Remarks of Richard Berner, Director, Office of Financial Research,

at the Annual Meeting and Public Policy Forum of the American Academy of Actuaries, "The Risk Outlook and Financial Stability" November 12, 2015, Washington, D.C.

Good afternoon. It's a pleasure to join you at the Academy's annual meeting and policy forum; thank you for inviting me.

Today I want to discuss financial stability in the context of insurance and pensions. The insurance industry provides critical risk-management and risk-transfer services to households and businesses. Pensions provide important vehicles for deferring compensation and saving. Both intermediate between savers and borrowers, and the smooth functioning of their activities is critical for our economy and for the stability of the financial system.

At the OFR, our mission is to promote financial stability, so we need to better understand how insurance and pension activities are evolving, where risks may be, and how best to manage them. You have heard from us twice before. In a different capacity, I spoke at your meetings in New York 10 years ago, where Michael Peskin and I presented a new way to defease the legacy costs of America's defined benefit pension system to help ensure its viability.¹ And in February of last year, my colleague Rebecca McCaughrin spoke to you about our work.

Today, I am glad to have this opportunity — to get to know each other, to understand how we can help each other, and to discuss issues related to financial stability. I'll outline the OFR's mission and how we are achieving it. I will discuss the risk outlook, stress testing and risk management, and describe how we evaluate tools for assessing the resilience of the system.

Setting the stage

Financial stability occurs when the financial system can provide its basic functions even under stress. Financial stability is not about constraining market volatility. Nor can we predict or prevent financial shocks. Rather, financial stability is about resilience. We want to ensure that when shocks hit, the financial system continues to provide its basic functions to facilitate economic activity. In the OFR's first annual report, we identified six such functions: (1) credit allocation and leverage, (2) maturity transformation, (3) risk transfer, (4) price discovery, (5) liquidity provision, and (6) facilitation of payments.

Threats to financial stability arise from vulnerabilities in the financial system — failures in these functions that are exposed by shocks. Resilience has two aspects:

(1) Does the system have enough shock-absorbing capacity so it can still function? and

¹ Richard Berner and Michael Peskin, "Defeasing Legacy Costs," *Journal of Applied Corporate Finance*, 2006, vol. 18, issue 1, pages 104-107.

(2) Are incentives, such as market discipline or transparent pricing of risk, aligned to limit excessive risk taking?

Both aspects matter. Shock absorbers are needed to buffer hits, while what I call guard rails — or incentives that affect behavior — are needed to increase the cost of — and thereby constrain — the risk taking that can create financial vulnerabilities.

Resilience, or conversely, threats to financial stability are systemwide concepts. To measure, assess, and monitor them, we must look across the financial system. We must examine both institutions and markets to appreciate how threats propagate from one institution or market to others, and to evaluate ways to mitigate those risks.

OFR 101

The financial crisis exposed critical gaps in our analysis and understanding of the financial system, in the data used to measure and monitor financial activities, and in the policy tools available to mitigate potential threats to financial stability. These gaps — in analysis, data, and policy tools — contributed to the crisis and hampered efforts to contain it. Filling those gaps is crucial to assessing and monitoring threats, and to developing what we call the macroprudential toolkit to make the financial system resilient.

In 2010, the Dodd-Frank Act established the Financial Stability Oversight Council and the Office of Financial Research with complementary goals. The Council is charged with assessing and monitoring threats to financial stability, developing remedies for those threats, and restoring market discipline by eliminating too big to fail. We at the OFR help promote financial stability by improving the scope, availability, and quality of financial data, by developing tools to assess and monitor threats to financial stability, and by evaluating policies designed to mitigate them.

Good data are essential for making sound policy decisions. I believe several OFR data-related projects are relevant to you. Among them:

- Vulnerabilities and data gaps persist in so-called securities financing transactions, or SFTs, including repo, and securities lending. As you know, insurers and plan sponsors are engaged in SFT activities. The markets for these critical short-term funding instruments remain vulnerable to runs and asset fire sales. We have mapped the sources and uses of such funds to help us look holistically at these markets, assess risks, and identify gaps in available data. The OFR recently published a working paper called, "Reference Guide to U.S. Repo and Securities Lending Markets," that employs a comprehensive framework to demonstrate the similarities and interactions between these markets.² The paper also draws a roadmap for OFR projects to collect critical, transaction-level data on bilateral repo and securities lending activities
- Insurers and plan sponsors use derivatives to manage risk and express market views; data on derivatives transactions are now reported to swap data repositories. We are helping the

² Viktoria Baklanova, Adam Copeland, and Rebecca McCaughrin, "Reference Guide to U.S. Repo and Securities Lending Markets," OFR Working Paper 15-17, September 9, 2015

Commodity Futures Trading Commission and other regulators improve data quality in registered swap data repositories. These repositories are designed to be high-quality, low-cost collection points for data that are critical to understand exposures and connections across the financial system. The OFR and the CFTC are collaborating to enhance the quality, types, and formats of data collected. We are also collaborating globally with our counterparts at the Bank of England and the European Central Bank, and through work organized by the Committee on Payments and Market Infrastructures and the International Organization of Securities Commissions, known collectively as CPMI-IOSCO.

- We are also improving the quality of financial data by developing and promoting the use of data standards. We have led a foundational initiative among governments and private industry worldwide to establish a global Legal Entity Identifier or LEI like a bar code for precisely and uniquely identifying parties to financial transactions. If the LEI system had been in place in 2008, the industry, regulators, and policymakers would have been better able to trace the exposures and connections of Lehman Brothers and others across the financial system. The LEI initiative has become fully operational in just a few years. Ubiquity will yield its full benefits, including reducing the reporting burden for you, so I have called for mandating its use for regulatory reporting.
- Improving the quality of data to evaluate risks in the operations of central counterparty clearinghouses is also critical. Three quarters of standard derivatives trades, including yours, are cleared through CCPs. With the notable exception of the Bank for International Settlement's Redbook collection,³ however, existing data collections have been limited in scope. Following a recommendation from our Financial Research Advisory Committee, we will engage relevant authorities to improve the quality and scope of such data. We intend to build on existing plans from CPMI-IOSCO and the Federal Reserve Bank of New York.

Current Threats and Tools to Assess and Monitor Them

Our data initiatives are critical, but they are not the whole story. Several of our analytical initiatives are also important for insurance and pension plan sponsors.

Consistent with our financial stability mandate, we developed a tool for measuring and summarizing risks systemwide. Our Financial Stability Monitor depicts a framework with five categories of risk: macroeconomic, market, credit, funding and liquidity, and contagion. This risk-based approach aligns with the financial system's basic functions, and it enables us to look across the financial system rather than focusing piecemeal on institutions or market segments. The monitor enables us to measure and track risks in each category wherever in the financial system they occur — in banks, shadow banks, other nonbanks, and markets. We update it and its supporting data semi-annually on our website.

The Financial Stability Monitor is part of a larger suite of OFR monitors and risk assessment tools we are creating for each of the five risk categories. For example, we are using agent-based models to assess contagion risks in financial networks. These models have been used to study the spread of epidemics and ways to mitigate them. Likewise, they hold great promise for understanding the dynamics of fire sales and other chains of complex events.

³ http://www.bis.org/list/cpmi/tid_57/index.htm

Taken together, these tools help us to examine the interplay among risks and to analyze related developments across asset classes.

We supplement our financial stability analysis at the OFR with market intelligence. In February, we launched a Financial Markets Monitor that summarizes major developments and emerging trends in global capital markets. Our aims in making it public are to increase transparency, enhance the availability of financial information, and facilitate timely reactions by the private sector to emerging risks and thereby defuse them.

In our judgment, overall threats to financial stability remain at a medium level. As depicted in the Financial Stability Monitor, macroeconomic, market, credit, and funding and liquidity risks are not excessive, though a number of risks within those categories have increased.

Credit risks are now prominent. The combination of leverage, the sharp drop in commodity and energy prices, and the slowdown in growth in emerging markets have exposed elevated credit risks at home and abroad. Valuations in both equity and debt markets remain well above historical averages, and exposures are high. Liquidity risks appear to have risen in major bond markets, which can amplify shocks. And certain financial activities continue to migrate to presumably less-regulated and less-transparent areas of the financial system.

Stress Testing

Later this afternoon, a panel will discuss the future of risk management tools and stress testing for U.S. insurers. I look forward to this discussion because promoting best practices in risk management and evaluating stress testing are central to our mandate.

In my view, a robust stress-testing regime is one of the best tools for evaluating the adequacy of reserves and capital, probing potential weaknesses outside the regulatory perimeter, strengthening firms' risk management, and assessing potential system vulnerabilities.

To evaluate stress tests, we are engaged in dialogue with the Federal Reserve about methodology and about obtaining access to relevant data. We are suggesting ways to conduct systemwide stress tests. To that end, we are exploring how stress tests can include runs and contagion.

I am particularly interested in your panel discussion about the results and lessons learned from the first year of the own-risk and solvency assessment, or ORSA, for insurers to conduct selfanalyses of risks in their groups. As I understand it, ORSA is designed to be an internal risk management process to gauge an insurer's ability to meet policyholder obligations, with the results shared with insurance supervisors.

More broadly, I wonder what you believe might be useful tools to assess vulnerabilities. Some specific questions include:

• Could stress tests benefit from including some uniform market-wide scenarios beyond interest rates? For example, the European Insurance and Occupational Pensions Authority

has required some standardized market scenarios for European life and property casualty insurers in its 2014 sector-wide stress test, developed by the European Central Bank.

- Could an approach with some common scenarios facilitate understanding of possible sectorwide vulnerabilities?
- Banks and insurers have sharp differences in their businesses and in the risks they manage. Stress testing for banks and insurers should reflect those differences. However, the bank stress tests have provided valuable improvements in data quality and in banks' risk models; in turn, these have helped strengthen banks' capacity to manage risks. Are there analogous improvements for insurance?

I'll be interested in hearing the discussion at this afternoon's panel on capital standards for insurers. I'll also want to hear more on captive reinsurance; in our 2014 Annual Report, we cited captive reinsurance as an activity that bears close watching.

Macroprudential Policies

In the past five years, federal financial regulators have taken important steps to make the financial system more resilient. Officials have put in place banks' new capital requirements, and agreed on key components of liquidity regulation and minimum requirements for firms' holdings of liquid assets. In addition, stress testing and a new regime to resolve large, complex, and troubled financial institutions in an orderly way have dramatically changed the approach to increasing resilience.

Achievements since the crisis have made the banking system stronger, but vulnerabilities remain outside the banking perimeter. We need tools to address them, and to develop those tools, we need to analyze and measure the vulnerabilities. That is especially important as financial activity migrates to more opaque and potentially less resilient parts of the financial system.

The OFR does not make policy. But we are required to conduct policy studies and provide advice on the impact of policies related to financial stability. Analyzing capital adequacy and the migration of financial activities to presumably less-resilient parts of the financial system are components of that work.

Progress in addressing risks outside banking includes ongoing work to assess risks in so-called shadow banking and to develop tools to limit them. There is agreement that minimum floors on haircuts can strengthen secured, short-term wholesale funding markets. New regulations are also in place to strengthen derivatives markets and make them more transparent. And rules have been proposed to address vulnerabilities in asset management activities. Because these initiatives must cut across the financial system, close collaboration among U.S. financial regulators — including regulators at the state level — is critical for their success.

The Council and the OFR each have important roles in such collaboration. As you know, an insurance expert — Roy Woodall — is a voting member of the Council. A state insurance commissioner — Adam Hamm of North Dakota, who spoke to you this morning, Michael McRaith, the Director of the Federal Insurance Office, and I are nonvoting members. Working

together, we try to ensure that Council deliberations include the unique perspective of the insurance industry on issues related to financial stability.

Looking ahead

In the past five years, we have improved our understanding of how the financial system functions, and our ability to measure financial activity and spot vulnerabilities. But we need to do more to understand how the financial system fails to function under stress, to spot vulnerabilities in the shadows, and to gather and standardize the data needed for analysis and policymakers' responses to identified threats. We know that financial innovation and the migration of financial activity create a moving target, so our goal to eliminate gaps in data and analysis will always elude us. But we will continue to fill the most important ones.

Financial stability is a systemwide concept, so attaining it must be a shared goal. I like to tell my OFR colleagues that it is a team sport. We collaborate extensively with our domestic counterparts in the Financial Stability Oversight Council and our global counterparts around the world. I want to extend that collaboration with you, and to ask for your support, your cooperation, and your counsel. Let's communicate and collaborate to help make the financial system stronger and more resilient.

Thank you for your attention. I would be happy to answer some questions.