Introduction
Good afternoon. I would like to start by thanking Charlie Steindel and the Forecasters Club of New York for their invitation to speak today. It is a particular pleasure for me to address your group: first, because I have known Charlie for many years – we both grew up as economists in the Federal Reserve System – but also because I know I won’t have to explain to you what a difficult task economic forecasting can be, even in the best of times. Still, forecasting is something economists and policymakers must do, so today I will discuss my outlook for the economy and monetary policy. As always, the views I’ll present are my own and not necessarily those of the Federal Reserve System or my colleagues on the Federal Open Market Committee.

The Economic Outlook
The economic expansion began nearly six years ago. While volatility in the monthly data can often obscure underlying trends – and today is no exception – it is important to recognize the significant economic progress the country has made since the darkest days of the global financial crisis and Great Recession. That progress, though slow in coming, has been significantly supported by extraordinary monetary policy accommodation. Underlying economic fundamentals have improved, resulting in an economy that is better able to sustain growth through the inevitable transitory shocks and typical sectoral ups and downs.

For example, the harsh winter weather took its toll on first-quarter growth this year, just as it did last year. A number of recent data releases have come in below expectations. But my sense in speaking with business contacts is that the economy has resiliency. I expect the slowdown to be temporary and do not view it as pointing to something more fundamental.
My view reflects the fact that a number of the so-called headwinds have waned. Those headwinds held back growth earlier in the recovery, made the economy more vulnerable to negative shocks, and dampened the transmission of very accommodative monetary policy to the broader economy.

The Great Recession wreaked havoc on household and business balance sheets. But balance sheets have improved substantially over the expansion. Households have reduced debt levels relative to disposable income from a peak of 130 percent before the recession to about 100 percent today. Very low interest rates mean that households are spending less to service their debt. And thanks to higher prices of equities and houses, households have more than made up the $10 trillion in net worth destroyed in 2008. U.S. businesses are also in better financial condition after deleveraging. They are positioned to expand investment and hiring, and they are doing both.

The headwind from government spending is also abating. Government spending declined over 2010 to 2013, but began to rise again last year. With tax revenues recovering, state and local governments have been adding to their payrolls and increasing expenditures. The drag from federal government spending has lessened over time, although it is unlikely that such spending will contribute to growth this year.

The banking sector is regaining its health, with higher capital levels and lower loan delinquencies. Bankers are working through the new regulatory requirements and augmenting systems to better monitor and evaluate risks in their portfolios. Loans to consumers and businesses are now rising and delinquencies and write-offs are at low levels.

As the headwinds continue to diminish, we now also have a tailwind in the form of lower oil prices. For an oil-importing country like the U.S., lower energy prices will be a net positive. No doubt, the drop in oil prices has led to reduced investment and dislocation in parts of the domestic energy and energy-related
sectors. This is already affecting growth, especially in certain regions of the country. But lower energy prices will eventually show up as a positive for consumer, business, and local government spending.

Despite the positives, as is always the case, not all sectors will contribute equally to growth. Residential construction is unlikely to come back strongly this year, but easing of mortgage credit conditions will help support continued moderate improvement in the housing sector.

I also expect net exports to be a drag on U.S. growth this year. The strength of the U.S. economy relative to that of many of our trading partners, as well as interest rate and inflation differentials, has contributed to about a 12 percent appreciation in the broad value of the dollar over the past year. While a stronger dollar means better terms of trade for U.S. consumers and businesses, which is a positive for a growing economy in the longer run, in the near term it can be a drag on U.S. export growth. Accommodative monetary policy actions have brightened the outlook for European economies, but growth and inflation are likely to remain low in the Eurozone for a while longer. Whether the drag from the trade sector will be larger or smaller than I’ve assumed is one of the risks to the forecast.

On balance, I expect that after a weak first quarter, U.S. economic growth will strengthen, averaging about 3 percent over the remainder of this year and next. This is somewhat above my estimate of 2.5 percent longer-run growth. The above-trend growth I am projecting will support continued improvement in labor markets, one of the factors that will figure into the FOMC’s assessment of the appropriate timing of liftoff.

Notwithstanding the slower job growth reported for March, the economy has seen significant improvement in labor market conditions. Over the past year, average monthly payroll job growth strengthened to about 260,000 jobs, and nonfarm payrolls are now about 2.8 million above their pre-recession peak. I certainly would have liked to have seen more than 126,000 jobs added in March. At the
same time, I believe it is premature to read anything about a significant new trend from this number. The FOMC has said that its policy is “data dependent.” But being “data dependent” does not mean reacting to every change in the data. Economic data can be volatile from one month to another. According to the Bureau of Labor Statistics (BLS), which publishes the employment report, the confidence interval for the monthly change in payroll employment is on the order of plus or minus 105,000. But we shouldn’t ignore monthly data reports either. My preference is to look at the broader trends in the data and at a number of indicators to get a better sense of developments.

These other labor market indicators suggest that the weakness in payroll jobs in March is likely temporary. Let me point out a few of these. According to the Job Openings and Labor Turnover Survey (JOLTS) published by the BLS, the rate of job openings is at a cyclical high, and both the hiring and separation rates are up substantially since the end of the recession, meaning that employers are looking to hire, and workers are confident enough to start looking for better jobs.

The unemployment rate is 5.5 percent, down sharply from its peak of 10 percent in 2009, more than a percentage point below its level last March, and near the range many economists view as its longer-run level. I continue to view the unemployment rate as a useful indicator of labor market conditions. Some people feel its sharp decline is overstating the improvement in labor markets because of the confounding effect of cyclical declines in labor force participation. However, research, including some by my staff at the Cleveland Fed, finds that a large part of the decline we have seen in labor force participation since 2007 reflects a longer-run structural trend driven by factors like changes in demographics.\(^1\) Moreover, there have been significant declines in the broader measures of the unemployment rate, such as those that

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include discouraged workers and those that include people working part-time who would prefer to work full-time, although these have not yet reached their pre-recession levels.

I expect progress to continue, and in my view, taken together, labor market indicators point to an economy that is nearing the Fed’s goal of full employment. Stronger labor markets have led to stronger growth in disposable income. While wage growth remains subdued, it typically lags improvement in labor market conditions. In fact, some analysis we’ve done at the Cleveland Fed shows that in the last three expansions, job gains in industries that pay above-average hourly earnings contributed more to total private-sector job gains as the expansions continued. After the Great Recession, it took some time for job gains to materialize. But our analysis indicates that at the national level, since the start of the expansion through 2014, for every job added in industries paying below-average hourly earnings, about 1.3 jobs have been added in industries paying above-average hourly earnings. As employment continues to grow, I anticipate that wages will accelerate and provide additional support for consumer spending.

I also anticipate that inflation will gradually return to the Fed’s 2 percent objective over time, and I continue to monitor inflation developments closely. The sharp decline in oil prices is showing up in much lower headline inflation numbers, and the appreciation of the dollar has put downward pressure on the prices of non-petroleum imports. I expect further declines in inflation in the near term, but those should prove transitory as oil prices stabilize. The FOMC has indicated that, in addition to further improvement in labor markets, a second factor in assessing the appropriate timing of policy liftoff will be reasonable confidence that inflation will move back to our 2 percent objective over the medium term. I am reasonably confident that inflation will gradually return to the Fed’s goal by late 2016 supported by above-trend economic growth.

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I base this view on a couple of factors. First, while there has been some pass-through of declines in oil prices and import prices to core measures of inflation that remove volatile food and energy prices, the pass-through has been relatively modest. Core PCE inflation is about 1.4 percent, but the Cleveland Fed’s median CPI measure has remained near 2.25 percent for the past year, and Cleveland staff research has found that this measure has some predictive power for headline inflation over the medium term.\(^3\) In addition, inflation expectations are an important factor in forecasting inflation, and in my view, inflation expectations remain well-anchored. The survey-based measures of inflation expectations of both consumers and professional forecasters have been fairly stable. These survey measures have historically done well at capturing longer-run trends in inflation and they have been shown to help in forecasting inflation.\(^4\)

I am not inclined to take much of a signal about inflation expectations from the recent movements in inflation compensation measured by the spread between yields on Treasury securities and Treasury inflation-protected securities, so-called TIPS. These market-based measures have been affected by flight-to-quality flows into Treasuries from abroad, and the recent changes in inflation compensation likely reflect liquidity effects and changes in inflation risk premiums more so than changes in inflation expectations. The fall in inflation compensation late last year also seems to be closely correlated with the drop in energy prices. Cleveland staff analysis has found that while typical moves in energy prices explain little of the variation in longer-term inflation expectations, the sharp drop in energy prices since last June can account for all of the decline in the Cleveland Fed’s expected inflation measure, which

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incorporates market data on inflation swaps and Treasury yields, as well as survey information from professional forecasters.\(^5\)

As I am sure the professional forecasters in this room know, forecasting inflation with any precision is very difficult. The confidence bands around the forecasts tend to be wide. For example, historical average projection errors across a range of private-sector and government forecasts indicate that the 70 percent confidence interval around a forecast of CPI inflation one year out is about plus or minus 1 percentage point. So when I say I am “reasonably confident” that inflation will return to target by late 2016, it is within that context – I am not requiring higher-than-normal precision around the forecast. I see quite a bit of difference between the situation in Europe, where inflation has been falling and growth has been weak, and the situation in the U.S., where an oil-price shock is driving down headline inflation rates and the economy has been strengthening. We have been climbing out of a very deep recession and have experienced a negative oil-price shock. In that environment, it does not surprise me that inflation has been slow to return to our 2 percent goal. So long as inflation expectations remain anchored and the economy remains on track to return to trend growth or above, as I expect it to, then I am comfortable with it taking some time for inflation to return to our 2 percent objective.

Of course, my projections for the economy are dependent on appropriate monetary policy. So let me turn to that now.

**Monetary Policy**

The financial crisis and the ensuing deep recession required an aggressive policy response. To support its goals of price stability and full employment, the FOMC has kept the federal funds rate at essentially zero

since the end of 2008. It pursued further policy accommodation by conducting large-scale asset-purchase programs to exert downward pressure on longer-term interest rates and by providing more explicit forward guidance on the anticipated future path of interest rates. This extraordinarily accommodative monetary policy has provided important support to the economy, helping to promote stronger labor markets and the pickup in growth that underlies my projection that inflation will gradually return to our goal over time.

Because monetary policy affects the economy with a lag, policy needs to be forward looking and rates will need to begin to move up from their very low level before we have fully reached our goals. With the fed funds rate at zero, even after the first rate increases, policy will remain very accommodative for some time to come and will continue to promote attainment of our goals. While financial market participants are particularly focused on the timing of the first rate increase, more important for macroeconomic performance is the expected path of policy beyond liftoff because expectations about the future path of policy can affect today’s economic decisions.

The FOMC’s March Summary of Economic Projections (SEP) indicates that most participants anticipate that it will be appropriate to begin raising rates sometime this year and that the path thereafter will be a gradual one. As shown in the SEP, there is some diversity of views about the appropriate path of policy. Such diversity should not be surprising. It does not reflect different views about our commitment to promote our dual mandate goals of price stability and full employment, but rather different views about realized and anticipated progress toward those goals and about the potential costs and benefits to changes in policy with respect to achieving those goals.

The economy has reached the point where these evaluations are not easy to make. But this situation should be celebrated because while it does mean policy decisions have become somewhat more
complicated, it also reflects the significant economic progress that has been made since the end of the recession.

I supported the changes the FOMC made in its communications in March, which made the June meeting and subsequent meetings viable options for liftoff. There has been cumulative improvement in the economy and our monetary policy stance and communications should reflect that. Over the next couple of months, incoming information on the economy – including the two monthly employment reports we will receive before we meet in June – will help us evaluate whether the softness in the first quarter is indeed transitory, as I currently anticipate, or whether it could be more enduring. If it turns out that the incoming information shows that growth is regaining momentum after the first-quarter slowdown and more broadly supports my forecast, I would be comfortable with liftoff relatively soon.

Let me explain my reasoning, which is based on my assessment that the potential returns to delaying action will soon be outweighed by the potential returns to beginning the normalization process.

First, although the Committee has been appropriately cautious, the improvement in underlying economic fundamentals consistent with my outlook indicates that the expansion would not be adversely affected by a gradual increase in the policy rate from zero. Liftoff means a reduction in the degree of extraordinary policy accommodation; it doesn’t mean tight policy. Headwinds are diminishing and above-trend growth is projected over the medium run. In this environment, the equilibrium real interest rate will be rising and the policy rate should rise with it.

Second, the FOMC has been communicating for some time that we anticipate it will be appropriate for policy normalization to take a gradual path. One benefit of the gradual approach is that it allows for a recalibration of policy over time as some of the uncertainties surrounding the equilibrium interest rate, potential growth rate, and longer-run unemployment rate in the post-crisis world are resolved. I would
like our policy actions to be consistent with our communications, and in my view, given the economic outlook, starting the normalization process relatively soon will help ensure that we can, indeed, take a gradual approach. A delay that’s too long might risk having to move rates up more steeply in order to promote attainment of our goals over time.

Third, although not an issue now, too long a delay could also eventually pose risks to financial stability. Holding short rates at zero too long might spur excessive leverage or encourage investors to take on risks they are ill-equipped to manage in a search for yield. The FOMC is carefully monitoring financial markets for any signs of adverse consequences of very low interest rates, and so far, there does not appear to be a threat to financial stability. However, we need to acknowledge that leading up to the financial crisis, some of the vulnerabilities of the financial system were not fully recognized by policymakers. And although we have made significant strides since then, there likely remain gaps in our ability to assess the risks in every part of the financial system. This is not an argument that we should use monetary policy as the main tool to address financial stability concerns. As I’ve said elsewhere, given the state of our knowledge, I would opt to use the macroprudential tools as the first line of defense, since they can be more targeted to the markets and institutions where the risks are emerging.\(^6\) However, I do think we should be cognizant of the linkages between nonconventional monetary policy and financial stability when we are making policy decisions.

**Data-Dependent Monetary Policymaking**

This is my current thinking on appropriate policy, but let me emphasize again that it is dependent on whether economic developments are consistent with my forecast. Let me finish my remarks with some thoughts about data-dependent monetary policymaking. As the FOMC has said, policy is not on a pre-set

path. Indeed, as I already mentioned, the SEP gives some information on the diversity of views among FOMC participants about the appropriate path of policy. But that diversity underestimates the degree of uncertainty about the future path because around each participant’s policy path, there is a confidence band, which reflects the fact that shocks will hit the economy and the policymaker will want to respond to some of those shocks.

In determining the appropriate timing for liftoff and the path thereafter, the FOMC will be assessing incoming information and evaluating how that information affects the economic outlook and progress toward our goals of maximum employment and price stability. If incoming economic information materially changes our outlook, we will adjust the funds rate up or down, as appropriate. Our policy path is not pre-determined because the future is not pre-determined.

But “data-dependent” does not mean “non-systematic.” Policymakers should strive to respond in a systematic fashion to incoming information because to the extent that households and businesses understand how policymakers are likely to react to economic developments – whether those developments are anticipated or unanticipated – their policy expectations will better align with those of policymakers. This alignment helps households and firms make better saving, borrowing, investment, and employment decisions, thereby making monetary policy more effective.

In the late 1980s and 1990s, the public had a pretty good sense of how the FOMC’s policy would respond to economic developments, the so-called reaction function. They were able to get a handle on the FOMC’s reaction function because after the great inflation of the 1970s, the FOMC became more predictable and systematic in how it reacted to changes in economic activity and inflation.\footnote{For a discussion, see John B. Taylor, “Monetary Policy During the Past 30 Years with Lessons for the Next 30 Years,” luncheon address at the Cato Institute’s 30th Annual Monetary Conference on Money, Markets and Government: The Next 30 Years, Washington DC, November 15, 2012.} Because the Great Recession required the Fed to behave in a way quite distinct from its past behavior, there is less
understanding about how policymakers are likely to react to incoming economic information than there was earlier.

As our economy returns to more normal territory and the Fed begins the process of normalizing policy, clear communications that enhance the public’s understanding of the rationale behind the FOMC’s policy decisions will have an important role to play. Stepping back from the explicit forward guidance the FOMC found necessary to use as part of its nonconventional policy tools and moving back to conveying a better sense of the FOMC’s policy reaction function should be viewed as a positive step. It is further evidence that our journey back to a more normal economic and policy-setting environment is well underway.