I would like to thank Ralph Crowley, both for his kind introduction and for his service as chair of the Boston Fed’s New England Advisory Council – a group that plays a valued role, providing us with perspectives on business conditions facing small and medium-sized companies around New England. Advisory councils like the one Ralph chairs provide information and perspectives that help us at the Fed interpret trends in the economic data.
I have been in your city a number of times in recent years, but the last time I gave a speech in Worcester specifically on the economic outlook, like today, it was at the Worcester Economic Club in May of 2009. The nation was really still in the midst of the financial crisis then, so it is wonderful to be speaking with you at a somewhat more favorable time.

We have had 11 consecutive quarters of positive growth in gross domestic product (GDP) since the economic recovery began, and the unemployment rate nationally has declined from a peak of 10 percent to 8.1 percent in April. However, the economic recovery and the improvement in the unemployment rate continue to be frustratingly slow. My outlook, unfortunately, is for growth right around its “potential” rate of between two and two-and-a-half percent – which implies no significant improvement in labor markets over the course of this year. Of course I would add that all the views I express today are my own, not necessarily those of my colleagues on the Board of Governors or the Federal Open Market Committee (the FOMC).

And even this modest pace of growth is contingent on some fairly significant assumptions – that Europe will be able to muddle through its current problems, and that in the United States the government will be able to reach agreements to avoid a so-called “fiscal cliff” looming at the end of this year. Under current law, at the end of 2012 certain factors – including the expiration of unemployment benefits and the payroll tax cut, revisions to the Alternative Minimum Tax, the expiration of the so-called “Bush tax cuts,” and sequestration (automatic spending cuts) associated with the Budget Control Act of 2011 – would together restrain growth by a significant fraction of GDP.¹
Recent Economic Data

I would note that there has been some positive news contained in recent economic data. Figure 1 shows the improvements in two components of real GDP that are linked to households. Consumption grew 2.9 percent in the first quarter of this year, a rate that is faster than the previous three quarters and faster than the 2.2 percent growth of the overall economy. Similarly, residential investment grew 19.1 percent in the first quarter of this year, faster than the previous three quarters – and obviously well above the rate of growth in the overall economy.2

Thinking optimistically, the improvement in residential investment may finally be signaling that the housing sector will not continue to be a source of significant restraint on economic growth. However, my enthusiasm for a housing recovery is still moderated – by the evidence of challenges in obtaining housing finance, by the number of borrowers who owe more than their house is worth, and by the still very elevated level of home foreclosures.

Indeed, as Figure 2 shows, housing prices across the country are moving together, and are likely being restrained by similar headwinds, rather than principally reflecting regional trends. I would expect that as the housing sector improves along with the national economy, regional differences would become prevalent and we would see a weaker correlation of housing prices across different regions of the country than we see to the far right in Figure 2.

And while some sectors of the economy are improving, some significant headwinds remain. Figure 3 shows two of them. Government spending has been declining,3 which regardless of your political views means, in the short term, less
aggregate demand and less growth in the economy. And without further action by Congress to avoid the “fiscal cliff” that I mentioned earlier, national fiscal policy has the potential to be a much bigger headwind to faster growth in the coming year.

Business investment has also been slowing. While business investment was a source of strength in the early stages of the recovery, companies have slowed investment spending more recently. To the extent that concerns over a possible worsening of future European economic problems and a possible U.S. fiscal contraction make U.S. businesses more tentative, these worries about the future can impede a more rapid recovery now.

This is a particularly difficult time to forecast the economy, given that significant political decisions can influence economic actions. To highlight why we should be humble about our forecasting abilities, we need only look at the size of revisions to the GDP numbers shown in Figure 4. The chart highlights the significant uncertainty associated with measures of recent economic growth. The blue dashed line plots the advance estimates of real GDP growth. The data are revised in subsequent months as more information becomes available, for example additional data on foreign trade and inventories. However, even those estimates can be significantly revised – see the red, green, and blue marks on the chart – once tax data and other information become available to the U.S. Bureau of Economic Analysis. As the chart shows, it is not uncommon for the revised data to differ from the preliminary estimates of GDP by as much as a percentage point.

Given the difficulty in measuring even the recent past, it should not be too surprising that estimates of the future are even more problematic. For example, economic forecasters need to make assumptions about the fiscal measures likely to be
taken by European countries, some of which are facing elections with quite stark policy choices represented by the candidates on the ballot. And forecasters need to make assumptions about fiscal policy in the United States, even though it goes without saying that political choices made up and down the ballot by the U.S. electorate in the fall could lead to quite different policies.

Since economists have no particular expertise in forecasting political results, they make estimates based on modeling likely outcomes – which often assume only modest divergence from the recent past. Despite the uncertainty inherent in them, these economic forecasts are an important aspect of how monetary policy is set.

At the Fed, we are now producing and publicly disclosing the estimates of real GDP growth, unemployment, and PCE\(^4\) inflation rates produced by the FOMC participants\(^5\) in a Summary of Economic Projections. The central tendency\(^6\) of the FOMC participants’ estimated forecasts, and my own current forecast, are provided in Figure 5.

You can see that my own forecasts are a little more pessimistic than the central tendency of the participants at the April FOMC meeting. I am expecting growth of only 2.3 percent for the full year, I’m sorry to say; and unfortunately no improvement in the current U.S. unemployment rate of 8.1 percent. As you can see, I also expect both total PCE inflation and core PCE inflation to be below 2 percent for 2012. My forecast of relative weakness in the economy reflects concern that the uncertainty about both Europe and the U.S. federal “fiscal cliff” will restrain spending by households and businesses – but it also assumes that Europe and our own fiscal situation achieve a “muddling through.”
I would, however, highlight the uncertainty and downside risks to my forecast. One downside risk is that European problems could become a much greater restraint on growth this year. Another downside risk is that Middle East problems could cause an oil supply shock that negatively affects economic growth. And another is that much greater fiscal austerity could result from a potential failure to reach budget agreements.

Given my expectations of only modest growth, no improvement in the unemployment rate, an inflation forecast below 2 percent, and significant downside risks to the forecast, I believe monetary policy should remain accommodative at this time and indeed that we should be looking for ways that monetary policy can foster more rapid growth, to bring down the unemployment rate more quickly. I believe further monetary policy accommodation is both appropriate and necessary. The U.S., like many other countries, needs to facilitate a more rapid recovery, and monetary policy is one important tool with the potential still for encouraging faster growth.

**Labor Markets**

Now I’d like to focus in on labor markets. I remain especially concerned about the ongoing weakness there. While most observers are concerned about labor market conditions, views differ on why unemployment remains so persistently and painfully high. Some believe there are structural reasons like shortages of specific skills, or labor shortages in specific geographic regions. If this argument were true, then the more stimulative monetary policy I am proposing might not be wise.

But I will present some analysis today that argues that most of the problem is in a lack of aggregate demand – in the parlance of economists, it is cyclical more than
structural. This is not to dismiss entirely some structural components of the current high unemployment rate. Certainly there are situations where the skills of people who had lost jobs were not well aligned with the skill sets needed in some sectors that are hiring, such as advanced manufacturing and health care. But I believe the evidence shows the bulk of the problem is cyclical. Furthermore, my desire to stimulate more growth now is partly to prevent the structural problem from becoming more severe because the economy did not re-employ workers more quickly.

Figure 6 highlights that all census regions experienced a significant decline in employment during the recent recession, and also that there is surprisingly little regional variation during this modest recovery. The lines move together at the extreme right of the chart, versus the earlier periods depicted on the rest of the chart. While recessions tend to impact all regions of the country simultaneously, recoveries are normally more varied across regions. Differences in industrial composition and idiosyncratic variation cause regions to diverge as the recovery progresses.

One reason for the current similarity across regions is that two weak sectors, state and local government spending and residential investment, remain much weaker than is usual for this stage of a recovery, and have been impacting all regions of the country. The similarity across regions also highlights that inadequate demand – rather than regional employment shortages in faster growing areas – is driving employment patterns.

Figure 7 further illustrates this point. Nationally, the unemployment rate is 8.1 percent, well above the unemployment rate in December 2007 before the onset of the recession. In fact, all census regions have much higher unemployment rates than they did before the onset of the recession, and no region today has an unemployment rate that I
would see as consistent with full employment. Again, the state of affairs we see today is not consistent with serious bottlenecks created by rapid growth in certain regions preventing further progress in labor markets.

Figure 8 illustrates in rather stark terms how unusual this recovery has been. In the previous three recoveries the previous peak in employment was reached within two years of the start of the recovery. In the current recovery, which has already exceeded two years in length, employment still remains more than 3 percent lower than the peak prior to the recession. This is partly because the recovery has been slow, and partly because the employment decline was so large.

Figure 9 shows the current recovery and also shows employment when the construction and government sectors are excluded (the dashed lines). These two sectors have been unusually weak in this recovery – but even when these sectors are excluded, employment is nowhere close to its previous peak. This highlights that employment weakness is not tied just to problems in specific sectors of the economy.

Figure 10 shows employment growth across industries. This recession was unusual in how pervasive the decline was across industries, reflecting a very sharp drop in overall demand as businesses significantly retrenched, given the severity of the downturn. Moreover, during the recovery the pattern has been similar across industries – with a modest pickup in employment across industries but no industry standing out as having comparably rapid growth. Again this seems more reflective of inadequate demand rather than structural impediments to growth, such as major industries being unable to find sufficient workers.
And if firms were having difficulty hiring, one would expect to see wages and salaries rising in their industries. Figure 11 highlights that wages and salaries have been growing only slowly, and in most industries it is below two percent – consistent with weak labor demand in general. The tight bunching of wage and salary growth at low levels in the recent period shown to the right of the chart does not give evidence that certain industries are bidding up wages and salaries because of difficulty finding workers.

These employment and wage patterns are consistent with a very modest recovery in most industries and most regions of the country. Growth has been only modest nationally, and I believe we need substantially more growth if we want to achieve full employment within a reasonable period of time.

Concluding Observations

The economy continues to recover, albeit at only a modest pace. I do not expect growth to pick up significantly, and therein do not expect marked improvement in the very weak labor markets.

The Federal Reserve is charged by Congress with what is known as our “dual mandate” – using monetary policy to achieve price stability and maximum sustainable employment over a reasonable horizon. The unemployment rate is well above what I expect it to be over the long run, and it is expected to remain uncomfortably high for what I consider far too long. And PCE inflation is likely to be below 2 percent this year and for some time to come.

Given the poor current conditions and my forecast for continued weakness – and the evidence that suggests the problem is one of aggregate demand rather than structural
unemployment – I believe monetary policy needs to be more stimulative if we hope to meet both elements of the dual mandate in a reasonable time frame. And should some of the downside risks that I have emphasized materialize, such as a significant disruption from abroad, more aggressive actions would certainly be warranted.

I thank you again for inviting me to discuss the economy, and policy, with you.

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NOTES:

1 The nonpartisan Congressional Budget Office on May 22 released a study on the “Economic Effects of Reducing the Fiscal Restraint That Is Scheduled to Occur in 2013.” The CBO noted “Under those fiscal conditions, which will occur under current law, growth in real (inflation-adjusted) GDP in calendar year 2013 will be just 0.5 percent, CBO expects—with the economy projected to contract at an annual rate of 1.3 percent in the first half of the year and expand at an annual rate of 2.3 percent in the second half. Given the pattern of past recessions as identified by the National Bureau of Economic Research, such a contraction in output in the first half of 2013 would probably be judged to be a recession.” [see http://www.cbo.gov/publication/43262]

2 Some suggest temporary factors like an unusually mild winter may have boosted Q1 residential investment to that degree.

3 On a real basis.

4 PCE stands for “personal consumption expenditures.” PCE inflation and core PCE inflation are the percentage rates of change in, respectively, the price index for personal consumption expenditures and the price index for PCE excluding food and energy.

5 The Federal Open Market Committee or FOMC is the committee that sets monetary policy for the U.S. FOMC participants include Federal Reserve Board members and regional Federal Reserve Bank presidents. Although Reserve Bank presidents vote on the FOMC on a rotating basis, the projections include all presidents’ input, not just those of current voting members. For more information see http://www.federalreserve.gov/monetarypolicy/fomc_projectionsfaqs.htm

6 The central tendency excludes the three highest and three lowest projections for each variable.
Figure 1
Growth in Real GDP Components: Consumption and Residential Investment

2011:Q2 - 2012:Q1

Source: Bureau of Economic Analysis / Haver Analytics
Figure 2
Growth in Real House Prices by Census Region*

1984:Q1 - 2012:Q1

* The 9 census regions are: New England (NE), Middle Atlantic (MA), East North Central (ENC), West North Central (WNC), South Atlantic (SA), East South Central (ESC), West South Central (WSC), Mountain (M) and Pacific (P).

Source: Federal Housing Finance Agency / Haver Analytics
Figure 3
Growth in Real GDP Components: Government Spending and Business Investment

2011:Q2 - 2012:Q1

Source: Bureau of Economic Analysis / Haver Analytics
Figure 4
Estimates of Real GDP Growth

2010:Q1 - 2012:Q1

Percent Change at Annual Rate

Source: Bureau of Economic Analysis
### Figure 5
Economic Projections of FOMC Participants and the Federal Reserve Bank of Boston, April 2012

<table>
<thead>
<tr>
<th>Variable</th>
<th>FOMC Central Tendency (Percent)</th>
<th>Federal Reserve Bank of Boston (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unemployment Rate (2012:Q4)</td>
<td>7.8 to 8.0</td>
<td>8.1</td>
</tr>
<tr>
<td>Real GDP Growth (2011:Q4 – 2012:Q4)</td>
<td>2.4 to 2.9</td>
<td>2.3</td>
</tr>
<tr>
<td>PCE Inflation (2011:Q4 – 2012:Q4)</td>
<td>1.9 to 2.0</td>
<td>1.7</td>
</tr>
<tr>
<td>Core PCE Inflation (2011:Q4 – 2012:Q4)</td>
<td>1.8 to 2.0</td>
<td>1.7</td>
</tr>
</tbody>
</table>

Note: The central tendency excludes the three highest and three lowest projections for each variable.

Source: Federal Reserve Board, Federal Reserve Bank of Boston
Figure 6
Employment Growth by Census Region*

1980:Q1 - 2012:Q1

Percent Change from Year Earlier

* The 9 census regions are: New England (NE), Middle Atlantic (MA), East North Central (ENC), West North Central (WNC), South Atlantic (SA), East South Central (ESC), West South Central (WSC), Mountain (M) and Pacific (P).

Source: Bureau of Labor Statistics / Haver Analytics
Figure 7
Unemployment Rate by Census Region
December 2007 and April 2012

Source: Bureau of Labor Statistics / Haver Analytics
Figure 8
Employment Change from Peak Employment
Most Recent and Three Previous Peaks

Source: Bureau of Labor Statistics / Haver Analytics
Figure 9

Employment Change from Peak Employment: Total and Total Excluding Construction and Government

Most Recent Peak

Percent Change from Peak Employment

Note: Both series use peak and trough of total employment series.
Figure 10
Employment Growth by Industry
1980:Q1 - 2012:Q1

Percent Change from Year Earlier

Source: Bureau of Labor Statistics / Haver Analytics
Figure 11
Employment Cost Index for Wages and Salaries by Industry
2002:Q1 - 2012:Q1

Percent Change from Year Earlier

Source: Bureau of Labor Statistics / Haver Analytics