

# Analysis of Threats to the Financial Stability of the United States



Overall risks to financial stability remain in the medium range. We reached this assessment by weighing the financial system's resilience against its vulnerabilities. Thanks to actions taken after the financial crisis, the system is far more resilient than it was when the crisis loomed a decade ago, but vulnerabilities have emerged, including in the last fiscal year.

Although our overall assessment is moderate, market risks are high and rising from the potential for a sudden drop in the prices of assets in financial markets, particularly the stock markets and bond markets. Such a decline could exploit vulnerabilities from excessive leverage, when resources are too low in relation to investment exposures.

The chapter highlights three key threats to the U.S. financial system:

1. **Vulnerabilities to Cybersecurity Incidents**
2. **Obstacles to Resolving Failing Systemically Important Financial Institutions**
3. **Structural Changes in Markets and Industry**

We also introduce new risk-assessment tools developed by the OFR — our Financial System Vulnerabilities Monitor and our Financial Stress Index — and discuss the insights we glean from them about financial stability.

The new monitor and index can be found on the OFR website

The new monitor and index, which are both on the OFR website, [financialresearch.gov](http://financialresearch.gov), are part of the OFR's quantitative monitoring toolkit. They signal where potential vulnerabilities might require further investigation. We conduct those investigations using a wider set of data, qualitative information, and expert analysis. The OFR's *2017 Financial Stability Report* contains a more in-depth analysis of the threats and our overall assessment of financial stability.

## Financial Stability Threats

Shocks that cause widespread losses or loan defaults can expose underlying vulnerabilities and turn them into threats that can potentially disrupt the financial system with adverse consequences for the economy.

We selected the key threats to U.S. financial stability based on their potential impact, probability of occurring, probability of happening soon, and the preparedness of industry and government to manage them. The key threats are:

### 1. Vulnerabilities to Cybersecurity Incidents

The financial system is vulnerable to cybersecurity incidents because of its interconnectedness and heavy reliance on information technology.

A large-scale cyberattack, accident, or other cybersecurity incident could disrupt the operations of one or more financial companies and markets and spread through financial networks and operational connections to the entire system, threatening financial stability and the broader economy.

The financial system is an attractive target for cyber thieves and other hackers because financial companies manage the nation's wealth and handle trillions of dollars in transactions every day that underlie the U.S. economy.

The hack of consumer information at the consumer credit reporting firm Equifax, disclosed in September 2017, highlighted the vulnerability of some financial companies and the absence of regulatory guidance on how consumer credit reporting companies should manage cybersecurity risks. The attackers reportedly accessed personal information for 145 million Americans, including Social Security numbers and driver's license information.

A cybersecurity incident could pose a financial stability risk if it caused a loss of confidence in financial institutions, if it damaged the integrity of consumer financial data, or if the victimized company provided unique services that could not easily be replaced.

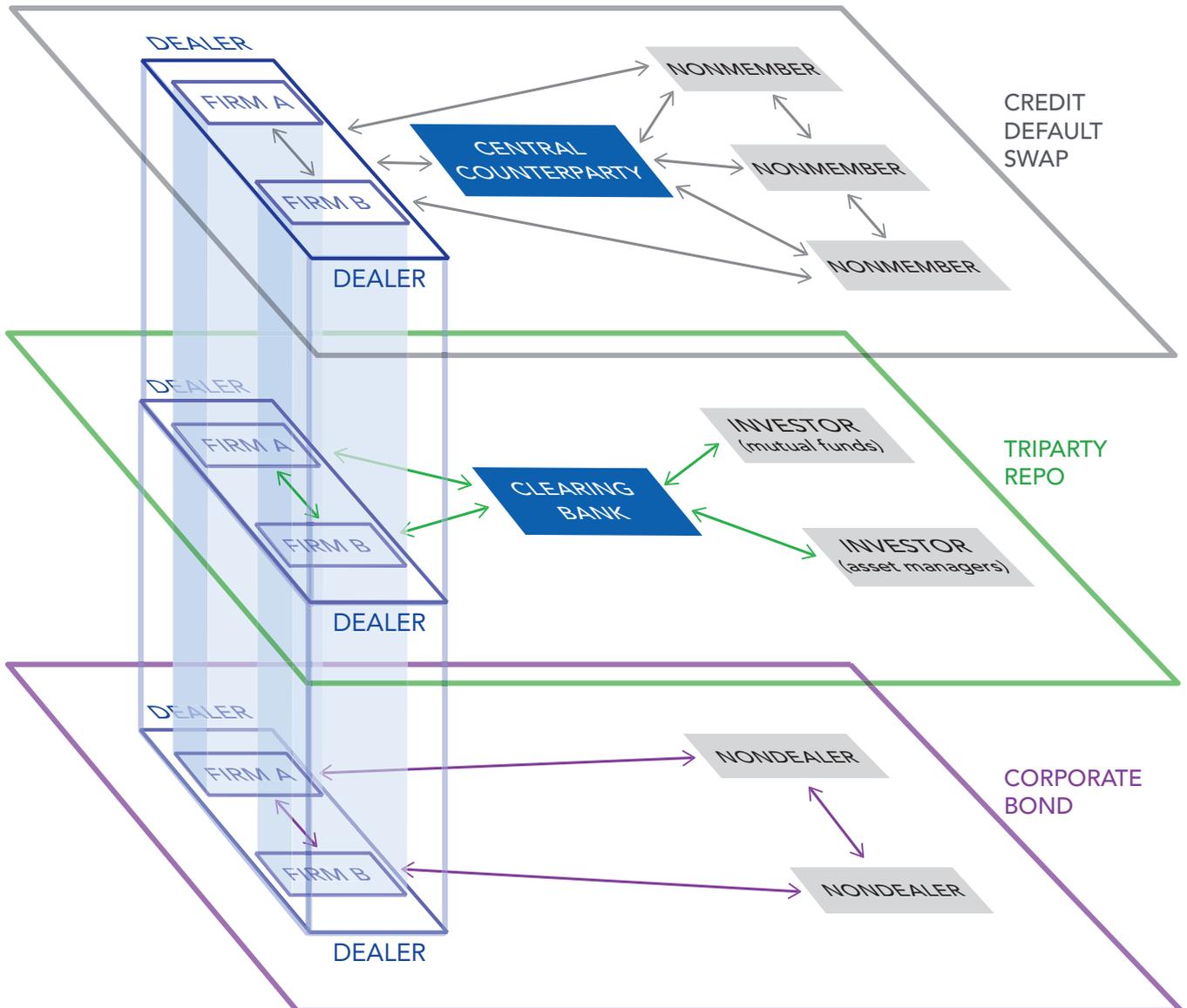
In such a scenario, customers and other financial companies might sever their connections to a victimized company to avoid exposure and protect themselves

from losses. They might also sever ties to similar companies for fear they are also vulnerable. Finally, they might limit their risks by pulling back from certain types of financial activities.

Three factors increase vulnerabilities to cybersecurity incidents for any type of company and industry:

1. The open structure of the Internet allows malicious actors to target companies across the globe.

Figure 1. Example of Financial System Network Mapping



Source: OFR analysis

2. The availability of encrypted digital currencies or "cryptocurrencies" makes evading detection easier for criminals because they can move and hold funds under assumed names.
3. Product liability laws do not generally apply to computer software, creating potential incentives to rush products to market and fix or "patch" problems later, including cybersecurity vulnerabilities.

Financial companies can help protect themselves and the overall system by investing in strong defenses and increasing their ability to recover from cybersecurity incidents. Regulators must work with the industry to ensure the resilience of the financial system, even if individual companies do not recognize that the benefits of protecting the overall system are worth their cost of increased resilience.

In the insurance industry, the National Association of Insurance Commissioners adopted a model law in October for protecting insurance data from hackers. But for the model law to take effect, U.S. states would need to adopt it.

In October 2016, federal banking regulators proposed rules to enhance risk management standards to combat cybersecurity threats.

As the OFR researches cybersecurity risks, we analyze past breaches, evaluate the effectiveness of regulations and policies, and draw lessons from "tabletop exercises" — simulated cybersecurity incidents — industry and regulators hold.

We are also applying network analysis and using detailed datasets to develop maps to learn how cybersecurity incidents can spread through the financial system (see **Network Analysis to Identify Cybersecurity Vulnerabilities and Operational Risk**). For example, such network analysis could focus on interconnections within markets and how shocks are transmitted — analysis that can be applied to shocks from cybersecurity incidents (see **Figure 1** for a representative multilayer view of work that could be done on three markets: credit default swaps, triparty repurchase agreements, and corporate bonds).

## 2. Obstacles to Resolving Failing Systemically Important Financial Institutions

Resolution is the process of restructuring or liquidating a failing financial company through bankruptcy or regulatory mechanism. The failure of a large, complex financial company could transmit distress to other firms and possibly trigger another financial crisis.

After the financial crisis of 2007-09, regulators developed important tools for resolving failing U.S. bank holding companies that are systemically important, but orderly resolution still may be difficult in some scenarios. Tools to enable an orderly resolution process for nonbanks are still works in progress.

Tabletop exercises are simulated cybersecurity incidents industry and regulators hold

There are two paths for the resolution of a failing systemically important financial institution (SIFI) that is not an insured depository institution. The first path is bankruptcy.

The second path, created by the Dodd-Frank Act, is the “orderly liquidation authority” when bankruptcy may not be the best alternative. On the recommendation of regulators and in consultation with the President, the Secretary of the Treasury could place the failing SIFI into receivership for the Federal Deposit Insurance Corporation (FDIC) to liquidate. The Act created this second path as a backstop to the bankruptcy process for the FDIC to address financial stability concerns and for better cross-border coordination among regulators.

In some scenarios, the first and second paths have shortcomings for handling the failure of the largest and most complex bank holding companies, known as global systemically important banks (G-SIBs). For example, if more than one G-SIB was failing, the FDIC might not be able to use the orderly liquidation authority to restructure the banks and release them from oversight quickly enough to stabilize the U.S. financial system.

Some proposals would strengthen bankruptcy provisions for financial companies but also would eliminate orderly liquidation authority. However, obstacles to handling a G-SIB failure through the bankruptcy process may remain. For example, the bankruptcy trustee might not have near-immediate access to short-term liquidity needed to stabilize the failing company or the cooperation of international regulators.

Finally, tools for successfully resolving systemically important nonbank financial firms are still being developed, despite problems among such firms during the crisis, such as the collapse of Lehman Brothers and near-failure of insurer American International Group, and the increasing importance of nonbanks such as central counterparties (CCPs).

Unlike G-SIBs, CCPs are not required to submit “living wills” to their primary federal regulators with plans for their rapid and orderly resolution in the event of their material financial distress or failure. CCPs are required to develop recovery and orderly wind-down plans for extreme events that could threaten their viability and financial strength before insolvency is reached. But CCPs are not subject to sanctions if regulators deem their plans unsatisfactory.

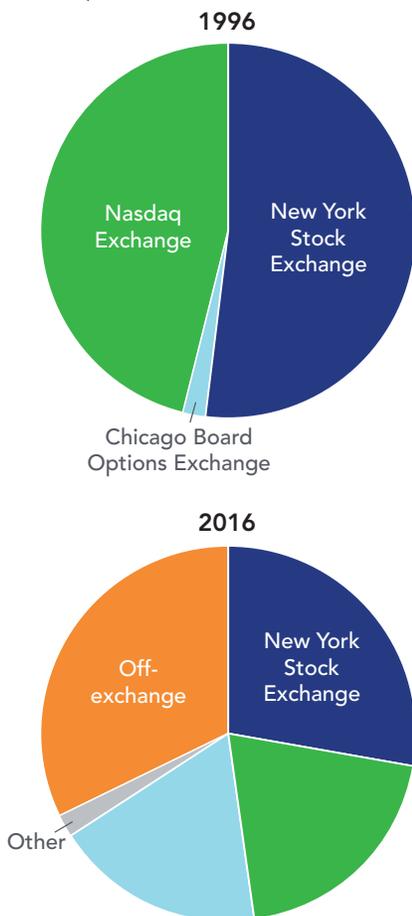
In 2016, the Commodity Futures Trading Commission (CFTC) issued guidance requiring more detailed wind-down planning. The Securities and Exchange Commission (SEC) is requiring CCPs under its supervision to submit initial plans by the end of 2017.

### 3. Structural Changes in Markets and Industry

Three aspects of market structure pose threats: (1) lack of substitutability, which is the ability to replace essential services if a provider fails or drops that line of business; (2) fragmentation of trading activities through multiple channels and products; and (3) the danger of a difficult transition to a new reference rate to replace the London Interbank Offered Rate (LIBOR).

A lack of substitutability is an aspect of market structure that can pose a threat. Some markets depend on one or a few financial institutions whose services may be difficult to replace under stress. For example, the increasing reliance on a single institution for settlement of Treasury securities and related repurchase agreements (repos) is a key vulnerability. An interruption in Treasury settlement services would disrupt the Treasury market and potentially a range of other markets.

Figure 2. Market Share by Exchanges and Their Affiliates, 1996 and 2016 (percent)



Fragmentation in markets can also pose threats. As electronic trading has escalated, the number of trading channels has grown (see Figure 2). This growth can increase flexibility for risk managers who want to hedge by diversifying their risks and for corporate treasurers and portfolio managers to reallocate assets quickly under stress. But fragmentation also introduces risks by reducing liquidity because resources of market makers are stretched thinner across more exchanges and products.

Some markets are also becoming more fragmented among products, raising concerns about the availability of liquidity also becoming more fragmented.

Another potential threat comes from the transition from LIBOR to an alternative. The risks and costs of using LIBOR make the move essential, but failure to make a timely and smooth transition could impair the functioning of markets that now rely on LIBOR. LIBOR reflects transactions in a shrinking market. Most of the responses by traders to the LIBOR survey are based on judgment rather than actual trades. LIBOR tracks unsecured transactions, which represent a small share of banks' wholesale funding.

The new U.S. benchmark rate, the Secured Overnight Financing Rate, will be produced by the Federal Reserve Bank of New York in cooperation with the OFR. It will be based on trading activity in repos backed by Treasury securities, not bank surveys (see **LIBOR Alternative** in next chapter).

Source: Muzan Trade and Quote

The Alternative Reference Rates Committee, made up of banks active in the derivatives market, informed the process and selected the Secured Overnight Financing Rate as its preferred LIBOR alternative. The new rate promises to be more reliable.

Despite these improvements, the transition from LIBOR carries additional risks. Obtaining widespread market acceptance and reliance could take years. Officials and market participants must develop active derivatives markets that use the new rate.

## Financial Stability Assessment

We base our overall assessment of U.S. financial stability in part on an evaluation of the six categories of risk in our new Financial System Vulnerabilities Monitor and on our research, analysis, and surveillance of the financial system.

This new monitor improves on and replaces the OFR's Financial Stability Monitor. When we introduced the prototype of the Financial Stability Monitor in 2013, we noted that we planned to update and fine tune it. We made improvements in 2014 and 2015, then began a project in fiscal year (FY) 2017 to make fundamental changes.

The previous version of the monitor combined signals of vulnerability and stress, which prevented an accurate assessment of risk.

**A vulnerability is a factor that can originate, amplify, or transmit disruptions in the financial system**

As its name indicates, the new Financial System Vulnerabilities Monitor gives early warning signals of potential vulnerabilities. A vulnerability is a factor that can originate, amplify, or transmit disruptions in the financial system.

When the Financial System Vulnerabilities Monitor shows high or rising vulnerabilities, it indicates a high or rising risk of disruptions in the future. Vulnerabilities typically lead to additional stress when shocks hit, such as when widespread losses or loan defaults strike the financial system. The additional stress can feed a downward cycle.

A second new tool, the OFR Financial Stress Index, is a daily snapshot of current stress in global financial markets. Stress can be minor; for example, it can surface in a brief period of uncertainty and price volatility in the equity market. Or it can be major, like the stress precipitated by the runs on Lehman Brothers and other broker-dealers in 2008.

The distinction between stress and vulnerabilities means that the two should be measured separately. Both of these complementary tools factor into our overall assessment that risks to U.S. financial stability remain in the medium range.

## Financial System Vulnerabilities Monitor

The Financial System Vulnerabilities Monitor is a heat map of 58 indicators of potential vulnerabilities organized into six risk categories: (1) macroeconomic, (2) market, (3) credit, (4) solvency and leverage, (5) funding and liquidity, and (6) contagion. These categories reflect key types of risks that have contributed to financial instability in the past.

The stress index and vulnerabilities monitor each have a category for credit, but the two tools are measuring different aspects of the financial system, so the same or similar categories or indicators

are not contradictory. For example, high stock valuations generally indicate low stress now, but such high valuations can be a potential vulnerability for the future.

The new monitor, which we will update quarterly, includes a category for solvency and leverage that was not in the earlier monitor. New underlying indicators provide additional information (see **Figure 3**).

The colors of the heat map mark the position of each indicator in its long-term range. For example, red signals that a potential vulnerability is high relative to its past. Orange signals that it is elevated. Movement toward red indicates that a potential vulnerability is building.

Figure 3. Financial System Vulnerabilities Annual Comparison, Second Quarters of 2016 and 2017

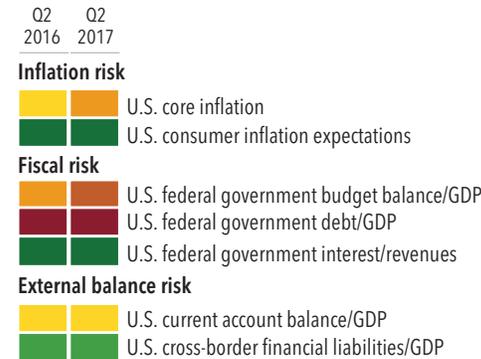


Note: Data available as of Oct. 4, 2017. The colors reported here and in past editions are subject to change because of newly reported data, data revisions, or changes in the historical range due to new observations.

Sources: Bloomberg Finance L.P., Compustat, Federal Financial Institutions Examination Council call reports, Federal Reserve Form Y-9C, Haver Analytics, Morningstar, SNL Financial LC, the Volatility Laboratory of the NYU Stern Volatility Institute (<https://vlab.stern.nyu.edu>), OFR analysis

## Macroeconomic risk

### Risk from inflation, government borrowing, and cross-border financing



Macroeconomic risks to U.S. financial stability are moderate. The U.S. economy continues to expand at a modest pace. The current U.S. economic expansion is the third longest since 1850. Inflation is low, and investors are not expecting major changes.

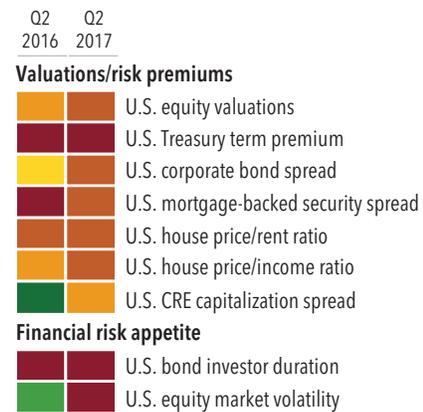
U.S. government debt as a percent of gross domestic product (GDP) is at its highest level in decades. Very low interest rates are currently mitigating this vulnerability because they make debt more affordable.

China's elevated level of debt hampers additional borrowing and is high by world standards, although credit growth has slowed over the past year. Direct U.S. financial claims on China are small relative to the size of the U.S. financial system, but the Chinese government is a major holder of U.S. government debt. Indirect exposures through other Asian markets and through the global economy are more significant.

Potential negative spillovers still exist from Brexit, the United Kingdom's planned exit from the European Union. If the exit does not go smoothly, the disruptions would most affect U.S. financial institutions with large direct financial exposures to the United Kingdom and potentially spread to other U.S. financial firms and markets.

## Market risk

### Risk to financial stability from movements in asset prices



Market risks from a sharp change in the prices of assets in financial markets are high and rising.

Rising prices and falling risk premiums may leave some markets vulnerable to big changes. Risk premiums are returns in excess of returns on risk-free investments.

Such market corrections can trigger financial instability when the assets are held by entities that have excessive leverage and rely on short-term debt and other liabilities.

Each of our annual reports has highlighted the risk that low volatility in

market prices and persistently low interest rates may promote excessive risk-taking by investors and create future vulnerabilities. In 2017, strong earnings growth, steady economic growth, and increased expectations for a U.S. fiscal policy that stimulates economic growth have fueled the rise in asset prices.

Stock market valuations are at historic highs, according to several metrics.

Prices are also elevated in bond markets, suppressing yields. Risk premiums for corporate bonds have nearly fallen to the lowest point since the financial crisis. At the same time, long-term interest rates in the United States remain low, despite a long span of steady economic growth, low unemployment, and gradual increases in benchmark interest rates by the Federal Reserve.

The low rates have increased the risk of loss by bond investors if interest rates rise, but two factors mitigate the potential systemic risk from rising rates. First, investors such as pension funds and insurance companies have long-term liabilities, including pension obligations and life insurance coverage that allow them to tolerate any short-term market losses on bonds. Second, the Federal Reserve has clearly stated its intention to raise interest rates gradually.

## Credit risk

**Risk of borrowers or counterparties not meeting financial obligations such as business loans and mortgages**

Q2 2016    Q2 2017

### Household credit risk

U.S. consumer debt/income	U.S. mortgage debt/income
U.S. consumer debt/GDP growth	U.S. mortgage debt/GDP growth
U.S. consumer debt service ratio	U.S. mortgage debt service ratio

### Nonfinancial business credit risk

U.S. nonfinancial business debt/GDP	U.S. nonfinancial business earnings/interest
U.S. nonfinancial business debt/GDP growth	
U.S. nonfinancial business debt/assets	
U.S. nonfinancial business debt/earnings	

### Real economy borrowing levels and terms

Lending standards for nonfinancial business	Lending standards for residential mortgages
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Some measures of credit risk have moderated since last year, reflecting crosscurrents of positive and negative developments. Credit risk from debt by nonfinancial corporations remains elevated. Nonfinancial corporate debt continues to grow, although at a slower pace than in 2016. Measures of firms' debt-to-assets and debt-to-earnings ratios are red on the monitor heat map.

In addition, the quality of covenants may be weakening. Covenants are terms in financial contracts meant to protect investors. For example, covenants may limit a borrower's total debt or restrict business activities. Weaker covenants historically accompany buildups of debt and may signal lower credit quality.

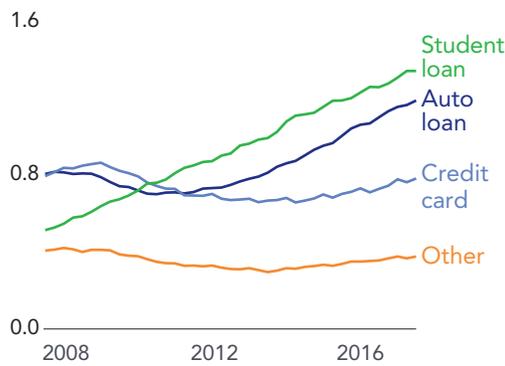
However, the growing economy and rising profits are reducing the risk of

defaults. Many companies have rolled over their existing debt at lower interest rates and with longer repayment timetables.

Household credit risks are rising, but appear to be concentrated in the nonmortgage segment of the market. Total household debt, including mortgages, hit a record \$12.8 trillion in the second quarter of 2017, surpassing its 2008 peak. Mortgage risks remain moderate after the drop in such debt after the financial crisis.

Auto loans and student loans bear watching. They account for much of the recent growth in household debt (see Figure 4). Delinquencies of student loans have been high since 2012. Auto loan delinquencies have declined from their post-recession peak in 2011 but have been rising since 2015.

Figure 4. U.S. Nonmortgage Household Debt (\$ trillions)



Note: Data as of June 30, 2017. "Other" includes consumer finance and retail loans  
Sources: Federal Reserve Bank of New York, OFR analysis

## Solvency and leverage risk

**Risk of reduced ability to repay debts or borrow funds**

Q2 2016    Q2 2017

### Financial institution solvency

■	■	U.S. BHC risk-based capital (median)
■	■	U.S. BHC risk-based capital (aggregate)
■	■	U.S. commercial bank risk-based capital (median)
■	■	U.S. commercial bank risk-based capital (aggregate)

### Financial institution leverage

■	■	U.S. BHC leverage (median)
■	■	U.S. BHC leverage (aggregate)
■	■	U.S. commercial bank leverage (median)
■	■	U.S. commercial bank leverage (aggregate)
■	■	U.S. life insurer leverage (median)
■	■	U.S. non-life insurer leverage (median)

The failure or near-failure of large financial institutions has been a common source of stress during financial crises in the past, including the crisis of 2007-09. For this reason, the OFR's new monitor includes measures of solvency and leverage risk. These measures signal low risk in banks.

Large banks have more capital to serve as a cushion against losses than before the crisis. The eight U.S. G-SIBs have significant buffers of capital and liquidity above the minimum required, which bolsters their solvency. Bank profits are gradually starting to improve as interest rates rise but remain relatively low. Return on equity for U.S. G-SIBs has been stagnant at about 10 percent, compared with 12 percent to 17 percent before the crisis.

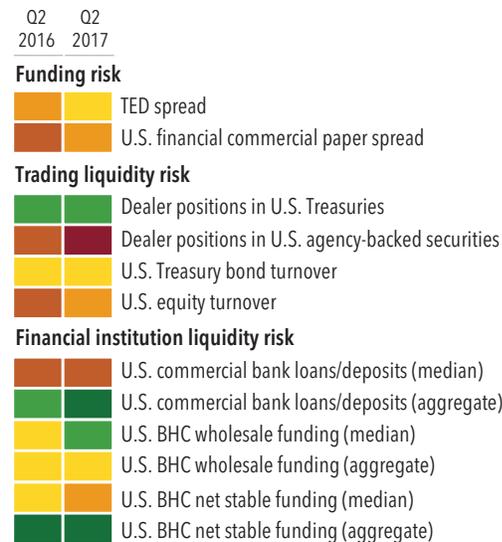
Insurance company leverage is moderate. Since the crisis, insurers have used less leverage. Leverage is high when the company resources needed as a buffer against losses are low relative to

investment exposure. Some life insurers make substantial use of derivatives; this indicator captures only the current market value of these exposures and may understate future risks.

Leverage among nonbank broker-dealers, which are not reflected in the monitor, deserves monitoring. Most of the largest U.S. broker-dealers are affiliated with banks. However, changes in bank regulation may fuel an increase in broker-dealers not affiliated with banks. The largest nonbank broker-dealers — each with more than \$10 billion in assets — have substantially more leverage than their bank-affiliated peers.

### Funding and liquidity risk

**Risk that investors will lose confidence and pull their funding from a firm or market and market participants won't be able to sell securities without creating a downward price spiral.**



Market liquidity, the ability of a market participant to buy or sell an asset in a timely manner at relatively low cost, remains a concern. Market liquidity is vulnerable to the risk of asset fire sales — the risk that market participants will not be able to sell securities without creating a downward spiral in prices.

Funding liquidity (the availability of credit to buy assets) is also subject to run risk — the risk that investors will lose confidence and pull their funding from a firm.

In the past several years, U.S. G-SIBs have steadily increased their reliance on "runnable liabilities," liabilities that are vulnerable to runs.

Indicators of market liquidity are mixed. Some indicators suggest that conditions are moderate, while others suggest lower risk. Two measures of market liquidity signaled extraordinary stress during the crisis but have since eased:

1. **Bid-ask spreads** – the difference between the average price at which customers buy from dealers and the average price at which customers sell to dealers; and
2. **Price-impact measures** – the price change after a large trade is completed.

## Contagion risk

**Risk that stress at a financial institution or market spills over to others**



Contagion risk is the danger that stress at a financial institution or market spills over to others. OFR research suggests that the financial system remains highly interconnected. Of the many factors contributing to the financial crisis, contagion is one of the most difficult to measure (see **The Contagion Index and Agent-based Models**).

The monitor includes measures of concentration in the financial system. Concentration makes the financial industry more vulnerable to the spread of disruptions from distress at individual

## The Contagion Index and Agent-based Models

In the search for new ways to measure contagion risk, OFR researchers have developed a contagion index to assess the potential spillovers to the broader financial system when a bank defaults. The contagion index has been declining in recent years for most G-SIBs (see **Figure 5**).

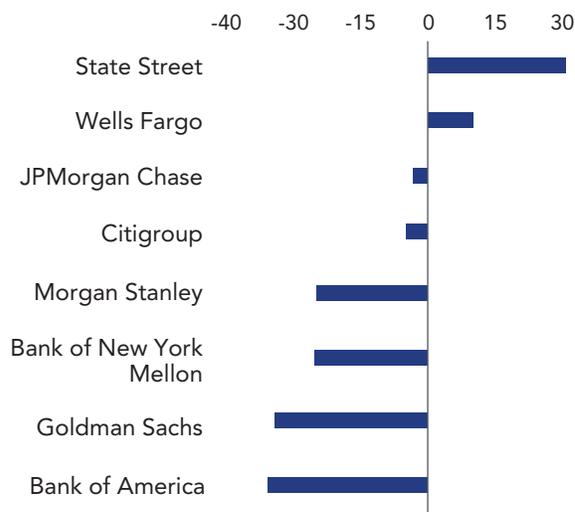
The contagion index is not included in the monitor because it can only be calculated since 2013. The index combines measures of a bank's leverage, size, and connectivity.

$$\text{Contagion Index} = \text{Financial Connectivity} \times \text{Net Worth} \times (\text{Outside Leverage} - 1)$$

Connectivity is measured as the portion of a bank's liabilities held by other financial institutions.

OFR researchers also continue to use agent-based models to analyze how risks can spread among firms during a crisis. Agent-based models simulate behaviors of different types of financial firms and the complexity of behavior among firms as they react to the actions of other firms. These models help us understand the way risks propagate across the financial system and the impacts of shocks and changes in regulatory policies. The OFR cosponsored a conference on the topic with the Bank of England and Brandeis University in September 2017.

**Figure 5. Percent Change in Contagion Scores for FY 2016**



Sources: Federal Reserve Form Y-15, OFR analysis

firms. The monitor shows that these signals are mixed. Concentration in the U.S. mutual fund industry is high. Concentration in the U.S. banking industry is moderately elevated; the heights reached after the crisis have subsided. Concentration in the life insurance industry is low.

The monitor also includes the SRISK measure. SRISK — short for systemic risk — reflects the capital a firm is expected to need to remain solvent during a crisis. SRISK and two other metrics offer insights on the contribution that individual firms make to systemic risk (see **Figure 6**).

In addition, the monitor now contains an index of fire-sale risk, the chance that a self-reinforcing cycle will develop when liquidations of bank assets push down prices in a falling market. This risk has also been low in recent years.

## Financial Stress Index

The Financial Stress Index is a daily market-based snapshot of stress in global financial markets. It is constructed from 33 financial market indicators. The indicators are organized into five categories: (1) credit, (2) equity valuation, (3) funding, (4) safe assets, and (5) volatility.

The index is positive when stress levels are above average and negative when stress levels are below average.

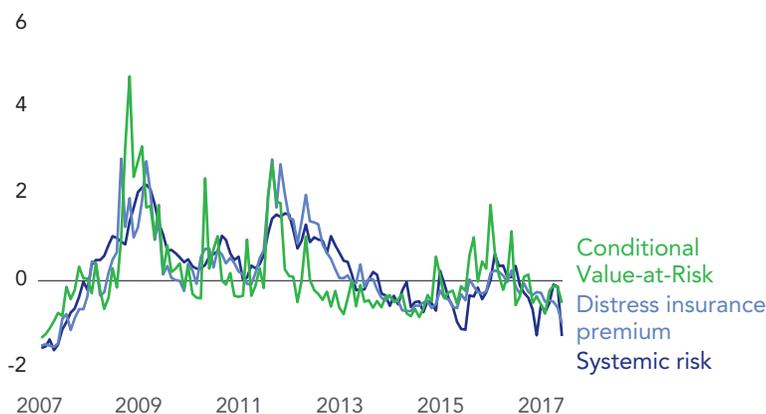
The index shows that overall stress is near its lowest level since the financial crisis, primarily because of low volatility. However, this low volatility may be leading investors to take big risks, making the financial system more fragile and vulnerable to shocks.

The OFR index can be broken down so users can view each of the five categories separately or in combination. It also can be broken down by the region generating the stress.

Analysis of the categories can reveal the drivers of financial stress, guiding the interpretation of market events by cutting through the clutter of market chatter. For example, if we examine the index during the 2013 “Taper Tantrum” event, we find that the index shows increased levels of stress in the credit and volatility categories (see **Figure 7**).

The methodology for the index uses a dynamic process to account for changing relationships among the variables in the index. No two stress events are exactly the same, and the relative importance of drivers of financial stress varies over time.

**Figure 6. Systemic Risk Measures of Joint Distress for the Six Largest U.S. Bank Holding Companies (z-scores)**

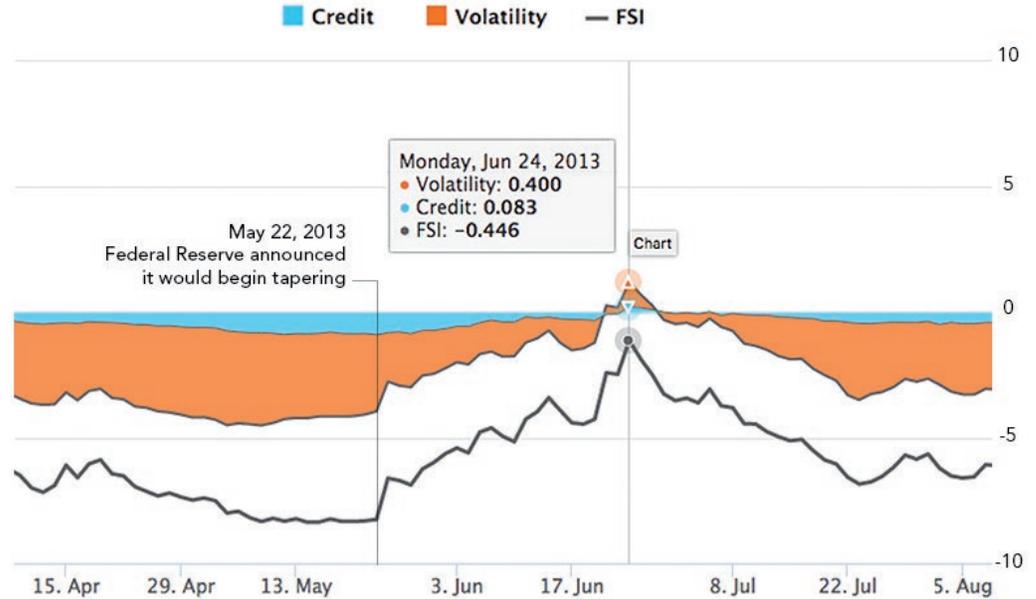


Note: Equal-weighted average. The six largest bank holding companies are Bank of America, Citigroup, Goldman Sachs, JPMorgan Chase, Morgan Stanley, and Wells Fargo. Z-score represents the distance from the average, expressed in standard deviations.

Sources: Bloomberg Finance L.P., the Volatility Laboratory of the NYU Stern Volatility Institute, OFR analysis

Figure 7. OFR Financial Stress Index - 2013 Taper Tantrum Period

Financial stress refers to a breakdown in the normal functioning of financial markets



Sources: Bloomberg Financial L.P., Haver Analytics, OFR analysis

The screenshot shows the OFR Financial Stress Index website. At the top, it displays the OFR logo and navigation links. The main heading is 'OFR Financial Stress Index'. Below this, it provides a brief description of the index and its components. A 'Current Index' box shows a value of -3.747 as of Monday, Oct. 30, 2017. Below the index value, there are tabs for 'Indicator Categories' and 'Regions'. A chart shows the index's performance from 2002 to 2017, with shaded areas indicating U.S. recessions. The chart shows a major peak in stress during the 2008-2009 financial crisis. Below the chart, there is a 'How to Interpret the Index' section and 'Indicator Categories' including Credit, Equity valuation, Funding, Safe assets, and Volatility.

OFR Financial Stress Index can be found at [www.financialresearch.gov/financial-stress-index/](http://www.financialresearch.gov/financial-stress-index/)

The OFR's innovative methodology is dynamic but remains accessible to policymakers.

The daily frequency of the OFR's index improves upon the weekly or monthly frequency of other indexes.

Financial stress refers to a breakdown in the normal functioning of financial markets. High levels of financial stress can precede declines in economic activity. These episodes can be severe. For example, the OFR index shows stress peaking during the financial crisis. Policymakers need accurate, clear, and timely signals of market stress to effectively manage the effects.