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The Links Between the Financial Crisis and Jobs

Introduction

I wanted to start with an opening joke of the form, "What is the difference between an actuary and an economist?" So I trolled the Web for funny descriptions of actuaries. I came across some gems like:

> (1) "An actuary is someone with a prolific ability to produce an infinite variety of incomprehensible figures calculated with micrometric precision from the vaguest of assumptions based on debatable evidence from inconclusive data for the sole purpose of confusing an already befuddled group of persons who never read the statistics anyway." And, (2) "An actuary is flexible: he or she is either right, or can prove it to be so."

After a while, I realized there is not much difference between an actuary and an economist, so I will dispense with an opening joke and go right to my subject: the intertwined problems of the financial crisis and unemployment.

President Obama took office 6 months ago in the midst of the worst economic and financial crisis since the Great Depression. I will discuss the dimensions of the economic crisis and progress that has been made combating it so far. In particular, I will highlight the connections between the financial crisis and the job market, and what the Obama Administration is doing to address these problems.

The Economic and Financial Crisis

It is useful to begin with some recent economic history.

- On December 1, 2008, the NBER announced that the U.S. economy had been in a recession for a year. They dated the starting month of the recession December 2007. While it is hard to remember now, there was considerable disagreement during the first three quarters of 2008 about whether we were in a recession at that time, or whether we were just feeling the effects of the unwinding of a construction bubble. That disagreement disappeared by the end of 2008. By that time there was no doubt that the economy was being whiplashed by a series of financial panics the likes of which the U.S. had not seen since the 1930s.

- The collapse of Bear Stearns in mid March 2008 was a harbinger that a financial crisis was simmering. Growing worries about the health of the financial system came to a boil with the bankruptcy of Lehman Brothers on September 15.
- Following the Lehman Brothers' collapse, uncertainty exploded. Lending between banks froze. The difference between interest rates on interbank lending and U.S. Treasury bills quadrupled, indicating substantial fear and uncertainty about the viability of the banking sector at that time.
- All forms of credit were affected, including corporate bond, commercial paper, municipal bond issuance; origination of business and consumer loans; and origination of new home loans.
    - Securitization of new loans essentially stopped. The market for asset-backed securities dried up overnight, which prevented credit from flowing to consumers and businesses.
- Confidence in the financial system and in the economy plummeted during this time.
    - Consumer sentiment hit a 28-year low in November 2008.
    - Plunging asset prices led to margin calls that led to fire sales of assets and further declines in asset prices. The S&P 500 fell over 40 percent from September 1, 2008 to November 20, 2008, when it reached an 11 year low.
    - Financial volatility soared. The VIX – also known as the "fear index" – rose four fold.
- The credit crunch led to a cascade of problems in the rest of the economy. Because they couldn't access credit, companies could not borrow to pay their suppliers or meet their payroll. So many cut hours and let workers go. Suppliers saw a drop in demand and also cut back on production and cut hours and laid off workers. Meanwhile, consumers had difficulty buying on credit, which especially affected demand for durable goods like refrigerators and cars. This led to a drop in consumer demand, as did fear of job loss, which caused companies to cutback further. The end result was that the financial crisis dragged the economy down sharply at the end of last year and beginning of this year:
    - GDP contracted by 6.3% in 2008-Q4 and by 5.5 percent in 2009-Q1.
    - From mid December 2008 to the payroll period covering the week before President Obama took office in January 2009, employment fell by 741,000 jobs – the largest single-month drop since 1949.

    - At the time, the economy felt in a free fall.

- There were many causes of the economic crisis, but fundamentally the financial crisis can be linked to over leverage and excess risk taking, which fueled by insufficient regulation. The bubble economy that these conditions fostered concealed deep imbalances in the U.S. economy, including inadequate personal savings, under investment in public infrastructure, and over investment in residential real estate.

Policy Responses

- During the Fall of 2008 the Federal Reserve, the FDIC and the Treasury Department took extraordinary actions to address the financial crisis.
    - This included the FDIC's guarantees of new debt issuances for banking institutions, the Federal Reserve's innovative policies to support credit, and the Treasury's injection of capital into banks through the TARP.
- When the Obama Administration took office, the economy was rapidly spiraling downward. The Administration and Congress moved quickly to provide much needed stimulus for the economy and to further address problems in the financial system.
- In February, Congress passed and the President signed into law the American Recovery and Reinvestment Act (ARRA), which will inject $787 billion of fiscal stimulus into the economy, most of it over the coming two years.
    - At around 5 percent of GDP, this is the largest stimulus bill in American history. More than $60 billion in outlays have been paid out and more than $43 billion in tax relief has been provided to American working families and businesses.
    - Stimulus is already having an impact on the economy. In May alone, the Bureau of Economic Analysis reports that the tax cuts and transfers from the Recovery Act added $160 billion to disposable income at an annual rate. This additional income is helping households increase their savings and maintain their consumption.
- To address the acute problems in the financial sector, Secretary Geithner and the Treasury Department have implemented a three pronged Financial Stability Plan (FSP).
    - First, the Stress Tests and the Capital Assistance Program have ensured that banks have adequate capital to increase lending and safeguard against the possibility of a deeper recession, and have increased transparency and disclosure.
    - Second, the Treasury Department and the Federal Reserve have established programs to unfreeze secondary credit markets, which are essential to create investor demand for consumer and business loans.

  - Third, through the Making Home Affordable program, Secretary Geithner and the Treasury Department continue to work with the housing sector to prevent foreclosures and allow homeowners to stay in their homes. In just three months, this program has enabled 160,000 homeowners to modify their mortgages. And the Treasury has reinforced the financial foundation of the government sponsored housing enterprises.

- Collectively, these policies have helped restore confidence and restart the flow of credit to consumers and businesses. As Secretary Geithner said last week, "We are seeing … very important signs of not just adjustment and restructuring of our financial system but greater confidence and stability of the system."

Where we stand today

- There are clear signs that the U.S. economy is now stabilizing and we have seen improvement in some sectors.
  - After the huge spikes in late 2008, spreads on interbank lending have returned to a more normal level.
  - The S&P 500 is up 40 percent since early March, and the VIX index of expected volatility has returned to levels that are close to the pre-Lehman days.
  - Consumer sentiment has generally moved higher.
  - Home sales and housing starts have stabilized.
  - The four-week moving average of initial Unemployment Insurance claims has been on a downward trend since peaking in early April, consistent with the moderation of job loss in the second quarter.
  - Following the two quarters of sharp contractions, macroeconomic forecasters expect the contraction to slow in the second quarter of 2009 and the economy to grow in the second half of the year.

Unemployment and Jobs

Unemployment rises in recessions because production contracts and companies cut back on their workforce due to reduced demand. The economists Carmen Reinhart and Kenneth Rogoff find that recessions brought about by banking crises tend to be particularly severe for output and employment.

- Since the beginning of the 2007 recession, payroll employment in the U.S. has declined by 6.5 million jobs, and the unemployment rate reached 9.5 percent in June.

NEC Director Lawrence Summers commented a few days ago that the rise in unemployment in this recession goes beyond what one would expect from the contraction in GDP that we have experienced. In the technical language of economics, he was referring to a deviation from the Okun's law relationship, which links changes in the unemployment rate to real GDP growth. The unemployment rate is about 1 to 1.5 percentage points higher than one would predict based on the contraction in GDP. This deviation helps explain why unemployment is higher and job loss greater than most economic forecasters had predicted last winter. If the usual historical pattern had held, the unemployment rate today would be around 8 percent, instead of 9.5 percent.

In addition to measuring unemployment from its monthly household survey, the BLS also surveys establishments each month to measure payroll jobs. We have analyzed the payroll survey data at Treasury to learn more about the nature of job losses. The data indicate that the financial crisis exacerbated job loss in the recession, as job losses soared from an average of 137,000 a month in the first 9 months of the recession to 544,000 a month from the fall of Lehman Brothers in September 2008 to January 2009.

Over the last three quarters, when the financial crisis intensified, there has been a net loss of 4.9 million payroll jobs. Estimating the same types of models that have been used to relate unemployment to recent GDP growth, we find that about 1.5 million more jobs have been lost than one would predict from the fall in GDP in this period. There is no doubt that the sharp GDP contraction that began in 2008 would have caused severe job loss under normal circumstances – but about a third of the job loss exceeds that which would be expected from the contraction in GDP.

Employers also reduced work hours throughout the recession, although the decline in the work week appears to be roughly in line with what one would expect from the magnitude of the GDP contraction. Nonetheless, average weekly hours now stands at a record low level.

A corollary of these observations is that productivity has increased. Employers are using fewer labor hours to produce a given amount of output. Productivity typically follows a procyclical pattern, rising in recoveries and falling in recessions, but this recession and the previous one are exceptions from this pattern.

Normally, when demand for output declines in a recession, employers look for other activities for workers to do to keep them employed, such as asking them to maintain plant and equipment or undergo training. Labor economists call this phenomenon labor hoarding, as employers hold on to workers in anticipation of needing them in the future when the economy picks up. This time, however, employers are more lean, as labor hoarding has given way to labor shedding.

Another observation that supports this conclusion is that permanent as opposed to temporary layoffs have reached a record level. Today over 40 percent of the unemployed report themselves as ‘permanent job losers’, which is well above the figure reached in previous recessions. The share of the unemployed on permanent layoff is significantly elevated compared to what one would predict from the size of the GDP contraction.

We have dug deeper into these statistics to try to identify the industrial sectors that have particularly contributed to the greater-than-expected job loss. Our analysis revealed that the “excess job loss” is spread throughout much of the economy, but is especially concentrated in manufacturing, construction, and finance, insurance and real estate. *These industries collectively account for nearly three quarters of the excess job loss that has occurred starting in the fourth quarter of 2008, but only 20 percent of all jobs.*

Now I would argue that much of the excess job loss can at least tentatively be linked to the financial crisis. NEC Director Summers has already noted that a case could be made that “greater financial pressure on firms in this recession has led them to shed cash flow commitments at an unusually rapid rate by laying off workers and leaving jobs vacant” and that “perhaps an expectation that the recession would be lengthy has also contributed to this behavior.”

In other words, the credit crisis and lack of confidence in the economy could have produced an environment that led employers to shed labor at an unusually rapid rate.

The timing of the acceleration of job loss is consistent with this view. The greatest level of excess job loss occurred at the height of the financial crisis, in the fourth quarter of 2008 and first quarter of 2009. When financial conditions eased up and confidence increased in 2009Q2, the rate of job loss moved closer to what one would predict from the pace of the GDP contraction.

This view is also consistent with the observation that the sectors where the greatest amount of job loss occurred – manufacturing, construction and FIRE – are particularly sensitive to access to credit or directly affected by the financial crisis. Durable goods manufacturing, for example, has shed 400,000 more jobs than would be expected from the fall in GDP. The financial and real estate sectors are undergoing a restructuring directly related to the financial crisis.

I would be remiss if I did not acknowledge that many caveats should be borne in mind in interpreting the statistics I have presented. As I alluded to at the beginning, economists like actuaries are forced to draw inferences from incomplete and noisy data. The GDP data, for example, are regularly revised, and a benchmark adjustment will soon be released which could change our understanding of the economy. The annual (absolute) revisions to quarterly real GDP growth have averaged plus or minus 0.4 percentage points in the last few years.

Nonetheless, the breadth of evidence from a variety of sources points to a link between the acceleration of job loss at the turn of the year and the financial crisis, which makes it unlikely that revisions to any one data series will change that view.

Moreover, there is another sense in which the labor market is intertwined with the financial situation. Unemployed workers are more likely to become delinquent on their mortgage, auto and credit card payments. A weak job market turns good loans into bad. Assessing this risk was a prominent feature of the stress tests.

The Recovery Plan and the Labor Market

My theme has been that problems in the labor market were exacerbated by, and are intertwined with, the crisis in financial markets. The last topic I want to discuss is that features of the Recovery Act and Financial Stability Plan are designed to address these interconnected problems.

ARRA and Support for the Unemployed

- I mentioned previously the role of the Recovery Act in stimulating aggregate demand. It is a little told story that the Recovery Act is providing unprecedented relief to the unemployed in very short order.
  - Among other things, the bill extends Unemployment Insurance benefits up to 59 weeks ($23.7 billion), increases UI benefits by $25 per week ($8.7 billion), grants a tax exemption for the first $2,400 of UI compensation ($5.6 billion), provides a credit for 65 percent toward COBRA payments for health insurance ($25 billion), broadens coverage for UI receipt ($7.5 billion), and provides much needed support for state UI trust funds ($1.4 billion).
  - Not only are these programs providing a lift to consumer spending at a time when that is what the economy needs, they are also providing crucial income support for a vulnerable population that is larger than forecasters expected it would be at this time.
  - The combined spending increases from Unemployment Insurance represent about a *third* of the initial wave of stimulus spending and tax cuts.

ARRA and Job Growth

- Some have criticized the Recovery Act because jobs are still declining, albeit at a much lower rate than in January. But the Recovery Act was not expected to immediately boost employment. The CEA predicted that by stimulating demand in the economy, the Recovery Act would lead approximately 3.5 million jobs to be created or saved. The Recovery Act dollars are being spent ahead of schedule. But given lags in spending and job creation, the CEA had predicted that only about 10 percent of the total jobs impact over the life of the Recovery Act would occur in 2009. The peak job impact was not expected until the end of 2010.

- The Recovery Act appears to be on course. It is bolstering disposable income, consumer spending and GDP about as expected.

Bank Capital and Job Growth

Given the connections between the financial crisis and unemployment, the administration's efforts to stabilize financial markets can be expected to save and create jobs. Increasing capital in banks, for example, enables more lending to businesses and consumers, which in turn stimulates demand and growth in jobs.

- The following calculation, which is meant to be illustrative, makes this point. The Capital Purchase Program and Targeted Investment Program invested $244 billion of capital in banks (of which $70 billion was repaid last month) since October 2008.
- If banks lent out these funds using a leverage ratio of 8:1, this would imply that around $2 trillion of additional credit was made available to businesses and consumers. If the leverage ratio is lower, say 4:1, because banks were more cautious than normally about lending in the current environment, the additional credit would be $1 trillion.
- At these leverage ratios, the additional capital would amount to an increase of nonfinancial U.S. debt of between 3 and 6 percent.
- Over the past 30 years, growth in annual real debt of 5 percent has been associated with around a 1.2 percent increase in jobs, or 1.5 million jobs today. There are serious econometric issues about how this relationship should be interpreted, but this calculation is just meant to illustrate the possible effects of injecting capital into banks on jobs. So if these relationships hold – which may or may not be the case in the unusual current circumstances -- the additional capital from CPP and TIP would have enabled from 900,000 to 1.8 million jobs to be added or retained on companies' payrolls.
- This calculation only captures how one of the financial stability programs could have bolstered the job market. Other government programs, such as the Stress Tests (SCAP) and TALF, have also increased the flow of credit to businesses and consumers and thereby supported jobs. Over $80 billion of private capital, for example, was raised in the aftermath of the Stress Tests.
- And the overall improvement in confidence and reduction in uncertainty brought about by the broad array of financial programs have helped stabilize the economy and prevented job losses from being even greater.

- While my calculations are just meant to be illustrative, it is clear that stabilizing the financial sector, increasing bank equity and restoring the flow of credit play an essential role in preventing job losses.

Conclusion

Although there is always a risk of a false dawn, so far the latest phase of the recession has followed the typical pattern seen around the end of recessions. The financial markets have recovered sooner than production, and production is stabilizing faster than the job market. If the typical pattern continues, a major challenge going forward will be hiring, as markets continue to stabilize but employers delay hiring in the face of lingering uncertainty.

The NBER Business Cycle Committee announcement of the start of the recession noted that, "Unemployment is generally a lagging indicator, particularly after the trough in economic activity …. For instance, the unemployment rate peaked 15 months after the NBER trough month in the 1990-91 recession and 19 months after the NBER trough month in the 2001 recession."

There is no question that the job market poses severe challenges. The number of workers unemployed for more than half a year, for example, increased by 11 percent in June, to a record 4.4 million. The unemployment rate for those with less than a high school degree is 15.5 percent.

The administration is focused on making the Recovery Act work as well and quickly as possible, and on repairing financial markets to address these challenges. The problems in the economy took years to build up, however, and rescuing the economy from the recession that began in December 2007 and accelerated with the financial crisis in 2008 will take time and perseverance. But the increased stability in financial markets and support for aggregate demand from the FSP and Recovery Act provide indications that the rescue is underway. As President Obama said in his radio address last week, "We're moving in the right direction."

Thank you very much.