

## CAPITAL MARKETS RESEARCH

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## Special Report: Fed Caution Toward Labor Markets Is Warranted

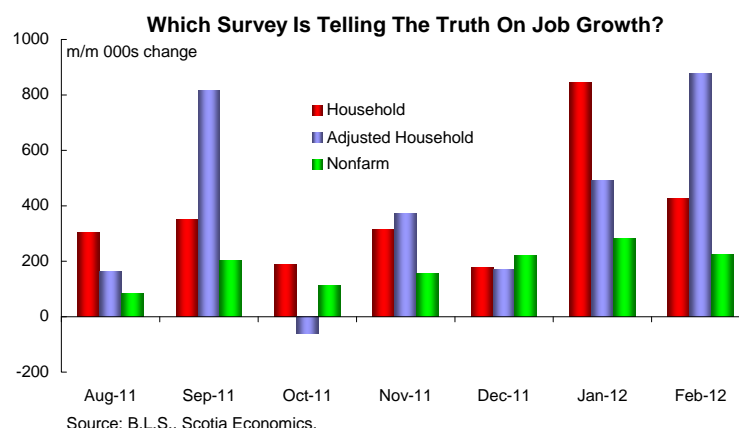
The drop in the US unemployment rate to 8.3% now from 9.1% just last August is critically relied upon by markets as a bullish signal since last summer's stalled recovery, and also relied upon in formulating expectations for future Fed policy. Some media headlines have even been daring enough to suggest that Fed Chairman Ben Bernanke is overtly ignoring the decline in the unemployment rate. Few metrics, however, have become as outright unreliable as the unemployment rate of late. In fact, there are enough serious inconsistencies in US job market data to merit Bernanke's cautious take on US job markets. While the pace of improvement in nonfarm payrolls is mildly encouraging, the improvement in the unemployment rate is grossly overstated in our view and thus exaggerates the market's impression of the speed of improvement in US job markets. This merits a note for our clients that is distinct from other important issues such as seasonal distortions that may be biasing recent job growth artificially higher, how job growth has perhaps only temporarily run ahead of economic growth in contrast to Okun's "law", and risks to future growth in the economy and jobs that are posed by high gasoline prices and rising Treasury yields.

### *The Unemployment Rate Comes From The Faulty Household Survey...*

Recall that the US has two job market surveys; one is the household survey which samples what households are reporting about their employment status and whether or not they are seeking work, and the other is the more commonly followed nonfarm payrolls survey that is based upon hard data on payroll remittances. The unemployment rate is derived from what the household survey says about monthly employment changes and monthly changes in the size of the labor force, as opposed to the more popularly watched nonfarm survey that only generates monthly changes in jobs and not the labor force or unemployment rate. The household survey has a far greater degree of sampling error associated with it, and the readings it has thrown off regarding job and labor force growth in the US economy since last summer are difficult to defend—a point we'll return to in a moment.

Because the household survey only samples about 60,000 households which is only about one-twentieth of one percent of all US households and the nonfarm payrolls report samples 141,000 businesses that cover about 486,000 individual establishments that in turn equal about one-third of all US nonfarm employment, the household survey's small sample size leads to an enormously greater degree of statistical uncertainty over the data quality of the reported outcome than the nonfarm payrolls report. Indeed, the US Bureau of Labor Statistics (BLS) estimates that the size of the *change* in job growth from one month to the next that is required in order to declare a movement in jobs within the household survey to be statistically significant is +/- 436,000. This contrasts with +/-90,900 for the nonfarm payrolls report. In other words, if the household survey reports, say, 100,000 jobs gained in one month and then 400,000 jobs gained the next month, one cannot say that the 300,000 acceleration is statistically significant as opposed to just random sample error. Put another way, statisticians have an

**Chart 1**



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enormously greater degree of confidence in the nonfarm report than the household survey's reported job changes. Further, neither the changes in the nonfarm nor the household survey estimates of monthly job growth have been statistically significant on a trend basis since last Fall despite the attention placed upon precise monthly nonfarm payroll readings each month. What flies for media headlines on the health of the US job market is therefore a much lower standard than the one set by the statisticians who create the figures.

### **...That Is Reporting Job Growth Twice That Of The Nonfarm Payrolls Report...**

Indeed, consider the patterns over recent months as the unemployment rate dropped from 9.1% in August to 8.3% in February (chart 1). Over that stretch, the household survey told us that monthly job creation from August through to February equaled 304k, 353k, 190k, 317k, 176k, 847k and 428k. The nonfarm payrolls survey told us that job creation equaled 85k, 202k, 112k, 157k, 223k, 284k, and 227k. Over this stretch, the household survey has therefore told us that cumulative monthly job creation has come in at 2.62 million or about twice the cumulative pace being suggested by the 1.29 million pace registered in the nonfarm survey, and the household survey has been much more volatile. Some of this is due to the fact that the nonfarm and household surveys measure different concepts. The BLS attempts to control for this by also offering an adjusted household survey that strips out items like agricultural employment, the self-employed, unpaid work, and other items.<sup>1</sup> This adjusted metric is also shown in chart 1 and leaves intact the general point about how even the adjusted household survey offers a much more volatile and vastly stronger picture of job creation than the nonfarm payrolls report. Indeed, the household survey's job gains adjusted to a comparable nonfarm payrolls methodology over this same period have equaled 165k, 817k, -61k, 374k, 170k, 491k, and 879k, which is an even higher tally of 2.8 million jobs having been created since last August and therefore the adjusted household survey is reporting more than twice the pace of job gains calculated within the nonfarm payrolls report. One might be tempted to conclude that perhaps nonfarm is underestimating the magnitude of US job growth, but our experience with the household survey and its sampling errors leads us to strongly doubt the magnitude of the gains in the household survey and indeed the quality of the overall survey.

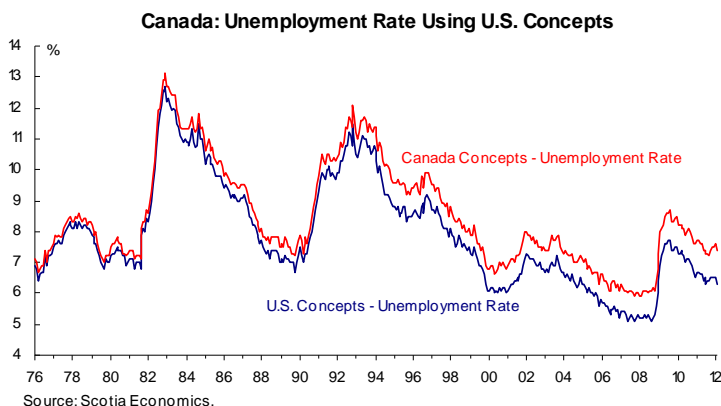
### **...And The Household Survey Has Yielded Highly Volatile Labor Force Readings**

Which measure of job growth is accurate is only half the battle in determining the unemployment rate. What also matters is how the labor force changes from one month to the next, given that the unemployment rate equals the unemployed over the size of the total labor force. The news doesn't get much better here. Changes in the monthly size of the labor force are exclusively derived from the household survey since the nonfarm survey's reliance upon payroll remittances precludes it from having the ability to measure the size of the overall labor force. The household survey's measured labor force has been as volatile as the household survey's job changes, and so much so that the job seeking ambitions of Americans border upon the extreme indecisiveness of a manic depressive. Over the stretch from August through to February, the household survey has told us that monthly changes in the labor force have been +316k, +330k, +53k, -120k, -50k, +508k, and +476k. The cumulative change has equaled 1.5 million new labor force entrants. The fact that this is smaller than the household survey's reported job gains is why the unemployment rate has dropped from 9.1% to 8.3% over this period. Thus, where the true unemployment rate now sits is anyone's best guess but the pace of improvement in the official rate is overstated.

### **Measurement Issues Also Heavily Distort The Unemployment Rate...**

As one international example of how much measurement issues can matter to the unemployment rate, consider the case of the comparison between the US and Canadian measures. Chart 2 shows how much lower Canada's unemployment rate would be if the country used the same measurement principles as the US, and this adjusted figure is regularly calculated by Statistics Canada. If Canada measured the unemployment rate the way the US does, then its measure would be a full 1.1 percentage points lower than the official Canadian rate; by corollary, if the US measured unemployment like Canada does then the US rate would be much higher. A key explanation is that the US has a stricter definition of "looking for work" when it comes to determining changes in the labor force within the denominator to the unemployment rate.<sup>2</sup> In Canada, checking job ads is enough to count oneself as in the labor force and looking for work, whereas the US employs a more active definition of job search efforts. There are other reasons for

**Chart 2**



differences. For example, both countries exclude their prison populations from the labor force, but since the US has a higher rate of incarceration particularly across socioeconomic groups that are more likely to be marginally attached to the workforce this also means that the official US unemployment rate is artificially low. One might quip that the US jails more of its unemployed and past research has indicated that this effect might account for another 0.2 percentage points in the gap between the US and Canadian unemployment rates.

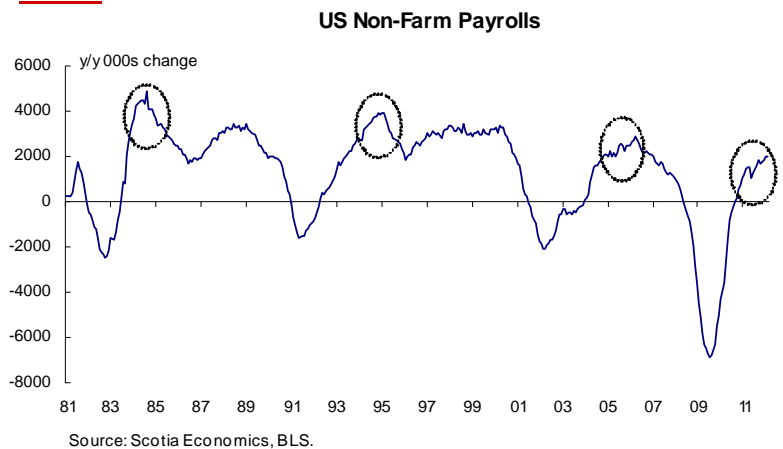
Why this matters is that it's not actually fully clear which country takes a better approach to measuring "looking for work" and hence the size of the workforce, but there is a case to be made for Canada. The gap between the official unemployment rate and the rate that is adjusted to US concepts started to open up in the mid-1990s onward, right about the time when the communication age arguably forever changed the job search process, and the gap currently sits at its greatest ever. Perhaps, therefore, the US underestimates its unemployment rate by adhering to an archaic and overly rigid definition of what constitutes a job search.

### ...Leading To Alternative Measures of the US Unemployment Rate

In order to capture these influences, that's why the US BLS offers the U-5 measure of unemployment that includes discouraged workers plus all others who are marginally attached to the labor force but not in it, which includes those who are currently neither working nor looking for work but indicate that they want and are available for a job and have looked for work sometime in the past twelve months. This measure sits a full 1.5 percentage points above the official measure of the unemployment rate and currently equals 9.8%. To go full tilt toward a broader measure of the unemployed is where the U-6 gauge enters which adds those working part-time but who would prefer to work full-time into the U-5 metric. This measure of labor force under-utilization sits 6.6 percentage points higher than the official measure of the unemployment rate. In short, both through the Canada example and alternative measures of US labor force slack, the US is much further away from closing off slack in its job market than a simple comparison between the Fed's goal of 5.2-6% range and the official 8.3% unemployment rate would suggest. Indeed, this is similar to Canada's story in the 1990s when the earlier part of the decade had about one in five in the prospective labor force being either unemployed or discouraged workers, thus requiring a very long stretch of employment gains on a long-delayed fuse in order to materially tighten job market slack. Also, note that all of our sampling concerns about the official unemployment rate that we have expressed in this note apply equally to the broader measures of unemployment such as the U-5 and U-6 metrics.

Our summary concern is therefore four-fold: we don't believe the US is creating the jobs that the household survey suggests in contrast to the encouraging but mild pace of growth in nonfarm payrolls now compared to past cycles (chart 3); nor that monthly changes in the labor force are as volatile or as generally soft relative to job growth on the cumulative trend since last Fall as the household survey suggests; therefore, the unemployment rate is rooted in a survey of highly debatable data quality; and a still enormous degree of slack exists in US job markets and will remain as such throughout our forecast horizon. In accordance with these points, we have cause for doubting the magnitude of the improvement in the unemployment rate as relayed by one of the more mythical measures of economic health. Given that job trends in the household survey and nonfarm payrolls typically follow each other reasonably closely over time but have not of late, we would emphasize the risk that the reported pace of job gains in the household survey could well mean revert lower, while the unemployment rate could well mean revert higher. Before we know this—and the many other issues affecting US job markets that we flagged at the beginning—it remains grossly premature to begin sounding the all-clear bell and premature to diminish expectations for further Fed stimulus.

**Chart 3**



<sup>1</sup> For a fuller, recent explanation of differences in the household and nonfarm surveys, see: [http://www.bls.gov/web/empsit/ces\\_cps\\_trends.pdf](http://www.bls.gov/web/empsit/ces_cps_trends.pdf).

<sup>2</sup> While the shoe is clearly on the other foot today than almost a decade ago when Canada used to have a higher unemployment rate than the US, for a fuller explanation of measurement differences in US and Canadian unemployment rates we recommend: W.C. Riddell "Why Is Canada's Unemployment Rate Persistently Higher Than That Of The U.S.?" University Of British Columbia working paper, October 2003.