## William C Dudley: Remarks at the 40th Annual Central Banking Seminar

Remarks by Mr William C Dudley, President and Chief Executive Officer of the Federal Reserve Bank of New York, at the 40th Annual Central Banking Seminar, Federal Reserve Bank of New York, New York City, 3 October 2016.

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It's my pleasure to welcome you to the Federal Reserve Bank of New York to participate in the 40th anniversary of our Central Banking Seminar. This year we have 140 participants representing 67 different countries and institutions. The program is designed to provide a broad view of central banking covering the key areas of monetary policy, supervision, payments and financial stability. This design reflects our belief that a well-rounded perspective can help us to be more effective in our jobs as central bankers. We also hope this program provides you with an opportunity during your stay to broaden your network of central bank colleagues. As always, what I have to say reflects my own views and not necessarily those of the Federal Open Market Committee (FOMC) or the Federal Reserve System.

The theme of this year's seminar is the policy challenges we face in an environment of sluggish economic growth and low inflation. Central bankers will always be confronted by challenges in carrying out their responsibilities, which will change over time. This puts a premium on our ability to adapt. Consider, for example, the contrast between the issues faced by the Federal Reserve in 1976 – the inaugural year of our seminar – and today. In 1976, the U.S. economy was recovering from the first oil price shock and the ensuing recession, which had ended in March 1975. The FOMC faced the problem of stagflation, as both inflation and unemployment were high – inflation was running around 6 percent and the unemployment rate was nearly 8 percent. The FOMC's policy rate – the federal funds rate – was about 5 percent.

Compare that to today's circumstances. The U.S. economy has entered its eighth year of expansion following the financial crisis and the Great Recession. In contrast to 1976, inflation has been below the FOMC's desired level of 2 percent for most of this expansion. This year, inflation is running at about 1 percent and the unemployment rate is 4.9 percent. Monetary policy remains accommodative, with the target range for the federal funds rate at 0.25–0.50 percent. I doubt that a central banker in 1976 would have viewed the current set of circumstances as even remotely plausible, or would have ever contemplated the types of challenges that we now face.

In my remarks today, I would like to briefly touch on four topics: (1) the efficacy of monetary policy at the zero lower bound, (2) central bank communications, (3) cyber risk, and (4) market liquidity and regulation. These have particular relevance for central banks today, and are likely to remain relevant in the years ahead. The speakers that you will hear over the course of our program will elaborate on some of these topics.

The financial crisis severely impaired the global financial system, and the resulting recession in the United States was the most severe since the Great Depression. Based in part on the lessons of the Japanese experience, in which falling inflation expectations undermined the effectiveness of monetary policy, the FOMC responded aggressively as the economy weakened. It began cutting the policy rate from 5.25 percent in September 2007 and reached the effective zero lower bound in December 2008. From that point on, the FOMC turned to unconventional monetary policy in order to provide additional stimulus to the economy.

BIS central bankers' speeches 1

Academic research indicates that recoveries following financial crises have tended to be shallow and protracted. One plausible reason for this pattern is that a financial crisis typically results in headwinds that take time to dissipate - for example, the deleveraging of business and household balance sheets or the tightening of credit standards. Even so, as the expansion failed to gather momentum and persistently underperformed most forecasts, alternative explanations for the sluggish economic growth - such as secular stagnation began to receive increased attention. Wednesday's session on Global Trends and Risks will more fully explore this debate. The insights from this debate have important implications for the appropriate path for monetary policy and the question of whether monetary policymakers need additional tools or greater support from the fiscal authorities to avoid being trapped at the zero lower bound for interest rates.

Beyond these factors, the tepid pace of the expansion reflects the fact that monetary policy was constrained by the zero lower bound. Monetary policy affects the economy mainly through its influence on financial market conditions – including long-term interest rates, credit spreads, exchange rates and equity prices. However, when the policy rate hits zero, conventional policy is constrained in terms of providing additional accommodation—even recognizing that some central banks have pushed short-term rates into negative territory. To overcome such constraints, the FOMC used forward guidance - promising to keep rates low for longer - and asset purchases to provide additional stimulus to the economy. Given the initial novelty of unconventional monetary policy tools, central banks did not have a welldeveloped body of research to draw on to design the programs and calibrate their impact. While it will take time to build this body of work, research to date varies in terms of the estimated effectiveness of unconventional policy. Several studies indicate that the FOMC's first asset purchase program helped to reduce long-term interest rates, while the subsequent programs had smaller though still significant effects on rates. However, Professor Summers, who is participating in our program, has recently questioned the effectiveness of the Fed's asset purchase programs when financial markets are well-functioning.<sup>2</sup>

There is a related concern given that the federal funds rate is still close to zero at this point in the expansion. While I'm on record as saying that expansions do not simply die of old age.<sup>3</sup> some economists are concerned that the risk of a recession is increasing. As I indicated earlier, the FOMC was able to reduce the federal funds rate by more than 5 percentage points in an effort to offset the effects of the last recession. If another recession were to happen in the next few years, it is likely that the FOMC would be unable to respond with a cut of such magnitude. In this case, the effectiveness of unconventional monetary policy in providing accommodation would again become a central issue, as Chair Yellen discussed in her recent Jackson Hole speech. A risk management approach to monetary policy would suggest that the more concerned one is with the effectiveness of these policies at the zero lower bound, the more cautious one would be in the process of removing accommodation. So, even though we are now slightly off the zero lower bound, an assessment of the effectiveness of unconventional monetary policy has implications with respect to the current stance of monetary policy.

Another important challenge for central banks is communication with the public. It is now accepted that the effectiveness of monetary policy is enhanced when the public has a clear understanding of the goals of monetary policy, and the framework and actions that the central bank will use to attain them. One important example is inflation expectations, which

For example, see Carmen Reinhart and Kenneth Rogoff. This Time is Different: Eight Centuries of Financial Folly. Princeton University Press, 2009.

See Larry Summers' blog.

See Remarks at the New York Fed's Economic Press Briefing on the Household Debt and Credit Report.

See The Federal Reserve's Monetary Policy Toolkit: Past, Present, and Future.

are important to the dynamics of inflation. Effective communication by the central bank can help to anchor inflation expectations at its target, thereby making it easier for the central bank to attain its inflation objective.

The use of unconventional monetary policy has also heightened the focus on communication. In the past, communication almost exclusively focused on the likely short-term path for the central bank's policy rate. But, once the zero lower bound became a constraint, forward guidance became an important communication tool to surmount the problems caused by that constraint. In addition, there are now many more dimensions to the stance of monetary policy, including the size and composition of the central bank's balance sheet. When communicating about these various dimensions, it is important for the central bank to demonstrate its commitment to a framework rather than to a specific policy path, since the precise path of policy should be data dependent and the future is uncertain. Good communication can lead to a clear understanding of the Fed's framework, which will help the public to assess the data along with the Fed and enable it to better predict how the Fed is likely to adjust policy as the economic outlook changes.

As I indicated earlier, the challenges the FOMC faced in 1976 were very different from today's. In addition, advances in information technology also have changed how we do our work. However, these advances come with the risk of increased exposure to cyber-attacks. The various motivations for these attacks include causing embarrassment to the central bank, stealing money, and disrupting critical financial services. The large sums of money potentially at risk mean that we need very strong defenses to lower the probability of success by cyber attackers in order to deter such efforts. Attacks can have consequences for a central bank's reputation and the public's confidence in it, underscoring the importance of a sturdy set of defenses and response actions. Protecting against cyber-attacks requires not only investment in the right infrastructure, policies and processes, but also vigilance from central bank employees. Many attacks involve tricking unsuspecting employees into installing malicious code or revealing key access information. Since this "phishing" plays on human weaknesses, to which we are all prone, protecting against these tactics requires ongoing training and testing, appropriate access controls, and segregation of duties in the context of critical infrastructures. Central banks also need reliable channels of communication and cooperation with those agencies that track and combat malicious cyber activity.

The last topic that I would like to touch on is market liquidity and regulation. Market liquidity is essential to the proper functioning of financial markets. I think of it as the cost – both in expense and time – of buying or selling an asset for cash. Market liquidity is like engine oil, which is essential for engine parts to move properly without generating excessive friction and heat. Market liquidity reflects many factors, including the expense of conducting a transaction, the price of the transaction relative to the midpoint of the bid-ask spread, any impact of the transaction on the market price, and the speed at which the transaction can be completed.

Some argue that market liquidity has been adversely effected by post-crisis regulation. For example, the higher capital and liquidity requirements for the largest securities dealers may have impaired market liquidity by reducing the profitability of dealer intermediation activities and raising the cost of dealer balance sheets. But, before considering whether any regulatory changes would be appropriate, it is important to carefully examine the evidence. New York Fed staff have been conducting an extensive analysis of empirical measures of market liquidity and the effects certain regulations may have had on it. The work to date finds little evidence – based on traditional liquidity measures – of any meaningful degradation in market liquidity across key asset classes. However, there are important data gaps that must be filled in order to have a more complete assessment. For example, the U.S. Treasury market data capture dealer-to-dealer transactions, but not dealer-to-customer transactions that are typically conducted on an over-the-counter basis. Moreover, we do see other consequences of regulation, such as the rise in the foreign exchange swap basis and the spread between LIBOR and the federal funds rate, as well as the decline in dealer repo financing activity. Still,

BIS central bankers' speeches 3

it is important to keep in mind that even if further analysis were to identify a regulatory-related decline in market liquidity, any associated cost would have to be weighed against the benefits of these regulations in terms of a safer and more robust financial system.

In closing, I hope you will find our program both engaging and challenging. Don't be shy – our speakers welcome difficult and thought-provoking questions. Absorb all you can. Use this opportunity to network with your colleagues. Hopefully, this experience will stimulate your thinking and help you be successful in your career as a central banker.