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U.S. UNEMPLOYMENT IN THE AFTERMATH OF THE GREAT RECESSION

HIGHLIGHTS

- **The Great Recession wreaked havoc on the U.S. labor market, cutting close to 8.4 million jobs from U.S. payrolls**
- **The length of the recession has led millions of formerly employed workers to give up the job search altogether**
- **The housing crisis has also done damage to the job market. Negative equity in household real estate has limited labor mobility and tied job searchers to regions with elevated unemployment rates**
- **Changes in the composition of U.S. output have also left workers in need of re-training before gaining employment**
- **Economic recovery has led to job growth, but digging out from the recession is likely to be a slow process**
- **The unemployment rate is likely to remain at or near its current level over the next year and a half, and move down slowly in 2012**

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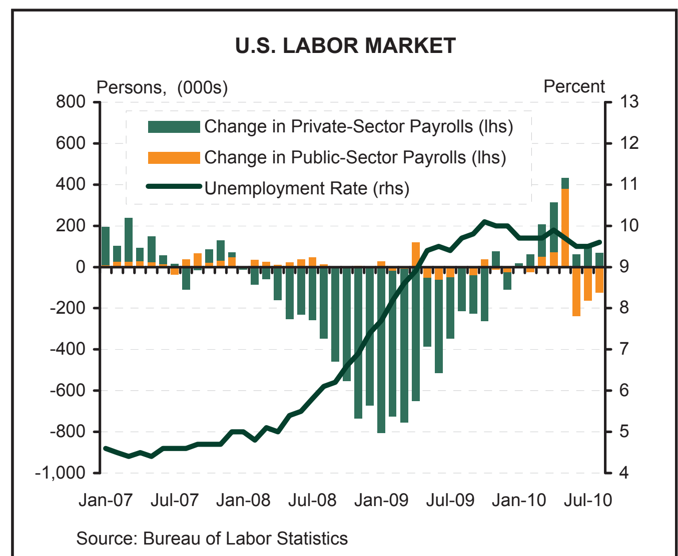
Nothing brings home the severity of the Great Recession quite like conditions in the U.S. labor market. The recession ravaged payrolls, cutting close to 8.4 million jobs and erasing over a decade of job growth. While employment reached a nadir in December 2009, at just over 700,000 net jobs created, we're still 7.7 million short of where we were just two years ago.

In a recession characterized by private-sector deleveraging and balance sheet repair, income and job growth are fundamental to sustaining the economic recovery. Nonetheless, the U.S. labor market is beset by structural problems imposed on it by the Great Recession. The record length of the recession has led the amount of time people have remained unemployed to rise to a record high. As of August, over 6.2 million workers and over 42% of the unemployed have been out of work for more than 27 weeks. Individuals unemployed this long must deal with the possibility that their skills have atrophied over this period. Moreover, the difficulty in finding work has led a record number of workers to leave the workforce altogether, implying that there are many more unemployed than are captured in the official unemployment rate statistic. Many of these unemployed workers won't easily be absorbed back into the job market as changes in the composition of U.S. output have displaced workers who now find their skills mismatched with current labor demand as well as the sources of future employment growth.



Source: Bureau of Labor Statistics

The fallout from the housing market crash has also left an indelible mark on the labor market. The over 30% drop in home prices across the country has meant that over 20% of households (or roughly 11 million homeowners) owe more on their mortgages than the value of their homes. Combined with the dramatic disparity in housing market conditions across the country, this has made it difficult for job seekers to move in response to job opportunities, and has weakened the usual flexibility of the labor market.

One of the key themes that we have focused on in our economic forecasts is the considerable amount of time it will take to heal the U.S. economy. One important element of this prolonged recovery is the extended period of labor market adjustment. The difficulty in matching workers with employers will persist due to

a slow improvement in the housing market and the need for workers to readjust their skills to a changed economy. While economic growth is expected to remain positive, the pace of growth over the next year and a half is not likely to be sufficient to meaningfully improve the unemployment rate from its currently elevated level. Moreover, even as growth picks up, discouraged workers will begin to re-enter the workforce, putting upward pressure on labor force growth and slowing improvement in the unemployment rate.

All told, the combination of discouraged workers returning to the labor force, a slow improvement in aggregate demand, and an increase in skills mismatch are likely to cause the unemployment rate to remain above 9% for the next two and a half years. This marks a significant departure from past business cycles. The increase in skills mismatch is of particular concern for policymakers as it implies a higher structural unemployment rate, which could force them to deal with inflationary challenges sooner than they had anticipated.

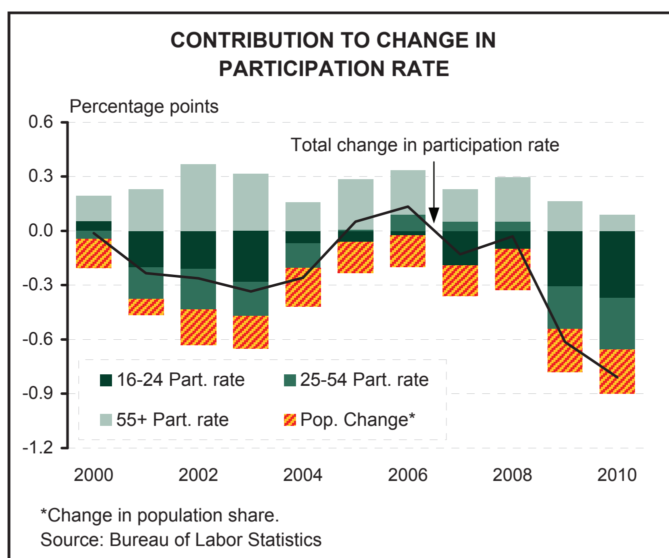
Whither the participation rate?

The positive job growth seen over the course of 2010 is a welcome development, but must be placed in context. In order to bring down the rate of unemployment from its current level of 9.6%, the increase in jobs must be greater than the increase in entrants to the labor force. In normal times the labor force expands by around 120,000 persons a month, due primarily to growth in the adult population. However, labor force growth is also impacted by changes in the labor force participation rate – the number of people employed or actively seeking work divided by the total adult population.

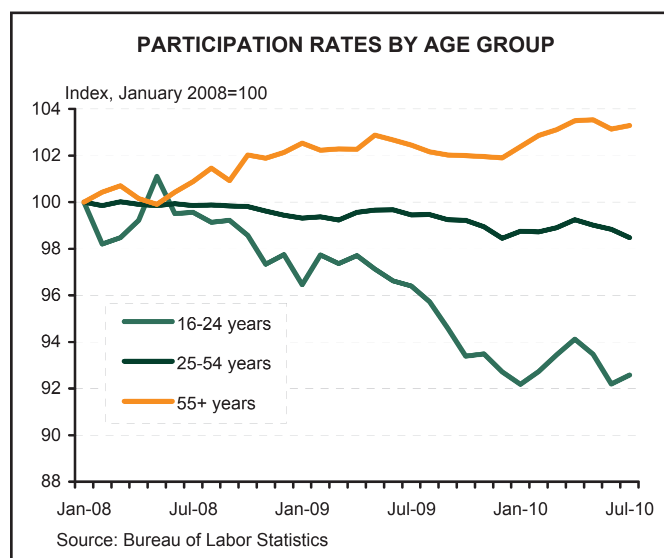
Changes in the aggregate labor force participation rate are driven by cyclical factors – changes in labor force attachment among various segments of the population, and structural factors – changes in the age structure of the population. Since the late 1990s, population aging has exerted a strong negative influence on the aggregate participation rate. From its peak of 67.3% in January 2000, the aggregate participation rate fell by 1.3 percentage points to 66.0% in December 2007. On net, this decline was due entirely to the change in the age structure of the population. While the participation rates for 16-to-24-year-olds and the prime working-age population (aged 25-54) also fell over this period, these declines were offset by increasing participation rates among those aged 55 and above.

Since the start of the recession in January 2008 to August of this year, the participation rate has declined by another 1.3 percentage points. However, instead of being driven by population aging, this decline has been predominantly due to discouraged workers leaving the labor force. The reduction in labor force participation has been particularly acute for young people. For persons aged 16-19, the participation rate has fallen by 6 percentage points since the start of the recession, while for the 20-24 age group the participation rate has fallen by 3 percentage points. In contrast, the participation rate for those aged 55 and above has continued to increase, rising by 1.4 percentage points since the recession's start.

The concentration of the decline among younger people suggests that the participation rate will eventually reverse course, putting upward pressure on labor force growth and therefore the unemployment rate. What is not clear is how quickly this will occur. For teenagers (aged 16-19), the participation rate has been steadily declining since the early



*Change in population share.
Source: Bureau of Labor Statistics



Source: Bureau of Labor Statistics

1980s as school enrollment has risen and the number of students working part time has fallen. There is little reason to expect the participation rate for this group to rebound strongly, but a stabilization once job growth picks up is likely.

For the early 20s age group, the participation rate has been in a slow decline since the early 1990s, also due to increased school enrollment. The "dot com" boom of the late 1990s lent itself to an improvement in the participation rate among this age group, but the subsequent bust and 2001 recession hastened a decline that continued through the "jobless recovery" of 2002 and 2003. The participation rate among 20-24 year-olds stabilized around 74% and remained relatively flat between 2004 and 2009. The decline to 71.5% occurred in relatively short order through the second half of 2009, and was driven predominantly by a decline in male participation. This appears to be precisely the discouraged worker phenomenon that will begin to reverse course once job growth improves.

Going forward, the unemployment rate will be extremely sensitive to movements in the participation rate. While the secular story of population aging will continue to put downward pressure on the aggregate participation rate, this is likely to be offset by an improvement in participation among young people and prime working-age adults, and a continued increase in participation of those above the age of 55.

From their current levels, a move back to pre-recession participation rates would add close to 2 million people to the U.S. labor force. If this rebound occurs within the same two year period in which it declined, it will imply an additional 80,000 workers per month re-entering the U.S. labor force (on top of the 120,000 added purely through population growth). We expect to see a more modest rebound in the aggregate participation rate, which will imply labor force growth of 135,000 per month in 2011, improving to 160,000 per month in 2012. With a view on labor force growth, the other side of the equation in determining the unemployment rate is the future path of job growth.

Getting back to business…slowly

So, what are the prospects for job growth over the next two and a half years? Answering this question requires a consideration of both demand and supply-side factors. Let's consider first the factors influencing the demand for additional workers. A precursor to sustained job growth is an expanding economy. However, even with economic growth, jobs can continue to be shed. Indeed, an average of 175,000 workers per month were dropped from U.S. payrolls in the second half of 2009, even while real GDP was expanding.

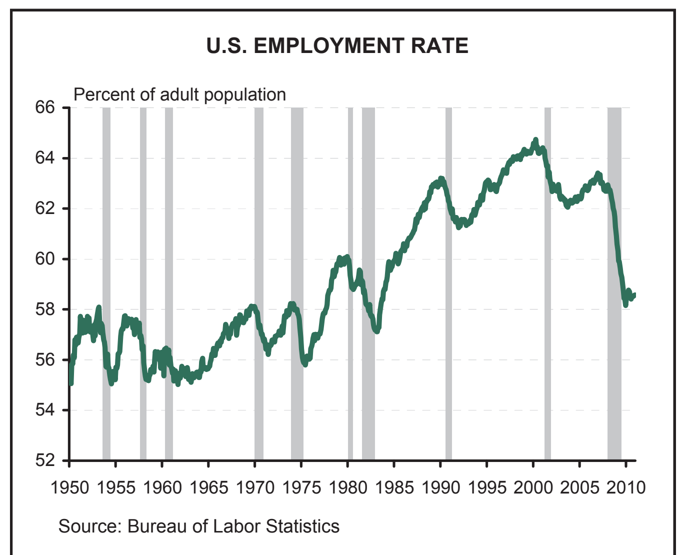
The discrepancy between economic growth and job growth is explained by rising labor productivity. Labor productivity in the non-farm business sector grew by a whopping 6.5% (annualized) over this period. As a result of robust productivity gains, corporate profits have made a strong rebound, and, as of the second quarter of 2010 have regained nearly all of the ground lost during the recession.

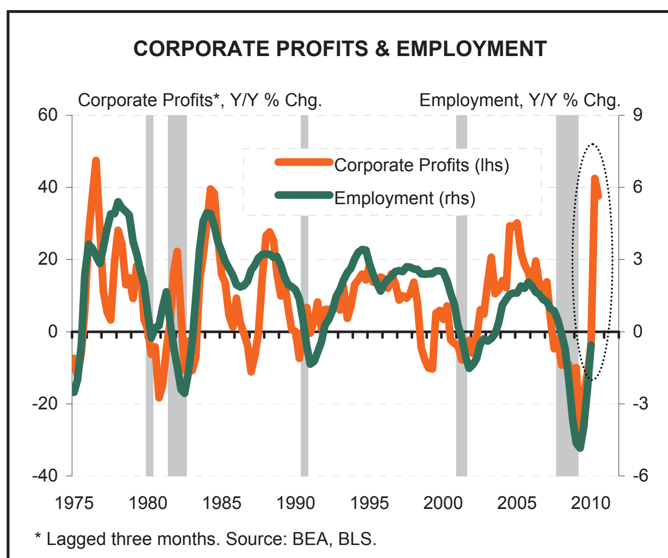
Historically, strong rebounds in corporate profits, facilitated by gains in productivity, have led to strong rebounds in hiring. However, in the aftermath of the Great Recession, several factors have conspired to slow the demand for additional workers. For one, in addition to the loss in jobs,

The Employment Rate

An alternative way to look at the impact of the recession on the amount of slack in the labor market is to consider the employment rate. The term, "employment rate" suggests that it is simply the inverse of the unemployment rate, but instead of being measured as a share of the labor force, the employment rate captures the number of employed as a share of the total adult population.

In December 2009, the employment rate reached its lowest level in close to thirty years at 58.2%. With the positive job growth that has taken place in 2010, the employment rate has improved ever so slightly to 58.5%. Nonetheless, even with no growth in the adult population from its current level, a return of the employment rate to its pre-recession level of 62.9% would require the creation of over 10 million jobs.





* Lagged three months. Source: BEA, BLS.

the recession also led to a 2.9% decline in the average work week, which reached a nadir in October 2009. While the work week has been trending up since then, as of August it was still 1.4% below its pre-recession level, leaving room for businesses to expand the hours of existing employees before greater pressure builds on the hiring front.

Another reason for the cautious pace of hiring among the nation's businesses is the heightened level of uncertainty that has followed in the wake of the financial crisis. In addition to uncertainty about the pace of future demand, changes to the regulatory and legislative environment have made businesses understandably cautious about expanding their workforces.

Finally, while credit conditions have improved over the course of 2010, conditions for small and medium-sized businesses remain tight relative to the pre-recession period. It will take time for this loosening to filter through to the small and medium-sized businesses that are key engines of job growth.

Importantly, momentum has shifted in favor of a gradual improvement in each of these factors. Assuming the recent trend in average hours worked is maintained over the remainder of this year, the pre-recession level of 34.7 hours a week will be reached by early 2011. Political uncertainty will remain an issue, but with both health care and financial regulatory reform through the legislative process, businesses can begin to prepare for the ramifications of each. Finally, the positive cycle that appears to be underway in terms of credit conditions should become self-reinforcing. As easier credit conditions filter through to businesses, it will promote a continual improvement in hiring prospects.

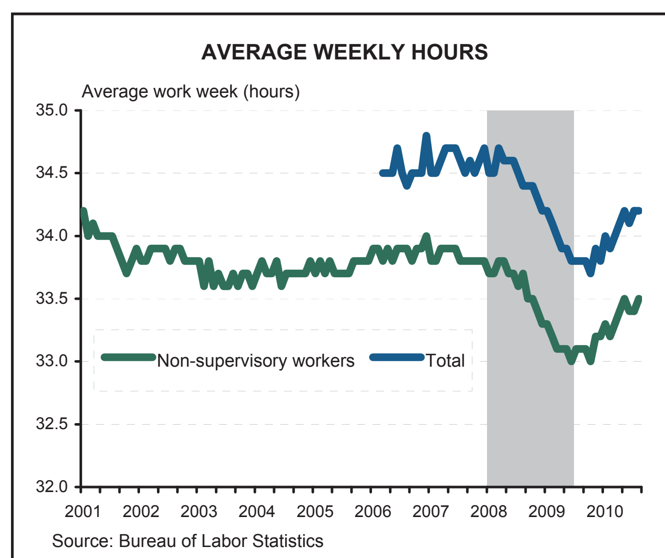
Finding the right workers for the jobs

Even while demand for workers is showing signs of improving, this is no guarantee that the unemployed are in the same place as the jobs, or have the skills necessary to take on the jobs available.

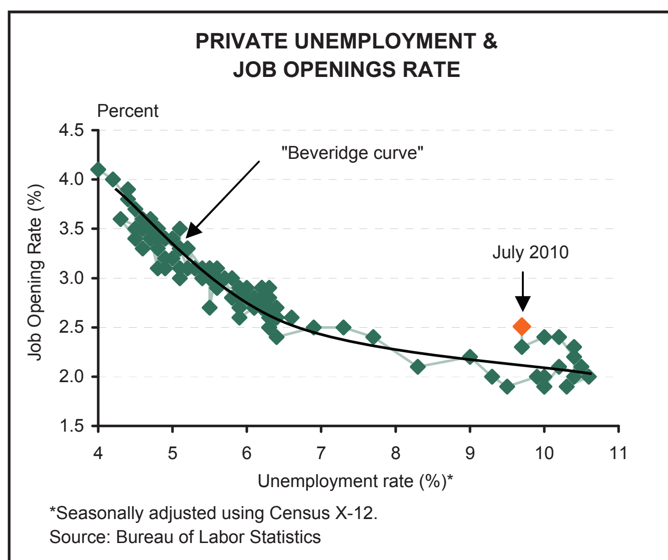
One key measure of the ability of would-be employers to match with would-be employees is the relationship between job openings and the level of unemployment. When the labor market is functioning well there is a fairly stable negative relationship between these two variables: A high rate of job openings relative to total employment is consistent with a low unemployment rate and an increase in job openings is associated with a decline in the unemployment rate (see charts below). Economists have termed this relationship the "Beveridge curve" after the British economist who first pointed out the relationship.

In general, recessions do not fundamentally alter this relationship, they just result in a move along the curve: as the unemployment rate rises, the job openings rate falls. However, this recession appears to have altered this relationship. In July of this year the private job openings rate rose to 2.51%. Based on the historical relationship between job openings and unemployment, we should have seen an unemployment rate in the 6% to 7% range rather than the actual 9.5% observed. The shift in the relationship between the unemployment rate and the job openings rate suggests that while employers are looking for workers, they are having a harder time finding the right ones for the job.

This mismatch between employers and job-searchers is due to a number of factors. It is caused in part by conditions in the housing market. The over 30% drop in home



Source: Bureau of Labor Statistics



*Seasonally adjusted using Census X-12.
Source: Bureau of Labor Statistics

prices across the country has left a significant number of households (roughly a quarter across the United States as a whole) owing more on their mortgage than the value of their homes. In some states, such as Nevada, the percentage of households underwater on their mortgages is as high as 68%. For these households, the ability to move in response to job opportunities is impaired, contributing to some of the mismatch observed between openings and unemployment.

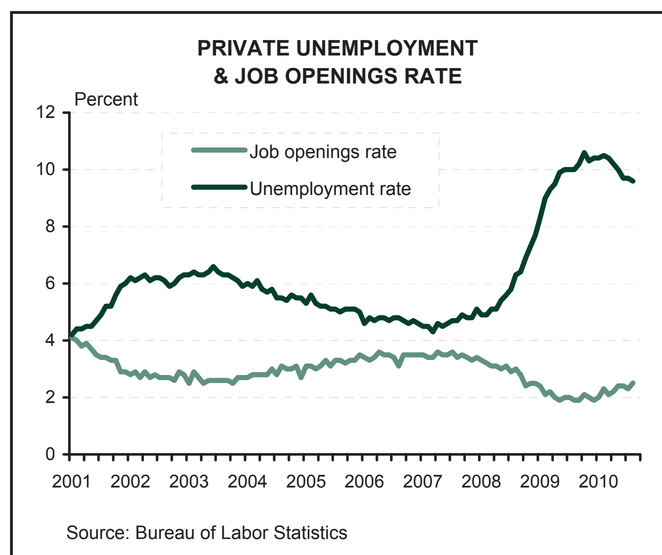
A second factor that has likely led to an increase in mismatch is the change in the composition of job growth prior to the recession and through the recovery. Between 2003 and 2007, construction sector employment grew at almost twice the pace of overall employment. In contrast, since December 2009, construction is one of the few sectors to continue to shed jobs. Job growth through the recovery has instead been led by education and health services. Laid-off construction workers may have difficulty training for health care positions, although that is where the demand is. At a minimum, acquiring this training is not a process that can be accomplished over night.

The impact of skills mismatch on the unemployment rate during this recession is also evident in the widening gap between unemployment rates of workers with different levels of educational attainment. While unemployment has always been worse for lower-educated workers, prior to the recession the gap between the unemployment rate of workers with a bachelor's degree and those without one was relatively steady at between 2.0 and 3.0 percentage points. This spread increased dramatically during the Great Recession. Currently the unemployment rate for workers without a bachelor's degree sits at 10.1%, 5.5 percentage points above the 4.6% rate for those with a bachelor's degree or higher, and 1.5 percentage points higher than the gap reached during the depth of the 1990s recession (the earliest for which data is available). Given a decline in labor force participation that has been more acute for lower-educated workers, the gap in employment outcomes is even wider than these two numbers suggest.

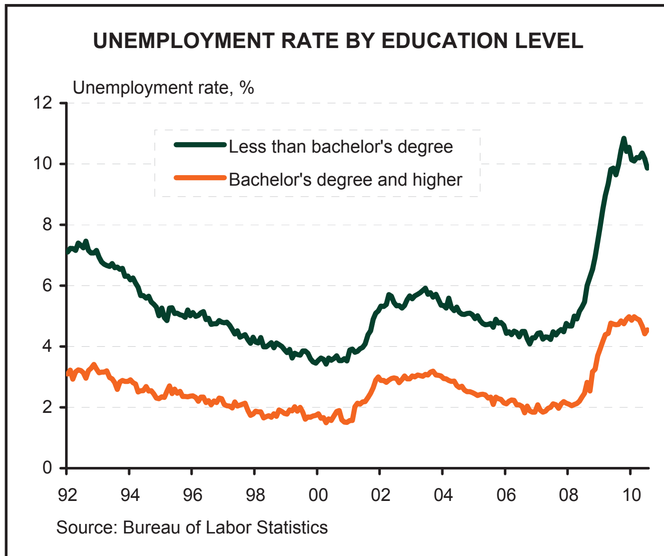
A study by researchers at the IMF looking at the impact of both housing and skills-mismatch suggests that as a result of conditions in the U.S. housing market and structural change in the composition of U.S. output, the structural rate of unemployment in the U.S. has likely increased by as much as 1.25 percentage points.[1] In other words, even as the unemployment rate declines, it will likely not return to the 4.5% to 5.0% range of the past five years, but rather to something noticeably higher.

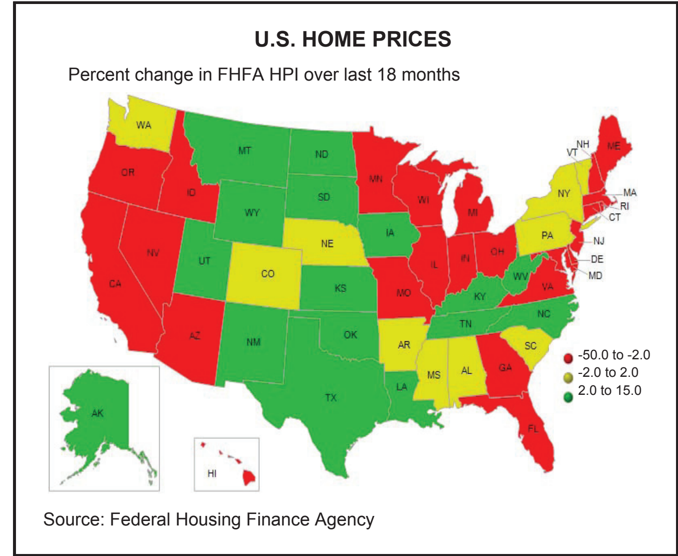
Putting it all together

Adding all the pieces up – slow re-entry of discouraged workers into the labor force, a gradual improvement in labor demand, and constraints on matching demand with supply – what does all this imply for the unemployment rate over the next several years? First, let's consider job growth. Economic growth in the second half of 2010 is likely to slow to an average of 1.8%, down from 2.7% in the first half of the year. This slowdown will also lead to a slowing in the pace of private-sector job growth. From the 83,000 jobs per month created in the first half of the year, private sector job creation is likely to slow to around 70,000 per month. Overall employment growth, however, will likely be even slower as the shedding of the final temporary Census workers and ongoing lay-offs of state and local employees continues to



Source: Bureau of Labor Statistics





subtract from the total. As a result of this slowdown, we expect the unemployment rate to edge up to 9.7% by year end from its current rate of 9.6%.

In 2011 economic growth is expected to improve modestly to 2.1% (on a fourth-quarter to fourth-quarter basis). In combination with modest gains in average hours this should lead job growth to rise by 145,000 per month over the balance of the year. Assuming a stabilization in the participation rate, growth in jobs will just keep pace with labor force growth, resulting in an unemployment rate that is likely to end the year at the same level that it started – that is 9.7%.

Finally in 2012, with economic growth of 2.9% and job growth above 200,000 jobs a month, the unemployment rate will begin to drift slowly downward. However, at this stage, formerly discouraged workers should be expected to begin re-entering the labor force in greater numbers, and slow the speed of improvement. While the unemployment rate should close the year near 9.0%, without a substantial upside surprise to GDP growth the unemployment rate will remain well above its pre-recession level.

What about after 2012? In all likelihood, economic growth will continue to improve and the unemployment rate will move down further. However, a return to the 5.0% unemployment rate of the pre-recession days will depend on how the mismatches that currently exist between employers and those searching for jobs work themselves out. In terms of the impact of negative equity, this could prove to be a relatively long-lived phenomenon. While home prices are likely to stabilize over the next year, price appreciation is unlikely to compare to the extraordinary pace of the boom years. Assuming a return to 5.0% growth by 2012 – a rate that would keep constant the ratio of home prices to nominal income – home prices as measured by the S&P Case-Shiller home price index would not reach their peak level until 2017.

Discrepancies in the skills of the working age population relative to those demanded will also take time to be corrected. Given the pressures of globalization, the sources of job growth are likely to move increasingly in favor of high-value-added services employment. Keeping up with these demands will require ongoing investments in education.

The bottom line is that the U.S. unemployment rate is not likely to return to its pre-recession level over the foreseeable future. A heightened unemployment rate over the next two years will keep the pressure on policymakers to support the recovery. At the same time, increased impediments to job searchers matching with employers imply that the structural unemployment rate is likely higher than it was before the recession, by probably 1 to 2 percentage points. While a slow improvement in aggregate demand relative to supply is likely to keep a lid on inflation over the next two years, a higher structural unemployment rate means that as unemployment begins to trend down, inflationary pressures will arise faster than they would otherwise. Wage pressures for high-skilled jobs in particular are likely to build more rapidly than those in other sectors of the economy.

Underneath this macro picture is a story of increasing disparity between those that have the skills necessary to thrive in the post-recession U.S. economy and those that do not. In addition to supporting the near-term economic recovery, policymakers will have to turn their attention to education and re-training in order to ensure that individuals are not left behind as the economy moves forward.

Endnotes

1 Estevao, Marcello and Evridiki Tsounta. "Is U.S. Structural Unemployment on the Rise?" IMF Working Paper. July 2010.

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