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Are large downward revisions to nonfarm payrolls associated with higher recession probability?

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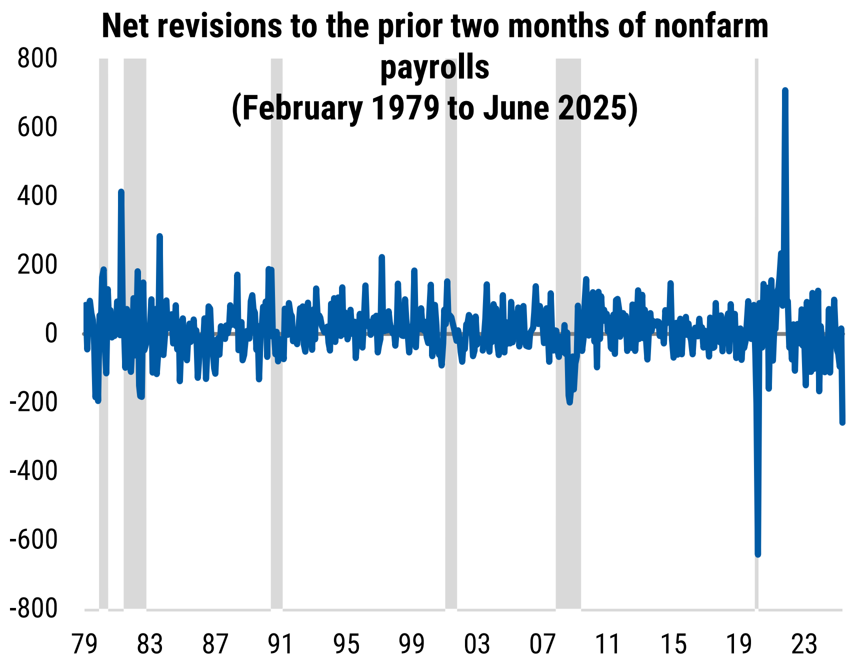
The July employment report brought downward revisions to May and June employment of 258k, the largest downward revision since 1979 outside of COVID. That said, empirical analysis indicates revisions have only marginal signal about recession risk. The change in current-month employment matters more.

Key Takeaways

- The 258k downward revision to the prior two months of payrolls was 4-5x larger than the median absolute revision since 1979. The median average revision is 56k
- If we regress revisions to payrolls on expansion or recession, we find that the 258k downward revision implies a 9pp increase in the probability of recession.
- However, if we add the current month's payroll data as an additional explanatory variable, the statistical significance of revisions evaporates.
- The message is the signal from the July payroll (+73k) is likely more important than the abnormally large downward revisions.

Exhibit 1: Outside of Covid, the downward revisions to July payrolls were the largest since 1979



Note: Shading = recessions. Source: BLS, NBER, Morgan Stanley Research

Net downward revisions of -258k?

In the July employment report, the big surprise was the 258,000 in downward revisions to the prior two months of data. June payrolls were reported as rising by 147k in the initial release, but were revised lower to show a gain of only 14k for a downward revision of 133k. Employment in May was originally revised higher from 139k to 144k with the release of the June employment report, but was subsequently revised to 19k in July for a downward revision of 125k. Together the 133k revision to June employment and the 125k downward revision to May employment yielded the -258k total for the net revisions to nonfarm payrolls in July.

Why does the BLS revise payrolls twice?

According to the BLS, the Current Employment Statistics (CES) program, also known as the payroll survey or the establishment survey, is based on a monthly survey of approximately 121,000 businesses and government agencies. These businesses and agencies cover about 631,000 worksites throughout the United States. From this sample, the CES produces and publishes estimates of nonfarm payrolls by industry, hours worked, and average hourly earnings estimates for the US economy.

The initial estimate of job change for a given month – in this case July 2025 – is based on businesses and agencies that report their data ahead of the survey deadline. Historically, about two-thirds or more return the survey ahead of the initial estimate. That said, while the response rate to the CES survey has remained steady at the final release, response rates before the initial release have been declining (see here). Whether this leads to more revisions remains to be seen. Generally speaking, the BLS assumes that the employment situation from survey respondents that met the deadline is representative of employment conditions broadly. In other words, the situation at those establishments that have not yet reported is assumed to be the same as those who have reported.

The BLS continues to collect outstanding reports from establishments in the sample as it prepares the second and third estimate for the month. Hence, the July employment report contained the first revision for June payrolls based on additional survey data received. It also includes the second revision to May employment based on additional survey data for May hiring received by the July deadline.

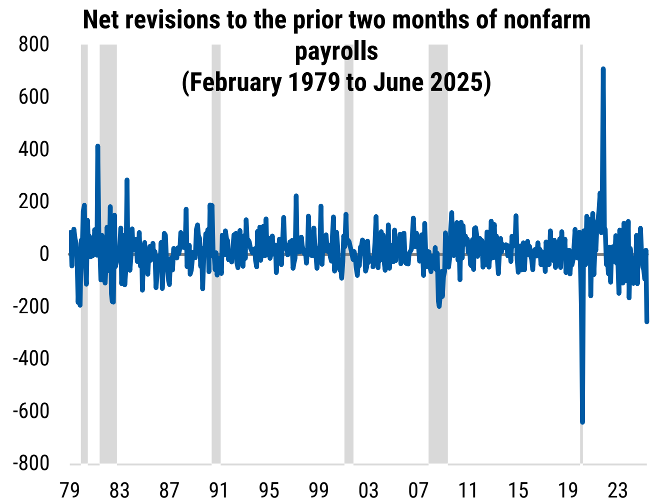
With each subsequent estimate more businesses provide more information. Should this information differ markedly from the initial release, then it is conceivable that revisions could be large. The employment picture in July should be viewed as the initial estimate for July plus any additional information received about the hiring situation in May and June.

Is this unusual? What do net revisions normally look like?

The magnitude of the revisions to prior data in the July employment report was very large, about 4-5x normal variation.

To see this, we plot the historical data on the net revisions to the prior two months of payroll data from March 1979 to the present (we start in March 1979 since it reaches back two months to January 1979). The average of all the observations is 12k, or a net upward revision of 12,000 jobs. The minimum observation was -642,000 in May 2020, which included revisions to the March and April jobs date during the COVID shutdowns. The maximum value was 709,000 in January 2022, which captured reopening effects post-pandemic.

Exhibit 2: Outside of Covid, the downward revisions to July payrolls were the largest since 1979

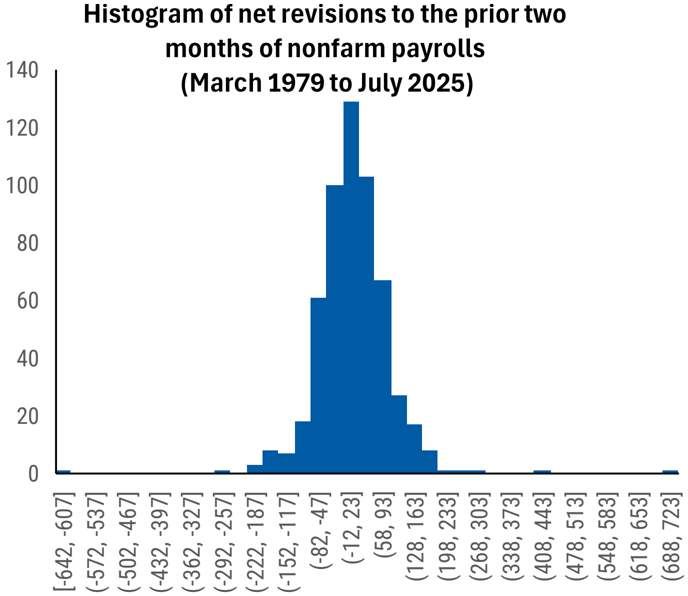


Note: Shading = recessions. Source: BLS, NBER, Morgan Stanley Research

If we exclude the pandemic, the downward revisions contained in the July 2025 payrolls is the largest on record dating to 1979, a sample period of 46 years and 557 observations (two months of revisions during 2003 are unavailable or the full sample would be 559 observations. The largest non-pandemic upward revisions came in June 1981 at 414,000.

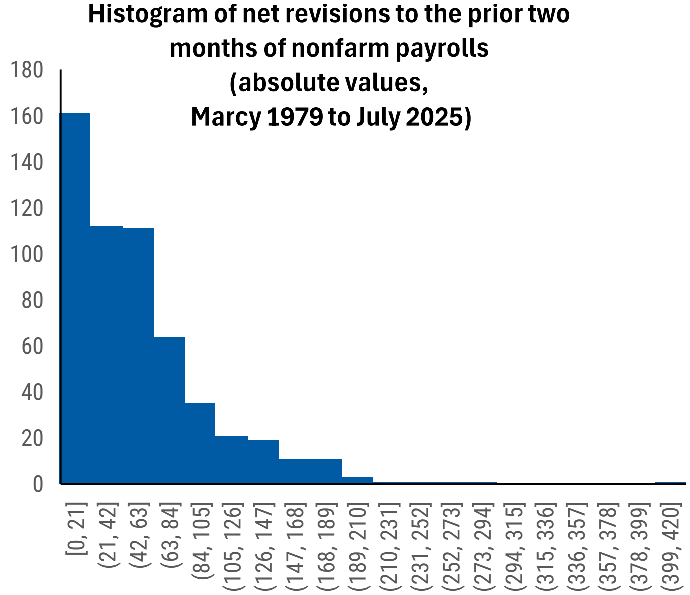
If we convert the data to absolute values, we find that the mean absolute value of net revisions to the prior tow months of payrolls is 56,000 with standard deviation of 61,000. Hence the 258k in july revisions – in absolute terms – is about 4-5x higher than normal and a statistical outlier by any standard definition.

Exhibit 3: Histogram of revisions to prior two months of payrolls



Source: BLS, Morgan Stanley Research

Exhibit 4: Distribution of absolute value of revisions to prior two months of payrolls



Source: BLS, Morgan Stanley Research

Should we be worried? What does it say about recession risks?

As we noted in our post-report write-up (July Employment Report: A sharp drop-off in labor demand) and in our US Economics weekly (It's the unemployment rate), we took some signal from the downward revisions since they point to a more abrupt slowdown in the hiring rate than 1) prior data indicated and, 2) more than we had been forecasting. We did not change our outlook for monetary policy this year (no rate cuts in 2025), but we emphasized that the report signals that recession risk remains elevated and investors who had turned complacent in recent months should be on alert.

Are large downward revisions to nonfarm payrolls associated with higher probabilities of recession?

To answer this question, we estimate a simple probit model to quantify the impact of nonfarm payroll revisions on recession risk. Probit models are a type of regression analysis used when the dependent variable is binary: in this case a value of 0 when the economy is in expansion or a value of 1 if it is in recession. We take NBER monthly recession/expansion estimates for this portion of the analysis.

The regression model then estimates the probability of an observation falling into one of those two categories – expansion or recession – based on the independent or explanatory variable. The model uses the cumulative distribution function of the standard normal distribution (also known as the probit function) to calculate these probabilities. The explanatory variable is the sum of revisions to the prior two months' payroll data.

Initial results suggest that downward revisions are associated with a statistically significant increase in the three-month-ahead recession probability. However, the magnitude of the effect is modest—insufficient to conclude that a recession is more likely than not. For example, the 258k downward revisions to May and June raise the recession probability by 9 percentage points and the results are significant at the 95th percentile (when we exclude COVID observations). Given that the revisions to July employment were the largest downward revisions in more than forty years outside of COVID, a 9pp increase in recession risk appears fairly minor.

That said, when we include the change to payrolls in the current month as an additional explanatory variable alongside net revisions to the prior two months of payrolls, revisions to the prior two months loses its statistical significance.

Put simply, if the question is which signal matters more – the signal from July employment (+73k) or the revisions to the June and May employment data (-258k) – the answer is July employment. Could this time be different? Sure. But the historical evidence indicates that a sharp deceleration in the initial estimate of nonfarm payrolls is more strongly correlated with recession risk than revisions to prior data.

Hence, we take more signal from the July employment data – 73k increase in payrolls, modest wage growth, bump in hours worked, and low unemployment rate – than from the statistically abnormal downward revisions to prior months and conclude that recession risk remains elevated, but may not have risen materially enough to alter our view on the US economy.

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