Zions could pose to these counterparties.

Table 8: Repurchase Agreement Exposures to Zions (\$ Millions)

Repo Counterparty	Cash In (\$)	Market Value of Collateral (\$)	Net Exposure (\$)
[•]	[•]	[•]	[•]
Total	[•]	[•]	[•]

Source: Zions Submission, Annex 2, pp. 1-2; totals reflect gross balances, prior to netting pursuant to FASB Interpretation no. 41.

Federal Funds Purchased

Zions has \$927 million in federal funds purchased.⁵³ [•] financial institutions provided [•] percent of this funding, with \$[•] and \$[•] in federal funds sold, [•].⁵⁴ These loans are generally unsecured, and therefore pose some risk of loss to Zions’ counterparties. However, purchases of federal funds typically mature overnight and are not rolled over to a company experiencing material financial distress, allowing Zions’ counterparties to reduce their exposure in the event of Zions’ distress. Further, the aggregate amount of Zions’ federal funds purchased is small. The small aggregate size of these exposures to Zions mitigates the risk that material financial distress at Zions could pose to U.S. financial stability.

Contagion

An important mechanism for the spread of contagion in financial markets is a nonbank financial company’s interconnectedness with other market participants as a result of the company’s capital markets activities, because capital market participants may engage in protective behavior such as reducing exposures to counterparties and customers or ceasing certain activities to increase liquidity in anticipation of a potential shock.⁵⁵ Due to Zions’ relatively small size and its relatively low level of capital markets activities, each as described above, there is little risk of contagion arising through this mechanism in the event of Zions’ material financial distress.

⁵³ Zions Bancorporation Annual Report on Form 10-K for the year ended December 31, 2017, p. 131. A federal funds transaction is an unsecured loan of reserves held at a Federal Reserve Bank to a depository institution by another depository institution or other eligible entity, typically on an overnight basis. Borrowers and lenders of federal funds are described as “purchasers” and “sellers” of federal funds, respectively.

⁵⁴ Zions Response to OFR Information Request (June 7, 2018), p. 4.

⁵⁵ See Hal Scott, *Interconnectedness and Contagion, Financial Panics and the Crisis of 2008* (November 20, 2012), available at <http://ssrn.com/abstract=2178475>; Ricardo J. Caballero, *Macroeconomics After the Crisis: Time to Deal with the Pretense-of-Knowledge Syndrome*, *Journal of Economic Perspectives* volume 24, issue 4 (2010), pp. 85-102.

5.2.2 Exposures of Depositors to Zions

Deposit exposures constitute another channel through which a bank's material financial distress or its activities could pose a threat to U.S. financial stability.⁵⁶ At \$53 billion, deposits constitute 91 percent of ZB's total liabilities.⁵⁷ Non-transaction accounts,⁵⁸ including money market, other savings, and time deposits, make up most of this total, at \$40.4 billion, \$5.0 billion, and \$3.1 billion, respectively.⁵⁹ Individuals, partnerships, and corporations provide the company with 97 percent of its total deposits, while U.S. states, political subdivisions, and depository institutions hold the balance.⁶⁰

In the case of FDIC-insured deposits, depositors generally bear little or no risk in the event of the bank's material financial distress or failure. In contrast, in the case of uninsured deposits, depositors are effectively creditors of the bank and can experience losses in the event of the bank's material financial distress or failure. An estimated \$25.3 billion, or 47 percent, of ZB's total deposits was uninsured by the FDIC as of March 31, 2018 (see Table 9).⁶¹

Table 9: Uninsured Deposits at ZB (\$ Millions)

Total Assets	66,301
Total Liabilities	58,726
Total Deposits	53,339
Estimated Uninsured Deposits	25,324
Uninsured Deposits % of Total Deposits	47.5%
Uninsured Deposits % of Total Liabilities	43.1%

Source: ZB Call Report as of March 31, 2018. Estimated uninsured deposits include related accrued and unpaid interest.

Among U.S. banks with assets between \$50 billion and \$125 billion, the share of uninsured deposits relative to total deposits and total liabilities varies widely. ZB's share of uninsured deposits is slightly above both the mean and median of these peer institutions (see Table 10).

⁵⁶ The Interpretive Guidance does not address bank deposits as a type of exposure that the Council will consider, because the Interpretive Guidance focuses on the Council's analysis of nonbank financial companies (which excludes bank holding companies) under section 113 of the Dodd-Frank Act. However, the Interpretive Guidance notes that relevant exposures to a company under review include exposures of the company's creditors, counterparties, or other market participants, and depositors are appropriately considered in the context of an application under section 117 of the Dodd-Frank Act.

⁵⁷ ZB Call Report as of December 31, 2017, p. 14. Zions Bancorporation has \$52.6 billion in total deposits, ZB has \$53.0 billion in total deposits, and Zions Bancorporation has \$332 million in deposits with ZB (see Zions Bancorporation Federal Reserve Form Y-9LP as of December 31, 2017).

⁵⁸ Transaction accounts, such as demand deposit accounts, are those from which the depositor is permitted to make transfers or withdrawals by negotiable or transferable instrument, payment order of withdrawal, telephone transfer, or other similar device for the purpose of making payments or transfers to third parties. Non-transaction accounts are accounts for all other deposit types, such as money market, savings, and time deposits.

⁵⁹ ZB Call Report as of December 31, 2017, p. 29.

⁶⁰ ZB Call Report as of December 31, 2017, p. 28.

⁶¹ ZB Call Report as of March 31, 2018, p. 45. In this section 5.2.2, except as otherwise noted, financial information is presented as of March 31, 2018, because [•]. See Zions Response to OFR Information Request (June 7, 2018), p. 4.

Table 10: Uninsured Deposits at ZB’s Selected Peer Institutions (\$ Millions)

Company Name	Total Assets	Total Liabilities	Total Domestic Deposits	Estimated Uninsured Deposits	Uninsured Deposits % of Total Liabilities	Uninsured Deposits % of Total Deposits
Citizens Bank, N.A.	122,429	105,820	89,495	36,829	34.8%	41.2%
Regions Bank	121,865	105,719	98,504	34,958	33.1%	35.5%
MUFG Union Bank, N.A.	120,913	104,385	84,487	44,165	42.3%	52.3%
M&T Trust Company	118,089	103,405	92,114	41,213	39.9%	44.7%
Capital One Bank (USA), N.A.	114,098	98,329	67,695	48,179	49.0%	71.2%
BMO Harris Bank, N.A.	111,890	96,398	82,948	42,645	44.2%	51.4%
Huntington National Bank	104,033	92,544	81,874	52,763	57.0%	64.4%
Discover Bank	100,495	89,910	62,940	4,786	5.3%	7.6%
Synchrony Financial	79,640	68,703	57,959	5,303	7.7%	9.1%
First Republic Bank	90,224	82,387	71,255	47,680	57.9%	66.9%
Bank of the West	89,461	77,489	68,790	34,178	44.1%	49.7%
Compass Bank	86,612	74,365	70,226	29,022	39.0%	41.3%
Santander Bank, N.A.	74,569	61,121	57,160	22,356	36.6%	39.1%
Comerica Bank	72,342	64,849	58,266	34,612	53.4%	59.4%
ZB	66,301	58,726	53,339	25,324	43.1%	47.5%
Morgan Stanley Private Bank, N.A.	66,109	59,727	57,684	7,910	13.2%	13.7%
American Express National Bank	55,002	48,931	45,804	10,586	21.6%	23.1%
Silicon Valley Bank	53,441	49,541	43,654	39,567	79.9%	90.6%
UBS Bank USA	51,789	46,245	46,008	2,049	4.4%	4.5%
Average (Mean)	89,437	78,347	67,905	29,691	37.9%	43.7%
Median	89,461	77,489	67,695	34,612	39.9%	44.7%

Source: Call reports of U.S. banks with total assets between \$50 and \$125 billion as of March 31, 2018.

[•] depositors have \$[•] or more deposited at ZB,⁶² and ZB’s material financial distress or failure could expose them to significant losses. Available data do not allow for extensive analysis of the potential impact on these depositors or their counterparties in such a scenario. The impact of these losses would be influenced by the availability of other liquidity resources to these depositors and their counterparties, among other factors. ZB’s largest depositors operate across a range of industries and do not include U.S. G-SIBs or other depository institutions. The absence of large financial institutions among ZB’s largest depositors reduces the potential for ZB’s

⁶² Zions Submission, Annex 2, p. 3.

material financial distress or failure to cause a broader impairment of financial intermediation or financial market functioning.

5.3 Asset Liquidation Transmission Channel

The second channel identified by the Council through which the negative effects of a nonbank financial company's material financial distress could be transmitted to other firms or markets is the asset liquidation transmission channel. Under the asset liquidation transmission channel, the Council considers whether a company holds assets that, if liquidated quickly, could significantly disrupt the operation of key markets or cause significant losses or funding problems for other firms with similar holdings. During a period of overall stress in the financial services industry and in a weak macroeconomic environment, deterioration in asset prices or market functioning resulting from a rapid liquidation of assets could pressure other financial companies to sell their holdings of affected assets in order to maintain adequate capital and liquidity. This initial liquidation, in turn, could produce a cycle of asset sales that could lead to further market disruptions.

The two key factors in assessing the potential risks of a company's asset liquidation are the amount and the nature of the assets the company may be forced to sell. In evaluating these factors, relevant considerations include the liquidity risk of the company's liabilities; the size and composition of the company's asset portfolio that would be liquidated; and any fire-sale discount, which depends on the liquidity of the assets. All other things being equal, the liquidation of larger or less-liquid asset portfolios poses a greater risk of disrupting financial markets than does the liquidation of smaller or more-liquid asset portfolios. In addition, rapid asset sales would be more likely to disrupt financial markets than asset liquidations over a longer period of time, because rapid asset sales would likely lead to larger price discounts. More-leveraged firms may be forced to liquidate more assets in a shorter time than less-leveraged firms. Finally, sales of assets that are widely held or that are commonly used as collateral by large financial intermediaries in critical funding markets would generally be more disruptive than sales of assets that are not held or used as widely by such intermediaries.

In the event of its material financial distress, Zions could be forced to liquidate assets to satisfy its obligations to counterparties, depositors, and others. However, based on the analysis below, the scale of Zions' runnable liabilities is relatively low, and the impact of a fire sale of Zions' assets on other institutions or markets would likely be small. As a result, the amount and nature of Zions' assets that it could be forced to sell in the event of material financial distress do not appear to contribute materially to the threat that the company's material financial distress could pose to U.S. financial stability.

5.3.1 Liquidity of Zions' Liabilities

As noted above, a key factor in assessing the risks posed by a company's liquidation of assets is the liquidity characteristics of the company's liabilities. Liabilities that may be withdrawn or terminated by a counterparty in the event of Zions' material financial distress, such as uninsured demand deposits and short-term wholesale funding, could impose liquidity strains that would force Zions to sell assets to satisfy its obligations.

Deposits

As discussed in section 5.2.2, deposits constitute the largest category of ZB's liabilities, at \$53 billion. Non-transaction accounts, including money market, other savings, and time deposits, comprise most of ZB's deposit funding, at \$49 billion. Time deposits constitute \$3.1 billion of ZB's deposits, of which an aggregate of \$1.9 billion are in accounts over \$250,000.⁶³

Individuals, partnerships, and corporations provide the vast majority of ZB's deposit funding, at \$51 billion collectively. U.S. states and political subdivisions hold \$1.5 billion in deposits at ZB. Commercial banks and other U.S. depository institutions hold only \$300 million in deposits at ZB, indicating a low level of financial system interconnectedness arising from these deposits.⁶⁴

In the context of material financial distress, a bank will generally not experience a uniform run rate across its various types of deposits. For example, FDIC-insured deposits and uninsured deposits have different degrees of risk, and therefore would generally be subject to runs of different severity. If a bank were to experience material financial distress, FDIC-insured deposits would be expected to run at a considerably lower rate than uninsured deposits.

The Council applied three approaches to assessing the potential run rates for different types of deposits. One approach applies the cash outflow assumptions used in the LCR. The U.S. federal banking agencies developed these assumptions based on estimated potential outflows over a 30-day period of elevated financial stress. The second approach applies actual run rates experienced at certain depository institutions during past periods of elevated financial stress. The third approach considers liquidity stress tests that Zions itself uses to manage its liquidity risk.

Assessing Deposit Run Rates: Liquidity Coverage Ratio

The LCR is a rule adopted by the federal banking regulators to create a standardized minimum liquidity requirement for large and internationally active banking organizations. The rule requires institutions to hold high-quality liquid assets in an amount at least equal to its projected net cash outflows during a 30-day stress period. The LCR applies to all banking organizations with \$250 billion or more in total consolidated assets or \$10 billion or more in on-balance sheet foreign exposure, and a less-stringent, modified LCR applies to bank holding companies and savings and loan holding companies that do not meet these thresholds but have \$50 billion or more in total assets.

ZB has four types of deposits relevant to calculations under the LCR:⁶⁵

- *Stable retail deposits* are retail deposits, the entire amount of which is covered by FDIC deposit insurance, where either (1) the deposits are held in a transactional account by the depositor, or (2) the depositor has another established relationship with the banking

⁶³ The standard deposit insurance amount is \$250,000 per depositor, per FDIC-insured bank, per ownership category.

⁶⁴ ZB Call Report as of December 31, 2017, p. 28.

⁶⁵ For the definitions of these terms under the LCR rule, see 12 C.F.R. § 249.3.

entity, such that withdrawal of the deposit during a liquidity stress event would be highly unlikely.

- *Other retail deposits* include all retail deposits that are not stable retail deposits, as described above. In the formulation of the LCR, supervisory data indicated a higher outflow rate for deposits that are partially FDIC-insured as compared to fully FDIC-insured. Accordingly, the outflow rate for “other retail deposits” is higher than for stable retail deposits.
- *Wholesale deposits* are deposits from institutional (not retail) sources, including financial and non-financial entities. This category includes operational and non-operational deposits. Operational deposits are deposits that are necessary for the bank to provide operational services as an independent third-party intermediary, agent, or administrator to the wholesale customer or counterparty providing the funding.
- *Collateralized deposits* are either (1) a deposit of a public-sector entity secured by a priority lien on assets owned by the bank, or (2) a deposit of a fiduciary account for which the bank is a fiduciary and sets aside assets as security.

Table 11 presents the total quantities of these deposit categories at Zions, the corresponding runoff rates under the LCR, and the resulting estimated runoff amounts. ZB’s deposit funding is primarily a mixture of stable retail deposits, other retail deposits, and wholesale deposits, which account for [•] percent, [•] percent, and [•] percent of its deposit funding, respectively. The LCR assumptions indicate that in the event of elevated financial stress, Zions may experience a 30-day deposit outflow of \$[•], or [•] percent of its total deposits.

Table 11: Deposit Runoff at Zions under LCR Assumptions (\$ Millions)

Category	Total Quantity	Runoff Rate	Runoff Amount
Stable Retail Deposits	[•]	[•]	[•]
Other Retail Deposits	[•]	[•]	[•]
Operational Wholesale Deposits	[•]	[•]	[•]
Non-Operational Wholesale Deposits	[•]	[•]	[•]
Collateralized Deposits	[•]	[•]	[•]
Total	[•]		[•]

Source: Zions Submission Annex 2, p. 4.

Assessing Deposit Run Rates: Historical Deposit Runs

Historical deposit runs provide useful case studies indicating the extent to which depositors could withdraw from Zions in the event of its material financial distress. Because different types of deposits would generally be expected to run at different rates, a granular view of the deposit composition of the banks that have experienced runs would be beneficial to compare these examples to Zions; however, this data is often unavailable.

Based on available data, Table 12 provides actual deposit outflow rates⁶⁶ at five institutions that experienced financial distress in 2008, along with hypothetical outflow rates at these institutions extrapolated over a 30-day period. Using a 30-day period allows for consistent comparisons across firms and allows for the assessment of the effects of a bank’s distress that may continue for a longer period of time than these examples. These hypothetical outflow rates mostly range from 5.7 to 25.3 percent; in one outlier case, the bank saw an outflow of 5.1 percent of deposits in just two days, which would translate to a 55.6 percent hypothetical 30-day rate. Excluding this outlier (because the outflows occurred over a very short period and it is unclear whether such a withdrawal rate could continue over a longer period) and applying the range of the remaining examples to Zions indicates potential net outflows between \$3.0 billion and \$13.4 billion over a 30-day period. The large size of this range indicates that liquidity needs at Zions could vary widely.

Table 12: Historical Deposit Outflows

Institution	Insured Deposits (% of Total)	Deposit Base (\$ Billions)	Start of Outflow	Duration of Outflow (Days)	Percent Outflow	Hypothetical 30-Day Outflow	Hypothetical 30-Day Outflow at ZB (\$ Millions)
Wachovia	61.3%	414	4/15/2008	14	3.6%	7.8%	4,134
			9/15/2008	5	2.0%	11.8%	6,254
			9/26/2008	8	2.4%	9.0%	4,770
Washington Mutual	74.2%	186	7/11/2008	23	4.9%	6.5%	3,445
			9/8/2008	16	10.1%	18.6%	9,858
National City	81.2%	98	3/15/2008	2	5.1%	55.6%	[Excluded]
			7/11/2008	5	4.6%	25.3%	13,409
			9/15/2008	25	4.6%	5.7%	3,021
Sovereign	70.7%	47	9/1/2008	30	6.2%	6.2%	3,286
IndyMac	83.3%	19	6/27/2008	14	8.4%	17.6%	9,328

Source: Jonathan D. Rose, “Old-Fashioned Deposit Runs,” Finance and Economics Discussion Series 2015-111, Board of Governors, available at <http://dx.doi.org/10.17016/FEDS.2015.111>. For Washington Mutual, National City, and Sovereign, the deposit base reflects total deposits as reported in Call Reports as of June 30, 2008. For Wachovia and IndyMac, the deposit base reflects total deposits as reported in Call Reports as of March 31, 2008. Subsidiaries of a holding company are combined where appropriate.

The applicability of historical examples to any particular bank is limited due to differences in the characteristics of the institutions, the severity of the institutions’ distress, the extent to which deposits are FDIC-insured, the economic context of the historical deposit outflows, the length and nature of the relationship between the depositor and the bank, the characteristics of peer institutions, and changes to regulation over time, among other factors. It is difficult to adjust for all of the potentially differentiating factors in the historical examples to develop precise estimates for Zions. Nonetheless, it is appropriate to consider historical examples, because they

⁶⁶ Deposit outflows rates are depicted as net of any deposit inflows over the periods examined.

provide context for the range of potential deposit withdrawals that could occur from a bank experiencing material financial distress.

One key difference between Zions and the institutions listed in Table 12 is that Zions has a larger share of uninsured deposits as a percentage of total deposits. As noted above, although all deposits are vulnerable to runs, FDIC-insured deposits are likely to have significantly different liquidity characteristics than uninsured deposits.⁶⁷ In particular, because uninsured deposit accounts tend to liquidate more quickly than insured deposit accounts, deposit runs at Zions could be larger than the range in Table 12 indicates.

Assessing Deposit Run Rates: Zions’ Internal Liquidity Stress Test

Zions uses an internal liquidity stress test to gauge its potential liquidity needs over 30 and 90 days. The company estimates that, in a context of material financial distress, \$[•] in deposits would run within 30 days and \$[•] would run within 90 days (see Table 13).

Table 13: Zion’s Internal Liquidity Stress Test (\$ Millions)

Category	30-Day Runoff	31-90 Day Runoff	90-Day Cumulative
Deposits	[•]	[•]	[•]
Repo	[•]	[•]	[•]
FHLB Advances	[•]	[•]	[•]
Federal Funds Purchased	[•]	[•]	[•]
Undrawn Credit and Liquidity Facilities	[•]	[•]	[•]
Other Liabilities	[•]	[•]	[•]
<i>Cash Inflows</i>	[•]	[•]	[•]
Total Estimated Runoff*	[•]	[•]	[•]

Source: Zions Submission, Annex 2, p. 5; Zions Response to OFR Request (July 6, 2018), p. 3.

*In this table, “N/A” indicates the specified data were not available for this analysis and are excluded from the relevant “Total Estimated Runoff” calculations.

Over a 30-day period, the net estimated runoff under Zions’ internal liquidity stress test [•].⁶⁸ In addition to the \$[•] in deposit outflows, the company projects \$[•] in outflows of short-term wholesale funding, \$[•] in drawdowns of commitments, \$[•] in additional collateral pledged associated with its derivatives, and \$[•] of inflows related to loan paydowns.

However, several components of the internal runoff figures differ from the LCR rates. For example, [•]. While it is not possible definitively to determine which of these assumptions more accurately reflects the potential withdrawals from Zions in the event of its material financial distress, [•].

⁶⁷ See Martin, Puri and Ufier, *Deposit Inflows and Outflows in Failing Banks: The Role of Deposit Insurance*, NBER working paper 24589 (2018). For example, the authors determined that at one banking institution, in a context of significant bank-specific distress, uninsured deposit accounts liquidate at a rate 92 percent faster than other accounts. The authors determined that their findings generalize to other banks.

⁶⁸ Zions Submission, Item B1.

Non-Deposit Funding and Other Commitments

Non-deposit funding and other commitments, such as short-term wholesale funding and undrawn credit or liquidity facilities, can also be sources of liquidity risk for financial institutions. Short-term wholesale funding in particular can be a significant source of liquidity strain at financial institutions experiencing material financial distress. For example, repo counterparties may decline to roll over repo funding in the event of material financial distress at their counterparty, particularly if the securities underlying the repo transactions have high interest rate, credit, or liquidity risk. Similarly, in the event of a borrower's material financial distress, a FHLB lender may declare all advances due and payable or increase the level of haircuts assigned to collateral, particularly if the loans securing these advances decline in value, such as during a downturn in U.S. real estate markets. Further, if Zions experiences material financial distress, sellers of federal funds are unlikely to roll over such unsecured funding, in order to reduce their exposure and reduce potential losses. Undrawn credit or liquidity facilities that a bank has made available to its customers are an additional source of liquidity risk, particularly during a period of overall stress in the financial services industry, when liquidity is scarce.

Zions has \$6.0 billion in short-term wholesale funding and other non-deposit liabilities, constituting 10 percent of the company's total liabilities.⁶⁹ Short-term FHLB advances make up the majority of the total in this category, at \$3.6 billion.⁷⁰ Federal funds purchased and funding secured by Level 1 and Level 2A assets (including repo) represent an additional \$0.9 billion⁷¹ and \$[•],⁷² respectively. Zions also has approximately \$[•] in undrawn credit and liquidity facilities, of which [•] percent is extended to retail customers, [•] percent is extended to non-financial wholesale customers, and [•] percent is extended to financial customers.⁷³ The cash outflow assumptions used in the calculation of the LCR are instructive in assessing potential run rates in a period of elevated financial stress. Under LCR assumptions, the outflows of Zions' non-deposit funding would total \$[•] over 30 days, including \$[•] of non-deposit wholesale funding, \$[•] of undrawn credit and liquidity facilities, and \$[•] of other outflows (see Table 14).

⁶⁹ Zions Bancorporation Annual Report on Form 10-K for the year ended December 31, 2017, p. 88.

⁷⁰ Zions Bancorporation Annual Report on Form 10-K for the year ended December 31, 2017, p. 131.

⁷¹ Zions Bancorporation Annual Report on Form 10-K for the year ended December 31, 2017, p. 131.

⁷² Zions Submission, Item B1.

⁷³ Zions Submission, Item B1.

Table 14: Runoff of Non-Deposit Wholesale Funding and Other Commitments under LCR Assumptions (\$ Millions)

Category	Total Amount	Runoff Rate	Runoff Amount
<i>Non-Deposit Wholesale Funding</i>			
Funding Secured by Level 1 Assets	[•]	0%	[•]
Funding Secured by Level 2A Assets	[•]	15%	[•]
FHLB advances (0-30 days)	[•]	25%	[•]
FHLB advances (31+ days)	[•]	0%	[•]
Federal funds purchased	[•]	100%	[•]
Total Non-Deposit Wholesale Funding	[•]		[•]
<i>Undrawn Facilities</i>			
Undrawn Credit and Liquidity Facilities to Retail	[•]	5%	[•]
Undrawn Credit Facilities to Non-Financial Wholesale Customers	[•]	10%	[•]
Undrawn Liquidity Facilities to Non-Financial Wholesale Customers	[•]	30%	[•]
Undrawn Credit and Liquidity Facilities to Deposit Institutions & Foreign Banks	[•]	50%	[•]
Undrawn Credit Facilities to Financial Customers	[•]	40%	[•]
Undrawn Liquidity Facilities to Financial Customers	[•]	100%	[•]
Total Undrawn Facilities	[•]		[•]
Other Outflows			[•]
Total	[•]		[•]

Source: Zions Submission, Item B1.

Summary of the Liquidity of Zions' Liabilities

Table 15 summarizes the above analyses of potential liquidity demands on Zions over a 30-day period.

Table 15: Sample 30-Day Liquidity of Zions' Liabilities (\$ Millions)

	Historical Deposit Runs	LCR	Internal Stress Test
Deposits	3,021-13,409	[•]	[•]
Short-Term Wholesale Funding	[•]	[•]	[•]
Undrawn Credit and Liquidity Facilities	[•]	[•]	[•]
Other Liabilities	[•]	[•]	[•]
<i>Cash Inflows</i>	[•]	[•]	[•]
Net Cash Outflows	[•]	[•]	[•]

Source: Tables 11-14; Zions Submission, Item B1; Zions Response to OFR Request (July 6, 2018), p. 3. Sample cash inflows and potential runs on short-term wholesale funding, undrawn credit and liquidity facilities, and other liabilities under the column labeled “Historical Deposit Runs” are calculated using the LCR assumptions

Using historical examples of deposit runs, the LCR, and the company’s internal liquidity stress test, the gross deposit outflows that Zions could experience range from \$[•] to \$[•]. Using estimates from the LCR, the company could experience \$[•] in outflows from non-deposit funding and \$[•] in cash inflows. Across all of Zions’ liabilities and commitments, these examples suggest a range of \$[•] to \$[•] in net cash outflows from Zions over a 30-day period of stress.

5.3.2 Liquidity of Zions’ Assets

To address a potential liquidity strain at Zions in the event of its material financial distress, the company could be forced to liquidate some of its assets. Factors affecting the extent to which Zions could sell its assets to meet liquidity demands include the type of asset, the asset’s credit rating, and the market liquidity of the asset (such as whether it is publicly traded).

Of the company’s \$66 billion of total consolidated assets, loans constitute the largest category, at \$45 billion, followed by investment securities, at \$16 billion (see Appendix A). The company has \$1.3 billion of cash and balances due from depository institutions, and \$0.5 billion in federal funds sold and securities purchased under agreements to resell.⁷⁴ The balance of Zions’ assets consists of goodwill, other intangible assets, and all other assets. Zions does not hold a significant amount of corporate bonds.

Zions’ \$45 billion loan portfolio predominantly consists of CRE (\$19 billion), C&I (\$11 billion), and residential mortgages (\$10 billion). In the event of material financial distress at Zions, the company may seek to liquidate these loans in order to satisfy its obligations. However, loans are highly illiquid assets, in part because they are not publicly traded and can be highly idiosyncratic to the particular region or borrower. For this reason, Zions would likely seek to rely on other sources of liquidity, including selling other types of assets, if it experienced a liquidity strain. For example, the company may instead use its cash on hand or sell its more-liquid assets, including U.S. Treasury securities, U.S. agency securities, and agency MBS. At the same time, there may be limitations on the extent to which the company can or would want to sell its more-

⁷⁴ Zions Bancorporation Annual Report on Form 10-K for the year ended December 31, 2017, p. 88.

liquid assets first, including regulatory minimum capital requirements, the extent to which liquid assets are encumbered, and possible first-mover advantage in selling less-liquid assets.

Table 16 shows Zions' cash and invested assets, divided between highly liquid assets and all other assets. The company's \$16 billion of liquid assets consist of cash and short-term investments, U.S. Treasury and agency securities, and agency MBS.

Table 16: Zions Asset Holdings (\$ Millions)

Assets	Total Amount
<i>Highly Liquid</i>	
Cash & Short-Term Investments	1,843
U.S. Treasury Securities	25
U.S. Agency Securities	4,040
U.S. Agency MBS	9,667
Total Highly Liquid Assets	15,575
<i>Other Invested Assets</i>	
Municipal Bonds	2,103
Other Securities	96
Residential Mortgage Loans	9,804
Commercial Real Estate Loans	18,632
Commercial & Industrial Loans	11,273
Other Loans	5,115
Total Other Invested Assets	47,023
Total Cash & Invested Assets	62,598

Source: Zions Bancorporation Federal Reserve Form Y-9C as of December 31, 2017. Cash and short-term investments include cash, balances due from depository institutions, federal funds sold, and securities purchased under agreements to resell. U.S. agency securities include securities issued by U.S. government agencies and government-sponsored enterprises. These figures do not exclude Reserve Bank requirements and assets pledged as collateral.

The LCR provides another means to assess the assets that the company could sell in the event of a liquidity strain. In particular, Zions could sell high-quality liquid assets (HQLA) as defined under the LCR to meet liquidity demands. While the company's HQLA resemble those listed as liquid assets in Table 16, haircuts are used in the calculation of HQLA to account for, among other things, a potential market liquidity discount for assets other than cash and U.S. government securities. Table 17 provides a summary of Zions' HQLA for purposes of the LCR.

Table 17: Zions' High-Quality Liquid Assets (\$ Millions)

Assets	Unweighted Amount	Weight	Weighted Amount
<i>Level 1 Assets</i>			
[•]	[•]	100%	[•]
[•]	[•]	100%	[•]
[•]	[•]	100%	[•]
<i>Level 2A Assets</i>			
[•]	[•]	85%	[•]
<i>Excess HQLA Amount***</i>			[•]
Total HQLA****	\$(•)		\$(•)

*[(•)].

**[(•)].

***[(•)].

****[(•)].

Source: Zions Submission, Item B1. Figures are reported as of December 29, 2017.

Zions has additional liquidity sources that could be used to satisfy its obligations. ZB, which is a member of the FHLB of Des Moines, can borrow against its eligible loans and securities to satisfy liquidity and funding requirements. As of December 31, 2017, the company had pledged loans with a carrying value of approximately \$(•) to the FHLB of Des Moines as collateral for current and potential borrowings.⁷⁵ The total amount available to ZB for additional FHLB advances is \$8.9 billion.⁷⁶ However, to the extent that Zions' pledged collateral declines in value, the company's ability to draw on its available credit lines could become constrained. In addition, to the extent that Zions sells some of its assets, those assets would no longer be available to collateralize FHLB borrowings.⁷⁷

5.3.3 Potential Impact of a Liquidation of Zions' Assets

The broader market implications of an asset liquidation depend on a number of factors, including the size and composition of the liquidated asset portfolio; any fire-sale discount, which depends on the risk and liquidity of the assets; and the extent to which other financial market participants may be forced or incentivized to sell similar assets. All other things being equal, the liquidation of larger or less-liquid asset portfolios generally poses greater risk of disrupting financial markets than the liquidation of smaller or more-liquid asset portfolios. In addition, fire sales of assets that are widely held, or commonly used as collateral in critical funding markets by large financial intermediaries, would generally have a greater impact on market function than fire sales of assets that are not held or used as widely by such intermediaries.

⁷⁵ Zions Response to OFR Information Request (June 7, 2018), p. 2.

⁷⁶ Zions Bancorporation Annual Report on Form 10-K for the year ended December 31, 2017, p. 131.

⁷⁷ Zions' internal liquidity stress test indicates a reduction in FHLB borrowing capacity to \$(•). Zions Response to OFR Information Request (June 29, 2018), p. 3.

The order in which Zions may liquidate assets in the event of its material financial distress is a factor in the extent of any fire sale risk but is subject to considerable uncertainty. Zions could liquidate a significant portion of its highly liquid assets rapidly, reducing the likelihood that the company would be forced to liquidate illiquid assets in the event of its material financial distress. However, in the event of the company's material financial distress, the company may also be expected to seek to maintain risk-based capital ratios and satisfy other requirements above the minimum levels set by regulatory authorities. Doing so might require Zions to sell a mix of assets across a number of asset classes, rather than proceed with sales of assets in order from most to least liquid. Further, in the event of a significant market disruption, there could be a meaningful first-mover advantage to selling less-liquid assets first. For example, markets for less-liquid assets could be prone to disruption in the event that a forced seller liquidated a large portion of its portfolio of those assets. Given these potential discounts, in some circumstances Zions may be incentivized to sell a portion of its less-liquid assets first and to hold U.S. government securities and agency MBS, which tend to increase in value during a period of market turmoil. To the extent that Zions' assets are encumbered (for example, as collateral for FHLB loans), Zions would need to sell less-liquid assets to fund its liquidity needs. Further, the company's holdings of liquid assets could be reduced before it enters material financial distress.

Potential Impact of Asset Liquidation on Financial Markets

One approach to assessing the potential fire-sale impact of a rapid liquidation of assets by Zions is to compare its amounts of assets in individual asset types to the average daily trading volume (ADTV) of those assets on a market-wide basis. This ratio provides insight into the ability of the market to absorb Zions' assets if the company were forced to liquidate its asset portfolio or if market participants were concerned that the company might do so.

Zions' holdings of highly liquid assets and municipal bonds are smaller than the ADTVs in these markets, in some cases significantly so. In 2017, the ADTVs for U.S. Treasury securities, U.S. agency securities, agency MBS, and municipal securities were \$505 billion, \$4.1 billion, \$209 billion, and \$11 billion, respectively.⁷⁸ On this basis, it appears highly unlikely that fire sales of these assets by Zions could disrupt these markets. Notably, Zions holds an insignificant amount of corporate bonds, non-agency MBS, and non-agency asset-backed securities.

In the event of Zions' material financial distress, it could seek to sell assets other than its highly liquid assets and municipal bonds in order to raise needed liquidity. In particular, the company could sell a portion of its \$44 billion loan portfolio. However, because loans are typically highly illiquid, it may be difficult for the company to sell its loans in a short period of time without accepting a large discount from the face value of the loans.

Zions' loan portfolio predominantly consists of CRE (\$19 billion), C&I (\$11 billion), and residential mortgage loans including home equity lines of credit (\$10 billion).⁷⁹ The company has smaller holdings of consumer loans, agricultural loans, and certain other loans and leases. Because banks and nonbank financial companies issue loans of similar types, these loans could

⁷⁸ SIFMA, US Bond Market Trading Volume, available at <https://www.sifma.org/resources/research/us-bond-market-trading-volume>.

⁷⁹ Zions Bancorporation Federal Reserve Form Y-9C as of December 31, 2017.

be viewed as types that are commonly held among financial market participants. Furthermore, CRE and residential mortgage loans are commonly pledged as collateral against advances from the FHLB System.

Due to low trading activity, data on trading volumes in CRE, C&I, and residential mortgage loans are unavailable. However, Zions' loans could be compared to the total size of these markets, measured by loan amounts outstanding. There is approximately \$4.1 trillion⁸⁰ in outstanding CRE debt, \$2.1 trillion⁸¹ in outstanding C&I loans (issued by U.S. commercial banks), and \$11 trillion⁸² in U.S. residential mortgage debt outstanding. While it is difficult to forecast with precision how a fire sale of Zions' loan portfolio may disrupt these markets, the company's holdings of each asset class are very small relative to the total amount outstanding of the asset class, reducing the potential for such a fire sale to disrupt those markets or to impair other investors in these categories of assets.

Further, loans are often highly idiosyncratic instruments in terms of their credit quality. In particular, while loans within a broad category, such as CRE, could be widely held or used as collateral, loans that are specific to a borrower, maturity, or funding terms are not. For this reason, a disruption in the specific markets in which Zions operates, such as by type of borrower within a particular region, could have a smaller negative effect on U.S. financial stability than a disruption in other types of asset markets.

Potential Impact of Asset Liquidation on Other Financial Institutions

Another approach to analyzing the potential effects of a liquidation of assets by Zions is to assess the relative impact that fire sales by various financial institutions could have on other financial institutions.⁸³ This analysis attempts to assess the effect of a firm's fire sale on the balance sheets of other firms holding the same or similar assets. The analysis starts by assuming a negative shock to the net worth of a firm or group of firms (an "equity shock"). Such a shock would raise the firm's leverage and decrease the equity cushion protecting the firm's creditors. In attempting to return to the company's original leverage, the company would have to rapidly sell assets. Such a fire sale of assets could directly affect the balance sheets of firms that hold the same or similar assets, thus spreading the negative effects of its distress to other firms. As a robustness check, the analysis employs a second scenario and assumes a downward shock to the value of assets of a firm or group of firms (an "asset shock").⁸⁴

⁸⁰ Calculated as the sum of (1) nonfarm, nonresidential (\$2.7 trillion) and (2) multifamily residential (\$1.3 trillion) mortgage debt outstanding as of December 31, 2017. See Board of Governors, Mortgage Debt Outstanding (June 2018), available at <http://www.federalreserve.gov/econresdata/releases/mortoutstand/current.htm>.

⁸¹ Federal Reserve Bank of St. Louis Economic Research: Commercial and Industrial Loans, All Commercial Banks (citing Board of Governors), available at <https://fred.stlouisfed.org/series/BUSLOANS>.

⁸² Including mortgages on one- to four-family residences as of December 31, 2017. See Board of Governors, Mortgage Debt Outstanding (June 2018), available at <http://www.federalreserve.gov/econresdata/releases/mortoutstand/current.htm>.

⁸³ The analysis considers the framework proposed in Greenwood, Landier and Thesmar, *Vulnerable Banks*, Journal of Financial Economics 115 (3) (2015), and extensions by Duarte and Eisenbach, *Fire-Sale Spillovers and Systemic Risk*, Federal Reserve Bank of New York Staff Report 645 (2015).

⁸⁴ While more-leveraged firms must sell more assets in both scenarios, the asset shock scenario requires leveraged

As noted above, a firm's asset size and leverage relative to other financial firms will affect the relative impact of a rapid liquidation of assets by that firm. For instance, firms that are small relative to the market can sell a volume of assets that can be easily absorbed, but larger firms will necessarily sell larger volumes of assets that may not be so easily absorbed. In addition, the market impact of asset sales by a financial firm will also depend on the firm's asset profile, because rapid fire sales of assets that are held by other financial firms would likely have a more pronounced effect on the financial system.

Because Zions' asset holdings are small relative to the market sizes of those asset classes, this analysis indicates that its asset liquidation would likely have a limited effect on other market participants. In an analysis of a sample of large financial companies, Zions ranked 47th and 44th, respectively, with respect to the impact of equity and asset shocks (see Appendix C).

These analyses indicate that there is not a significant risk that an asset liquidation by Zions would disrupt trading or funding in key markets or cause significant losses or funding problems for other firms with similar holdings.

5.4 Critical Function or Service Transmission Channel

Under the critical function or service transmission channel, the Council considers whether a nonbank financial company may no longer be able or willing to provide a critical function or service that is relied upon by market participants or customers and for which there are no ready substitutes. Market share is one useful proxy for substitutability of an institution; all other things being equal, an institution with a large market share will be more difficult for competitors to replace in a short period of time than an institution with a smaller market share. Market concentration is another useful proxy for substitutability, because highly concentrated markets are often less competitive than less-concentrated markets, and other market participants may be better positioned to fill a void in a highly competitive market.

Zions' most significant services to its customers and counterparties are making loans (particularly CRE, C&I, and residential mortgage loans) and taking deposits.

Zions does not appear to have a large enough share of any critical market to disrupt the provision of services if it experiences material financial distress and is unable or unwilling to provide services.

Deposits

Accepting deposits is a critical service that U.S. banks provide to individuals, businesses, and governments. Depositors rely on banks to safeguard their money. Transaction deposit accounts provide bank customers with ready access to their cash. Non-transaction accounts, such as savings and money market deposit accounts, provide bank customers with the ability to accrue interest.

firms to sell significantly more assets to return to their steady state.

As discussed above, Zions has \$53 billion in deposit liabilities, mostly in non-transaction accounts, with 76 percent of the total in money market deposits, 10 percent in other savings, 8.5 percent in transaction deposits, and 5.9 percent in time deposits. Individuals, partnerships, and corporations provide the company with 97 percent of its total deposits, while U.S. states, political subdivisions, and depository institutions constitute the balance.

Deposits at U.S. commercial banks totaled \$12 trillion as of December 27, 2017.⁸⁵ Zions' deposits represent a small share of total U.S. commercial bank deposits, at less than 0.5 percent. Further, the market for taking deposits is competitive, with 5,670 FDIC-insured banking institutions as of the fourth quarter of 2017.⁸⁶

At the same time, Zions does have a strong deposit presence in certain states. In particular, in Utah, when considering only retail branches, Zions has a deposit market share of approximately 25 percent (excluding 12 banks with only one branch in Utah where that branch is used to gather online deposits, brokered deposits, municipal deposits, health savings accounts or sweep deposits).⁸⁷ This market share figure would be lower if deposits drawn through the Internet and other methods were taken into account. In general, it does not appear that the state and regional product-specific markets in which Zions has a strong presence are sufficiently sizeable or interconnected with the broader financial system such that the negative effects on those markets of material financial distress at Zions would pose risks to U.S. financial stability.

Commercial Real Estate Loans

CRE loans are used to finance the purchase of commercial property. These loans are generally secured by liens on the property. The market for CRE loans is large, competitive, and fragmented, with approximately \$4.1 trillion in total CRE debt outstanding.⁸⁸ Zions holds a CRE portfolio of \$19 billion,⁸⁹ which represents a market share of less than 0.5 percent. Because the CRE loan market does not appear to be highly concentrated, and because there are numerous CRE loan holders, it would not be difficult for other firms to substitute for the lost capacity if Zions exited this market.

Commercial and Industrial Loans

C&I loans are used to finance certain business needs, including inventory, working capital, and investments in plant and equipment. There are \$2.1 trillion in C&I loans issued by U.S.

⁸⁵ Federal Reserve Bank of St. Louis Economic Research: Deposits, All Commercial Banks (citing Board of Governors), available at <https://fred.stlouisfed.org/series/DPSACBW027SBOG>.

⁸⁶ FDIC Quarterly Banking Profile, Fourth Quarter 2017, p. 5, available at <https://www.fdic.gov/bank/analytical/qbp/2017dec/qbp.pdf>.

⁸⁷ Without this adjustment, ZB ranks 7th in Utah, with a 3.6 percent market share. FDIC Summary of Deposits: Deposit Market Share Report as of June 30, 2017.

⁸⁸ Calculated as the sum of (1) nonfarm, nonresidential (\$2.7 trillion) and (2) multifamily residences (\$1.3 trillion) mortgage debt outstanding as of December 31, 2017. See Board of Governors, Mortgage Debt Outstanding (June 2018), available at <http://www.federalreserve.gov/econresdata/releases/mortoutstand/current.htm>.

⁸⁹ Zions Bancorporation Federal Reserve Form Y-9C as of December 31, 2017, p. 19. CRE loans include construction and development loans, loans secured by multifamily properties, and loans secured by nonfarm, nonresidential real estate.

commercial banks outstanding.⁹⁰ The C&I loan market is relatively concentrated, with the three largest U.S. banks by total consolidated assets holding approximately one-quarter of outstanding C&I loans.⁹¹ Zions' C&I loan portfolio totals \$11 billion,⁹² which represents a small market share of approximately 0.5 percent.

Other Loans

In addition to its CRE and C&I loans, Zions has \$9.8 billion in residential mortgages, \$0.7 billion in consumer loans, \$0.5 billion in agricultural loans, and \$4.0 billion in other loans and leases.⁹³ As outstanding loans in residential housing, consumer, and agricultural loans total \$10.6 trillion,⁹⁴ \$2.8 trillion,⁹⁵ and \$385 billion,⁹⁶ respectively, Zions represents a very small share of each of these markets.

Other Products and Services

Banks provide other critical services to U.S. financial markets besides making loans and receiving deposits. These services include provide payment, clearing, and settlement services, acting as a custodian for assets, and underwriting, among other services.

Zions has a minimal role in payments, clearing, and settlement. Zions had \$544 billion⁹⁷ in total payments activity in 2017, of which over 99 percent were payments in U.S. dollars, representing a small share of U.S. dollar payments in that year.⁹⁸ Further, Zions does not provide a significant quantity of clearing or settlement services to market participants. Zions also has a small presence in the asset custody and underwriting markets. Zions held \$7.2 billion⁹⁹ of assets as a custodian on behalf of customers, representing a small share of total U.S. assets under custody.¹⁰⁰ Zions underwrote \$133 million in debt security offerings in 2017,¹⁰¹ representing a

⁹⁰ Federal Reserve Bank of St. Louis Economic Research: Commercial and Industrial Loans, All Commercial Banks (citing Board of Governors), available at <https://fred.stlouisfed.org/series/BUSLOANS>.

⁹¹ See Federal Reserve Form Y-9C as of December 31, 2017, for JP Morgan Chase, Bank of America, and Wells Fargo.

⁹² Zions Bancorporation Federal Reserve Form Y-9C as of December 31, 2017, p.19.

⁹³ Zions Bancorporation Federal Reserve Form Y-9C as of December 31, 2017, p. 19. Residential mortgage loans include home equity lines of credit, junior liens, and other loans secured by residential real estate. Agricultural loans include production loans and loans secured by farm real estate.

⁹⁴ Including mortgages on one- to four-family residences. See Board of Governors, Mortgage Debt Outstanding (June 2018), available at <http://www.federalreserve.gov/econresdata/releases/mortoutstand/current.htm>.

⁹⁵ Board of Governors, Consumer Credit – G.19, available at <https://www.federalreserve.gov/releases/g19/current>.

⁹⁶ U.S. Department of Agriculture Economic Research Service: Summary of U.S. Farm Income Financial Indicators, available at <https://www.ers.usda.gov/data-products/farm-income-and-wealth-statistics/data-files-us-and-state-level-farm-income-and-wealth-statistics>.

⁹⁷ Zions Bancorporation Federal Reserve Form Y-15 as of December 31, 2017, p. 3.

⁹⁸ For context, the four largest U.S. bank holding companies by total consolidated assets made \$463 trillion in total U.S. dollar payments in 2017. See Federal Reserve Form Y-15 as of December 31, 2017, for JPMorgan Chase, Bank of America, Wells Fargo, and Citigroup.

⁹⁹ Zions Bancorporation Federal Reserve Form Y-15 as of December 31, 2017, p. 3.

¹⁰⁰ For context, the four largest U.S. bank holding companies by total consolidated assets held \$43 trillion in total assets under custody. See Federal Reserve Form Y-15 as of December 31, 2017, for JP Morgan Chase, Bank of America, Wells Fargo, and Citigroup.

¹⁰¹ Zions Bancorporation Federal Reserve Form Y-15 as of December 31, 2017, p. 4.

very small share of the total U.S. debt market issuance in 2017.¹⁰² Zions underwrote no equity security offerings in 2017.¹⁰³ Consequently, material financial distress at Zions would not disrupt the provision of these services to the U.S. financial system.

Provision of Credit to State and Local Governments

Zions holds approximately \$2.1 billion of debt issued by state and local governments.¹⁰⁴ In some cases, its holdings account for a large share of a particular issuer’s total debt outstanding. For example, Zions owns [•] percent of the debt issued by the [•] (see Table 18). However, Zions’ holdings of state and local government obligations are small relative to the size of these markets. In particular, Zions’ municipal debt portfolio is a small share of the estimated \$3.9 trillion¹⁰⁵ of total U.S. municipal securities outstanding. This portfolio is also small relative to the municipal securities holdings of banking institutions in the United States,¹⁰⁶ which collectively hold \$594 billion of such securities.¹⁰⁷ Given the small size of its holdings, if Zions were no longer able to participate as a buyer in this market, it does not appear that there would be an adverse impact on the liquidity or pricing of these securities.

Table 18: Zions’ 10 Largest Investments in State and Local Government Entities (\$ Millions)

Issuer	State	Investment (\$ Millions)	Percent of Issuer’s Debt Outstanding
[•]	[•]	[•]	[•]

Source: Zions Submission, Annex 2, p. 6.

Provision of Credit to Low-Income, Minority or Underserved Communities

Zions provides credit to low-income, minority or underserved communities through mortgage lending and community development lending. In 2017, Zions originated \$[•] of Home Mortgage Disclosure Act (HMDA) loans in low-income areas and \$[•] of HMDA loans in moderate-income areas.¹⁰⁸ In 2017, Zions originated \$[•] of community development loans. Zions’ community development lending included \$[•] for affordable housing, \$[•] for community service, \$[•] for economic development, and \$[•] in loans under the U.S. Small Business Administration’s 504 loan program (a form of long-term fixed-rate financing for approved small

¹⁰² SIFMA, US Bond Market Issuance and Outstanding, available at <https://www.sifma.org/resources/research/us-bond-market-issuance-and-outstanding>. In 2017, U.S. corporate bond issuance totaled \$1.6 trillion, and municipal bond issuance totaled \$448 billion.

¹⁰³ Zions Bancorporation Federal Reserve Form Y-15 as of December 31, 2017, p. 4.

¹⁰⁴ Zions Bancorporation Annual Report on Form 10-K for the year ended December 31, 2017, p. 52

¹⁰⁵ SIFMA, US Municipal Securities Holders, available at <https://www.sifma.org/resources/research/us-municipal-securities-holders>.

¹⁰⁶ Includes U.S. chartered depository institutions, foreign banking offices in the United States, banks in U.S. affiliated areas, credit unions, and broker-dealers.

¹⁰⁷ SIFMA, US Municipal Securities Holders, available at <https://www.sifma.org/resources/research/us-municipal-securities-holders>.

¹⁰⁸ Zions Submission, Annex 2, p. 6.

businesses).¹⁰⁹ In light of the small dollar amounts of Zions' lending, Zions does not appear to be a critical provider of loans to these markets.

6. COMPLEXITY AND RESOLVABILITY

The Council's Interpretive Guidance notes that the potential threat to U.S. financial stability posed by a nonbank financial company's material financial distress may be mitigated or aggravated by the company's complexity, the opacity of its operations, or its resolvability.

The Interpretive Guidance identifies factors that are relevant to the analysis of a company's resolvability, including the complexity of the company's legal, funding, and operational structure; obstacles to a rapid and orderly resolution; and legal entity and cross-border operations.¹¹⁰

Legal Structure

Zions Bancorporation is a financial holding company headquartered in Salt Lake City, Utah. Zions Bancorporation provides administrative support, strategic oversight, and capital markets access to ZB, its sole operating subsidiary.¹¹¹ In its resolution plan dated December 31, 2017, Zions Bancorporation identified ZB as its sole material entity under Title I of the Dodd-Frank Act.

ZB was formed through the merger of Zions Bancorporation's eight subsidiary banks in 2015.¹¹² As discussed in section 4, ZB accounts for approximately 99.7 percent of the total consolidated assets and 99.7 percent of the revenues of Zions Bancorporation. Zions Bancorporation and its two nonbank subsidiaries¹¹³ account for the remainder of the company's assets and revenues. Zions has stated that, as part of the Merger, [•] will be [•], and the other nonbank subsidiary will be contributed to and become a wholly owned subsidiary of ZB.¹¹⁴ Zions has also stated that ZB will hold 100 percent of Zions' assets.¹¹⁵ Zions has no foreign operations.¹¹⁶

Funding and Derivatives Management

The complexity of a financial company can be driven by the nature and amount of its funding and derivatives activity. Certain types of funding, such as funding between company affiliates or across jurisdictions, could increase the complexity of a financial company and make its

¹⁰⁹ Zions Submission, Annex 2, p. 6.

¹¹⁰ Interpretive Guidance at III.c.

¹¹¹ Zions Bancorporation Resolution Plan: Public Executive Summary as of December 31, 2017, pp. 3-4.

¹¹² Zions Bancorporation Resolution Plan: Public Executive Summary as of December 31, 2017, p. 3.

¹¹³ The only nonbank subsidiaries of Zions Bancorporation as of March 31, 2018, were Great Western Financial Corporation and Amegy Holding Texas, Inc. As of December 31, 2017, Zions Bancorporation had one additional nonbank subsidiary. Federal Financial Institutions Examination Council National Information Center: Organization Hierarchy of Zions Bancorporation, available at https://www.ffiec.gov/nicpubweb/nicweb/OrgHierarchySearchForm.aspx?parID_RSSD=1027004&parDT_END=99991231.

¹¹⁴ Zions Submission, Annex 2, p. 7.

¹¹⁵ Zions Submission, p. 7.

¹¹⁶ Zions Bancorporation Resolution Plan: Public Executive Summary as of December 31, 2017, p. 14.

resolution more difficult. Certain types of derivatives transactions, such as those that are highly customized or difficult to value, could have a similar effect on a company's complexity and resolvability.

As discussed in section 4.1, ZB is primarily deposit-funded, with deposits representing 91 percent of the company's total liabilities.¹¹⁷ Non-transaction accounts (including money market deposit accounts) constitute 92 percent of the company's total deposits, while transaction accounts (including demand deposits) constitute the balance. Individuals, partnerships, and corporations provide ZB with 97 percent of its deposit funding, with states, U.S. political subdivisions, and commercial banks and other U.S. depository institutions providing the remainder of total deposits.¹¹⁸

Short-term wholesale funding and other liabilities represent the remaining 9 percent of ZB's liabilities, at \$6.0 billion.¹¹⁹ Short-term advances from the FHLB System comprise \$3.6 billion of this amount, with all short-term advances provided by the FHLB of Des Moines.¹²⁰ The maturities of these advances appear staggered, with \$[•] maturing in 30 days or less, \$[•] maturing between 31 and 60 days, and \$[•] maturing between 61 and 90 days.¹²¹ Zions has \$354 million in outstanding repo,¹²² with funding provided by [•] counterparties.¹²³ Zions has \$927 million in federal funds purchased,¹²⁴ with [•] percent of the total provided by [•] institutions.¹²⁵ Long-term debt, reserves for unfunded lending commitments, and other liabilities represent the balance of Zions' total funding at \$383 million, \$58 million, and \$500 million, respectively.¹²⁶

Derivatives are an additional source of liabilities of ZB. To the extent that Zions' derivatives positions fall in value, the company may be forced to post additional margin against these positions or unwind them. The company has stated that its objectives in using derivatives are primarily to modify the duration of specific assets, liabilities, or equity; to manage exposure to interest rate movements or other identified risks; and to directly offset derivatives sold to customers of the company. The company has also stated that its derivatives that are not designated as accounting hedges, including basis swap agreements, are not speculative and are used to manage the company's exposure to interest rate movements and other identified risks.¹²⁷

Zions has \$6.8 billion in total derivatives gross notional exposure, with \$5.9 billion in interest rate swaps and the balance in foreign exchange derivatives.¹²⁸ Of the company's \$5.9 billion in interest rate swaps, the company has \$1.1 billion in derivatives that are specifically designated as hedging instruments. The company has \$4.6 billion in interest rate swaps for customers,

¹¹⁷ ZB Call Report as of December 31, 2017, p. 14.

¹¹⁸ ZB Call Report as of December 31, 2017, p. 28.

¹¹⁹ Zions Bancorporation Annual Report on Form 10-K for the year ended December 31, 2017, p. 88.

¹²⁰ Zions Bancorporation Annual Report on Form 10-K for the year ended December 31, 2017, pp. 75-76.

¹²¹ Zions Submission, Annex 2, p. 5.

¹²² Zions Bancorporation Annual Report on Form 10-K for the year ended December 31, 2017, p. 131.

¹²³ Zions Submission, Annex 2, p. 1.

¹²⁴ Zions Bancorporation Annual Report on Form 10-K for the year ended December 31, 2017, p. 131.

¹²⁵ Zions Response to OFR Information Request (June 7, 2018), p. 4.

¹²⁶ Zions Bancorporation Annual Report on Form 10-K for the year ended December 31, 2017, p. 88.

¹²⁷ Zions Bancorporation Resolution Plan: Public Executive Summary as of December 31, 2017, p. 10.

¹²⁸ Zions Bancorporation Annual Report on Form 10-K for the year ended December 31, 2017, p. 128.

including both customer swaps and any offsetting derivative contracts, and \$0.2 billion in other interest rate swaps.¹²⁹ With respect to its interest swaps for customers, the company has stated that, upon issuance, all swaps are immediately hedged by offsetting derivative contracts, such that the company minimizes its net risk exposure resulting from such transactions.¹³⁰ Of the company's \$5.9 billion in interest rate swap positions, \$[•] are cleared with [•] CCPs, and \$[•] represent positions with the company's [•] dealer counterparties.¹³¹

Operational Structure and Cross-Border Operations

ZB operates under the eight regional brands that were formerly used by its individual subsidiaries: Zions First National Bank; California Bank & Trust; Amegy Bank; National Bank of Arizona; Nevada State Bank; Vectra Bank Colorado; The Commerce Bank of Washington; and The Commerce Bank of Oregon. Across these eight brands, ZB operates 433 branches, with approximately 100 in each of Utah and California. The company also operates between 50 and 100 branches in each of Texas, Arizona, and Nevada.¹³² The company has approximately 10,000 full-time-equivalent employees. Importantly, Zions has no cross-border operations.

Resolution

The failure of ZB would rank among the largest U.S. bank failures. However, the legal framework for the resolution of the company after consummation of the Merger would be straightforward. As a single insured depository institution, ZB would be resolved by the FDIC under the Federal Deposit Insurance Act if it were to fail. Neither the Bankruptcy Code nor the Orderly Liquidation Authority will be applicable to ZB after the Merger. The Council's decision with respect to ZB's appeal will not affect the FDIC's exercise of its insured depository institution resolution authorities. If the company were to fail, its expected post-Merger legal and operational structure does not appear to have features that would increase the likelihood of a disorderly resolution that would pose a threat to U.S. financial stability. Further, in light of the analysis set forth in section 5 regarding the transmission channel analysis, any difficulty to resolve Zions does not lead to a conclusion that Zions' material financial distress could pose a threat to U.S. financial stability.

7. EXISTING REGULATORY SCRUTINY

In making a determination regarding a nonbank financial company under section 113 of the Dodd-Frank Act, the Council considers the extent to which the company is already subject to regulation and supervision by federal and state regulators and the extent to which this supervision and regulation may mitigate risks to financial stability identified by the Council.

In the case of an appeal submitted to the Council under section 117 of the Dodd-Frank Act, the context is different: The Council is evaluating the entity's request not to be treated as a nonbank financial company subject to supervision by the Board of Governors. Under section 117,

¹²⁹ Zions Bancorporation Annual Report on Form 10-K for the year ended December 31, 2017, p. 128.

¹³⁰ Zions Bancorporation Resolution Plan: Public Executive Summary as of December 31, 2017, p. 11.

¹³¹ Zions Submission, Item A1.

¹³² FDIC, Institution Directory, available at <https://www5.fdic.gov/idasp/advSearchLanding.asp>.

therefore, the Council instead considered the extent to which the company would be subject to regulation and supervision if the Council were to grant the company's request and the company were no longer subject to supervision by the Board of Governors. The factors the Council will consider in this regard are the same as those identified by the Council in its Interpretive Guidance. As relevant to ZB, these include whether regulators impose capital and liquidity requirements, have the authority to bring enforcement actions, impose detailed and timely reporting obligations, and have the ability to resolve the company, as well as the existence and effectiveness of consolidated supervision.¹³³

7.1 Supervision and Regulation

6.1.1 Supervision and Regulation by the Board of Governors

The Board of Governors exercises consolidated supervision of all bank holding companies, including Zions Bancorporation, under the Bank Holding Company Act and other applicable laws. In addition, pursuant to section 165 of the Dodd-Frank Act, the Board of Governors is required to impose enhanced prudential standards on any nonbank financial company that the Council has determined shall be subject to supervision by the Board of Governors.¹³⁴ ZB, as the successor entity of Zions Bancorporation, would be subject to supervision by the Board of Governors and treated as a nonbank financial company subject to section 165 of the Dodd-Frank Act upon consummation of the Merger if the Council were not to grant ZB's appeal under section 117.

The Board of Governors indicated in adopting its regulations implementing section 165 that it would review each nonbank financial company to determine how the enhanced prudential standards should apply and tailor the standards appropriately, taking into account differences among nonbank financial companies and large bank holding companies.¹³⁵ The Board of Governors also indicated that for those nonbank financial companies whose activities and risk profile are similar to bank holding companies, which would include ZB as the successor entity to Zions Bancorporation, the Board of Governors expects to apply enhanced prudential standards that are similar to those that apply to bank holding companies.¹³⁶

In addition, the Board of Governors imposes on bank holding companies such as Zions Bancorporation a regulatory capital framework of minimum risk-based and leverage capital ratios.¹³⁷ Bank holding companies of any size are also subject to limitations on the types

¹³³ Interpretive Guidance at II.d.2.

¹³⁴ Pursuant to section 165 of the Dodd-Frank Act, as amended by the Economic Growth, Regulatory Relief, and Consumer Protection Act, Pub. L. No. 115-174 (May 24, 2018), the Board of Governors applies enhanced prudential standards to bank holding companies with \$250 billion or more in total consolidated assets and nonbank financial companies supervised by the Board of Governors. In addition, the Board of Governors has the authority to apply any such standard to bank holding companies with \$100 billion or more in total consolidated assets if it determines that application of the standard is appropriate to prevent or mitigate risks to U.S. financial stability or to promote safety and soundness.

¹³⁵ 79 Fed. Reg. 17240, 17245 (Mar. 27, 2014).

¹³⁶ 79 Fed. Reg. 17240, 17245 (Mar. 27, 2014).

¹³⁷ See 12 C.F.R. part 217.

of activities in which they are permitted to engage and on their ability to make acquisitions under the Bank Holding Company Act and implementing regulations.¹³⁸

In addition, as part of its supervision and oversight of bank holding companies, the Board of Governors evaluates the effectiveness and quality of those companies' governance and management in conducting safe and sound operations and complying with applicable laws and regulations.¹³⁹ The Board of Governors' approach in its supervision of bank holding companies includes an emphasis on a firm's management of risks in light of that firm's risk profile and characteristics. Among other things, the Board of Governors considers how effectively a firm's board of directors oversees the development of the firm's strategy, risk appetite, and senior management and holds them accountable; supports the stature and independence of the firm's independent risk management and internal audit functions; and adopts effective governance practices.

7.1.2 Supervision and Regulation by the OCC

The OCC supervises and regulates ZB. The organization is also subject to "back-up" supervision by the FDIC and is subject to supervision and regulation by the Bureau of Consumer Financial Protection with respect to consumer financial law.

Upon consummation of the Merger, ZB would continue to be subject to supervision and regulation by the OCC, the FDIC, and the Bureau of Consumer Financial Protection. In addition, the Board of Governors has some additional supervisory and regulatory authority over national banks such as ZB.¹⁴⁰ The OCC would continue to deploy its supervisory tools to supervise ZB, which the Merger would leave generally unchanged from the entity that the OCC currently supervises.¹⁴¹

ZB is chartered as a national bank. National banks are highly supervised and regulated institutions that are limited as to their powers and activities under federal law. Under the National Bank Act, administered by the OCC, national banks may only engage in activities that are part of, or incidental to, the business of banking, or are otherwise authorized by law. Their activities are subject to a variety of requirements, including capital adequacy standards,¹⁴² lending limits,¹⁴³ restrictions on transactions with affiliates,¹⁴⁴ restrictions regarding investment securities,¹⁴⁵ and restrictions on loans to insiders.¹⁴⁶

¹³⁸ 12 U.S.C. §§ 1842–1843; 12 C.F.R. §§ 225.11–225.17, 225.21–225.28.

¹³⁹ Board of Governors, Supervision & Regulation Letter 12-17 re: Consolidated Supervision Framework for Large Financial Institutions (Dec. 17, 2012).

¹⁴⁰ See 12 U.S.C. §§ 248(a), 483.

¹⁴¹ Zions Bancorporation's activities or assets that are nonconforming for a national bank are very limited

¹⁴² 12 C.F.R. part 3.

¹⁴³ 12 U.S.C. § 84; 12 C.F.R. part 32.

¹⁴⁴ 12 U.S.C. §§ 371c, 371c-1; 12 C.F.R. part 223

¹⁴⁵ 12 U.S.C. § 24(Seventh); 12 C.F.R. part 1.

¹⁴⁶ 12 U.S.C §§ 375a, 375b; 12 C.F.R. part 215.

Examination Process

The core of the OCC's supervision of national banks is the examination process. The OCC's examination cycle provides for ongoing supervision of institutions such as ZB. The OCC is required to conduct a full-scope, on-site examination at least once during each 12-month period.¹⁴⁷ If the OCC determines it would be necessary or appropriate, the OCC may schedule examinations more frequently. The OCC also conducts targeted examinations, which may focus on particular products, functions, risks, or specialty areas. The purpose of the examination process is to ensure that national banks operate in a safe and sound manner and comply with laws and regulations. As described below, ZB is subject to continuous supervision by a resident examination team, with risk assessments and target examinations of key risk areas. This supervisory work culminates in an annual examination report reflecting all of the supervisory work completed during the examination cycle.

Within the OCC, ZB is supervised by the Midsize Bank Supervision office. That office's portfolio is comprised of 28 national banks and federal savings associations primarily ranging in size from \$10 billion to \$80 billion in assets. The Midsize Bank Supervision office evaluates the portfolio banks across a number of measures, including the effectiveness of management and overall corporate governance in managing risk. For example, OCC examiners ensure that banks such as ZB adhere to stress-testing processes as part of their established risk governance and capital planning processes.

With respect to corporate governance and risk management specifically, in 2014 the OCC adopted enforceable guidelines for governance and risk management practices applicable to insured national banks with \$50 billion or more in average total consolidated assets.¹⁴⁸ The guidelines provide that such institutions must establish and adhere to a written risk governance framework to manage and control their risk-taking activities.

Each institution in the Midsize Bank Supervision office's portfolio has a dedicated examiner in charge. For larger institutions, including ZB, there is full-time staff assigned to each core risk area, including commercial and retail credit, capital markets, bank information technology, asset management, compliance, and operational risk governance. Currently, the OCC has 10 examiners assigned to ZB.

Capital and Liquidity

With respect to capital adequacy, the OCC has established minimum capital requirements that all national banks must meet. These standards include three risk-based capital ratios—a common equity Tier 1 capital ratio, a Tier 1 capital ratio, and a total capital ratio, each of which includes

¹⁴⁷ 12 U.S.C. § 1820(d); 12 C.F.R. § 4.6. Other federal laws mandate particular subjects for examination at prescribed frequencies, such as compliance with the Bank Secrecy Act and the requirements of the national flood insurance program.

¹⁴⁸ 12 C.F.R. 30 appendix D. The OCC has also adopted enforceable guidelines for recovery planning applicable to insured banks with average total consolidated assets greater than \$50 billion, such as ZB. *See* 12 C.F.R. 30 appendix E. These guidelines are in addition to resolution-planning requirements adopted by the FDIC for insured depository institutions at 12 C.F.R. § 360.10.

an additional capital conservation buffer—as well as a risk-neutral leverage ratio. The OCC’s capital rules also authorize the OCC to require additional capital based on factors that are not explicitly covered by quantitative capital rules, including, for example, exposures to interest rate risk and credit concentrations.

Banks such as ZB are subject to OCC liquidity requirements that include requirements to maintain a cushion of HQLA, develop and apply a formal contingent funding plan, conduct regular liquidity stress testing, monitor intraday liquidity, and manage collateral. The supervision of such banks’ liquidity risk management consists of assessing that the bank’s overall liquidity risk framework is consistent with sound liquidity risk management principles and practices as set forth in OCC and interagency guidance. Examiners expect such banks to have the ability to adequately forecast cash flows, measure and monitor unstable liabilities, and calculate metrics such as liquid asset coverage ratios. Examiners also focus on the bank’s corporate governance, liquidity risk monitoring and reporting, and liquidity risk tolerances and limits, and assure that the bank has appropriate controls, policies, and procedures to effectively monitor and manage the institution’s liquidity risk.

Enforcement and Resolution Authority

The OCC’s broad supervisory authority is supported by its similarly broad enforcement authority. The OCC may take enforcement actions against national banks for violations of laws, rules, regulations, final orders, or conditions imposed in writing, or for unsafe or unsound practices. Enforcement actions can be formal or informal. Informal enforcement actions include nonpublic enforcement actions such as commitment letters, memoranda of understanding, operating agreements, and the imposition of individual minimum capital ratios. When a bank’s deficiencies are severe, uncorrected, repeated, or unsafe or unsound or negatively affect the bank’s condition, the OCC may use formal enforcement actions. Formal enforcement actions include cease and desist orders, civil money penalty orders, capital directives, and prompt corrective action directives.¹⁴⁹ Where a bank’s condition deteriorates and supervisory and enforcement action is not successful in remediating the bank, the OCC may appoint a receiver for a national bank based on certain enumerated grounds, including the bank having insufficient assets, being undercapitalized, being in an unsafe or unsound condition, or substantial dissipation of the bank’s assets.¹⁵⁰

Prior Approval

National banks must obtain prior approval of the OCC before engaging in certain activities. For example, prior approval is required for a national bank to establish or relocate a branch or relocate its main or home office, increase or reduce its capital, offer fiduciary services or establish certain subsidiaries.¹⁵¹ In addition, a change in control of the bank cannot occur until the OCC issues a notice of non-disapproval.¹⁵² OCC approval is also required for various business combinations, including bank mergers, consolidations, reorganizations, and purchase

¹⁴⁹ 12 USC §§ 504, 1786, 1831o.

¹⁵⁰ 12 U.S.C. §§ 191(a)(1), 1821(c)(2)(A)(ii), 1821(c)(5).

¹⁵¹ 12 U.S.C. §§ 36, 57, 59, 92a; 12 C.F.R. §§ 5.26, 5.30, 5.34, 5.46.

¹⁵² 12 U.S.C. § 1817(j); 12 C.F.R. § 5.50.

and assumption transactions, as well as substantial asset changes or changes in charter purposes.¹⁵³ When reviewing bank merger applications made under the Bank Merger Act, the OCC is required to consider the risk to the stability of the U.S. banking or financial system.¹⁵⁴

Reports

As an adjunct to the OCC's examination authority, the agency can require national banks to submit reports as to any matter relating to the performance of the OCC's supervisory functions. Pursuant to this authority, the OCC requires each national bank to submit various reports on the results of its operations, including quarterly Consolidated Reports of Condition and Income (Call Reports), Reports of Indebtedness of Executive Officers and Principal Shareholders, and Past-Due Loan Reports.

Consolidated Regulation of Bank Subsidiaries

The OCC has authority to examine affiliates of national banks, including subsidiaries.¹⁵⁵ The OCC's supervisory approach takes into account current and planned activities of all related entities to determine how much risk they pose to the bank. An assessment of the overall safety and soundness of a bank includes a review of related organizations to determine whether the activities of those related entities mitigate or increase the risks borne by the bank.

7.2 Regulator Consultations

On June 21, 2018, the Nonbank Designations Committee consulted with staff from the OCC, the FDIC, and the Board of Governors regarding Zions. Matters raised during these consultations are addressed herein where relevant.

8 CONCLUSION

For the reasons discussed herein, the Council has made a proposed decision to grant, subject to the conditions set forth below, ZB's appeal under section 117 of the Dodd-Frank Act, such that, upon the consummation of the Merger, ZB shall not be treated as a nonbank financial company supervised by the Board of Governors.

If the Council makes a final decision to grant ZB's appeal under section 117, the Council intends to condition its decision on the Merger being consummated, in accordance with the terms of the Merger Agreement, within 90 days after the Council's final decision.

Not later than 60 days after the date of the written hearing before the Council regarding ZB's appeal under section 117, the Council must submit a report to, and may testify before, the Committee on Banking, Housing, and Urban Affairs of the Senate and the Committee on Financial Services of the House of Representatives on the Council's proposed decision. Under section 117, the Council must notify ZB of the final decision of the Council not later than 60

¹⁵³ 12 U.S.C. § 1828(c); 12 C.F.R. §§ 5.33, 5.53.

¹⁵⁴ 12 U.S.C. § 1828(c)(5)(B).

¹⁵⁵ 12 U.S.C. § 481.

days after the later of (1) the submission of the Council's proposed decision to the two Congressional committees or (2) if, within one year after the date of submission of the Council's proposed decision to the two Congressional committees, either of those committees holds one or more hearings regarding the proposed decision, the date of the last such hearing. In order to comply with the statutory deadline, the Council intends to issue its final decision within 60 days after its proposed decision unless, before the end of that 60-day period, at least one of the two Congressional committees has scheduled a hearing to be conducted within the year following the Council's submission of the proposed decision to the committees.

APPENDIX A: ZIONS BANCORPORATION CONSOLIDATED BALANCE SHEET

Assets	
Mortgage loans*	9,804
Commercial real estate loans**	18,632
Commercial and industrial loans	11,273
Consumer loans	690
Agricultural loans***	459
Other loans and leases	3,966
Less: loan loss provisions and unearned income	562
Net loans and leases	44,262
Securities	15,932
Cash and balances due from depository institutions	1,329
Federal funds sold	227
Securities purchased under agreements to resell	287
Goodwill and other intangibles	1,044
All other assets	3,207
Total assets	66,288
Liabilities	
Noninterest-bearing balances	3,918
Money market deposit accounts and other savings accounts	45,057
Interest-bearing demand dep., NOW, ATS, and other transaction accounts	532
Time deposits	3,114
Total deposits	52,621
Federal funds purchased	927
Securities sold under agreement to repurchase	354
Other borrowed money	3,736
All other liabilities	971
Total liabilities	58,609
Total equity	7,679

Source: Zions Bancorporation Federal Reserve Form Y-9C as of December 31, 2017.

*Mortgage loans include home equity lines of credit, junior liens and other loans secured by residential real estate.

**Commercial real estate loans include construction and development loans, loans secured by multifamily properties, and loans secured by nonfarm, nonresidential real estate.

***Agricultural loans include production loans and loans secured by farm real estate.

APPENDIX B: SYSTEMIC IMPORTANCE SCORES UNDER THE BASEL METHODOLOGY

Bank Holding Company	Size	Interconnectedness			Substitutability			Complexity			Cross-Jurisdictional Activity		2016 Systemic Importance Score
		Total exposures score	Intrafinancial system assets	Intrafinancial system liabilities	Securities outstanding	Payments activity	Assets under custody	Under-writing activity	Amount of OTC derivatives	Adjusted trading & AFS securities	Level 3 assets	Foreign claims	
JPMorgan Chase	405	393	413	426	1,199	1,369	741	797	724	440	329	404	467
Citigroup	300	232	388	334	679	831	622	748	416	369	404	439	410
Bank of America	348	274	125	371	471	178	774	568	576	274	193	171	347
Goldman Sachs	159	381	107	262	50	64	542	649	279	467	193	164	254
Wells Fargo	284	199	187	408	162	217	354	124	446	444	74	87	242
Morgan Stanley	134	246	47	179	45	104	449	455	472	286	153	192	213
Bank of NY Mellon	47	95	225	55	777	1,650	12	15	62	0	45	84	152
State Street	32	43	177	70	349	1,473	0	26	110	25	44	79	149
Credit Suisse U.S.*	36	36	101	1	235	9	241	17	64	89	44	48	69
Deutsche Bank Trust	31	21	90	0	418	5	118	36	98	12	41	5	64
Barclays U.S.*	36	55	31	10	237	2	273	84	62	9	43	8	63
Northern Trust	17	55	19	18	169	456	0	5	18	0	17	36	58
U.S. Bancorp	69	17	15	103	36	87	39	5	32	68	5	22	43
HSBC North America	48	60	37	43	16	8	85	114	32	74	17	0	43
PNC Financial Services	54	27	14	63	12	6	35	7	58	167	4	2	37
RBC U.S.*	21	21	22	1	43	20	293	4	28	5	3	6	34
Charles Schwab	28	21	0	41	1	187	0	0	152	0	4	2	33
TD Group U.S. Holdings	47	18	5	14	37	0	70	3	71	20	23	2	28
BNP (previously BancWest)	25	42	34	10	51	1	58	60	6	2	2	2	23
Capital One Financial	50	32	1	78	3	0	4	3	21	17	5	1	21
MUFG Americas Holdings	22	14	15	11	8	9	95	3	18	35	4	4	19
UBS Americas*	23	13	32	1	5	25	49	0	27	48	4	0	18
SunTrust Banks	31	6	2	34	3	4	24	4	10	47	1	1	16
BB&T	31	2	4	52	4	3	16	1	13	36	1	0	15
American Express	23	11	7	92	1	0	0	1	7	0	14	7	15
BMO Financial	19	30	20	18	22	11	19	1	18	1	2	3	14
Ally Financial	21	9	6	76	1	0	0	1	23	1	0	0	12
Santander Holdings USA	18	3	26	22	1	0	30	1	3	22	2	4	11
Fifth Third Bancorp	21	3	5	31	6	17	12	1	23	3	1	0	11
Huntington Bancshares	14	3	3	19	1	6	2	1	18	56	1	0	10
KeyCorp	21	3	4	31	4	5	9	1	7	1	1	0	9
Synchrony Financial*	16	1	11	58	0	0	0	0	1	1	0	0	8
Citizens Financial	22	3	6	27	6	0	0	1	6	0	1	1	8
Discover Financial	14	15	0	57	1	0	0	0	1	0	0	0	8
M&T Bank	17	3	4	29	9	6	1	0	5	0	0	0	7
Regions Financial	18	1	2	20	2	2	4	1	12	7	0	0	7
CIT Group*	10	8	12	26	1	0	0	0	5	15	2	2	7
BBVA Compass	12	1	3	11	1	0	10	1	8	1	1	1	5
Comerica	11	8	8	14	1	4	1	0	2	1	1	1	5
Zions Bancorp	9	3	3	9	2	0	0	0	6	3	0	0	4

*Banks not required to report this data in 2015.

Source: Basel Committee on Banking Supervision; Federal Reserve Form Y-15 as of December 31, 2016; Office of Financial Research analysis, available at https://www.financialresearch.gov/gsib-scores-chart/files/GSIB_Figures_Dec21.pdf. Scores for each systemic indicator are calculated by dividing an institution's applicable indicator value by an aggregate global measure of that indicator. The resulting value for each systemic indicator is then multiplied by the prescribed weighting indicated in Table 2, and by 10,000 to reflect the result in basis points.

APPENDIX C: FIRE SALE IMPACT ANALYSIS

The liquidation of assets by a firm in financial distress may temporarily force prices below those attainable in normal market conditions. These “fire sale” prices will have a direct impact on the balance sheet of all firms holding the same or similar assets, thus spreading financial stress to other firms.

The analysis in this appendix assumes that a downward shock to the net worth of a firm or group of firms can be one impetus for a firm to rapidly liquidate assets. Such a shock would raise the firm’s leverage and decrease the equity cushion protecting the firm’s creditors. In order to quickly return to its original degree of leverage, the firm would have to rapidly sell assets. Such a fire sale of assets could directly affect the balance sheets of firms that hold the same or similar assets, thus spreading the negative effects of its distress to other firms.

A firm’s asset size, leverage, and asset composition relative to other financial firms will affect the relative impact of a rapid liquidation of assets by that firm. For instance, a firm that is small relative to the market can sell a quantity of assets that can be easily absorbed, but larger firms will necessarily sell larger volumes of assets that may not be as easily accommodated. In addition, the market impact of asset sales will also depend on the firm’s asset profile relative to other financial firms, since fire sales of assets that are widely held by others would likely have a greater effect on the financial system.

This fire-sale analysis was calculated as of December 31, 2017, for Zions, the largest 50 bank holding companies, and the largest 25 insurance companies. A summary of the analysis of the relative impact on other financial institutions of negative shocks based on firms’ equity and assets is shown below.¹⁵⁶

¹⁵⁶ The analysis considers the framework proposed in Greenwood, Landier and Thesmar, *Vulnerable Banks*, Journal of Financial Economics 115 (3) (2015) and extensions by Duarte and Eisenbach, *Fire-Sale Spillovers and Systemic Risk*, Federal Reserve Bank of New York Staff Report 645 (2015).

Mean Scores for the Magnitude of Firm's Fire-Sale Effects (2017)

Equity Shock			Asset Shock	
Rank	Firm	Mean Score (%)	Firm	Mean Score (%)
1	JPMorgan Chase & Co.	98.5	JPMorgan Chase & Co.	99.7
2	Bank of America Corporation	95.7	Wells Fargo & Company	92.0
3	Wells Fargo & Company	95.6	Bank of America Corporation	83.7
4	Citigroup, Inc.	51.7	Citigroup, Inc.	48.2
5	Morgan Stanley	25.8	Morgan Stanley	28.6
6	U.S. Bancorp	25.4	The Goldman Sachs Group, Inc.	27.3
7	The Goldman Sachs Group, Inc.	24.2	Brighthouse Financial, Inc.	27.1
8	Berkshire Hathaway Inc.	23.4	U.S. Bancorp	24.3
9	PNC Financial Services Group, Inc.	19.8	PNC Financial Services Group, Inc.	16.3
10	Brighthouse Financial, Inc.	17.2	MetLife, Inc.	14.3
...				
41	UBS Americas Holding LLC	5.3	American Equity Investment Life Holding Co.	4.6
42	Credit Suisse Holdings (USA), Inc.	5.0	First Republic Bank	4.3
43	Charles Schwab Corporation, The	4.7	Barclays US LLC	4.2
44	Lincoln National Corporation	4.5	Zions Bancorporation	3.9
45	New York Community Bancorp, Inc.	4.4	Santander Holdings USA, Inc.	3.8
46	Barclays US LLC	4.4	BBVA Compass Bancshares, INC.	3.7
47	Zions Bancorporation	4.4	Lincoln National Corporation	3.7
48	Allstate Corporation	4.3	Comerica Incorporated	3.6
49	Jackson National Life Insurance Co.	4.3	UBS Americas Holding LLC	3.3
50	United Services Automobile Association	4.3	New York Community Bancorp, Inc.	3.3

Source: Annual Reports on Form 10-K for the year ended December 31, 2017; Federal Reserve Form Y-9C; Federal Reserve Board calculations.

Based on a shock to firms' equity, Zions produces a fire-sale effect that ranks 47th among financial institutions. Based on a shock to firms' assets, Zions produces a fire-sale effect that ranks 44th among financial institutions. Zions' fire-sale effects under the equity shock and the asset shock are a small fraction of the fire-sale effects of the top-ranked institution in these results, primarily due to Zions' smaller asset size.

There are a number of elements that the fire sale model does not take into account that could affect the results. For instance, the liability profile of a firm is not a variable in the model, although a company's reliance on more-liquid funding sources could serve as a trigger for a potential asset liquidation. Zions' liquid liabilities (primarily its uninsured deposits) may therefore exacerbate the potential effect of asset fire sales by Zions beyond what is predicted by this model.