

# EMPLOYMENT SITUATION CASE

## LEARNING OBJECTIVES

Use labor-market indicators to forecast payroll employment and unemployment; distinguish job growth from changes in the unemployment rate; and translate evidence and uncertainty into probabilities and trading decisions.

### MARKET 1 | NONFARM PAYROLLS

What month-over-month change in seasonally adjusted total nonfarm payroll employment will the next BLS Employment Situation release initially report?

| Security / outcome    | Change (thousands) |
|-----------------------|--------------------|
| Less than 50 thousand | Below 50           |
| 50 to 99 thousand     | 50 to 99           |
| 100 to 149 thousand   | 100 to 149         |
| 150 to 199 thousand   | 150 to 199         |
| 200 thousand or more  | 200 or more        |

### MARKET 2 | UNEMPLOYMENT RATE

What change in the seasonally adjusted unemployment rate will the next release initially report, relative to the preceding month shown in that same release?

| Security / outcome         | Change (pp)  |
|----------------------------|--------------|
| Decrease by 0.2 pp or more | -0.2 or less |
| Decrease by 0.1 pp         | -0.1         |
| No change                  | 0.0          |
| Increase by 0.1 pp         | +0.1         |
| Increase by 0.2 pp or more | +0.2 or more |

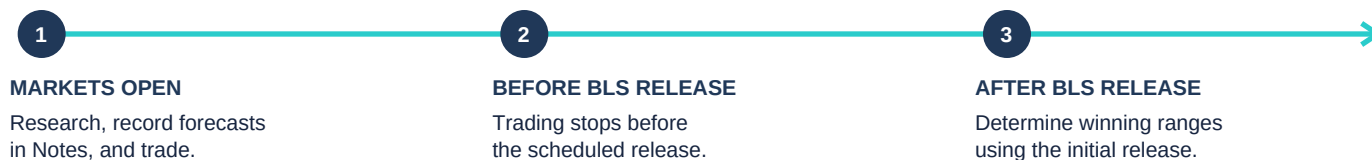
### SETTLEMENT | PAYROLLS

Use the month-over-month change in seasonally adjusted total nonfarm payroll employment in the **first BLS Employment Situation release for the forecast month**. Use the initially published change in thousands, not a later revision. A boundary value belongs to the range beginning at that value: **100 thousand settles in 100-149**. Negative changes belong to the below-50 range.

### SETTLEMENT | UNEMPLOYMENT

Subtract the preceding month's rate from the forecast month's rate using the seasonally adjusted, **one-decimal rates first published together in that release**. Calculate the difference in **percentage points (pp)**; later revisions are not used. Use the prior-month rate in this release, not a separate earlier release. Example:  $4.2\% - 4.1\% = +0.1 \text{ pp}$ .

## CASE TIMELINE



### YOUR TASK

Research the available labor-market indicators. For **each market**, record a point estimate and your reasoning in **Notes**, including sources and dates. Assign probabilities to all five ranges (total: **100% per market**), then connect your analysis to your trading strategy.

**RESEARCH STARTING POINTS:** Prior BLS releases, unemployment insurance claims, job openings and hiring, and private payroll reports. Use information available before the cutoff; consider differences in coverage and reporting periods.

**BEFORE TRADING:** Your professor specifies the forecast month, BLS release date and time, trading cutoff, and payout. **Proposed payout:** 100 market-cash units for the winning security in each market; 0 for the other four.

Authoritative source: [BLS Employment Situation](#) (payrolls: establishment survey / Table B-1; unemployment: household survey / Table A-1).

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## 1. RESEARCH | WHAT DOES THE EVIDENCE SUGGEST?

Record the forecast month, release date, and trading cutoff in **Notes**. Which available indicators support your forecast: prior BLS reports, unemployment insurance claims, job openings and hiring, or private payroll reports? Record sources, publication dates, and reference periods. Which signals conflict, and which deserve the most weight? Use only information available before trading stops.

## 2. ECONOMICS | WHY CAN THE TWO MEASURES DIVERGE?

Payroll employment counts jobs in the establishment survey; unemployment is measured in the household survey. Why might payrolls rise while the unemployment rate also rises? How do labor-force entry and exit affect the rate? Could unemployment fall without stronger hiring? Distinguish changes in jobs, employed people, and labor-force participation.

## 3. FORECASTS | CONNECT THE TWO MARKETS

Record point estimates for payroll growth (thousands) and the unemployment-rate change (percentage points, pp). In **Notes**, assign a probability to each payroll range; then estimate the unemployment outcome probabilities **conditional on each payroll range**.

| Payroll change<br>(thousands) | Payroll<br>probability | Unemployment<br>-0.2 pp or less | Unemployment<br>-0.1 pp | Unemployment<br>0.0 pp | Unemployment<br>+0.1 pp | Unemployment<br>+0.2 pp or more |
|-------------------------------|------------------------|---------------------------------|-------------------------|------------------------|-------------------------|---------------------------------|
| Below 50                      |                        |                                 |                         |                        |                         |                                 |
| 50-99                         |                        |                                 |                         |                        |                         |                                 |
| 100-149                       |                        |                                 |                         |                        |                         |                                 |
| 150-199                       |                        |                                 |                         |                        |                         |                                 |
| 200 or more                   |                        |                                 |                         |                        |                         |                                 |

**Check:** Payroll probabilities sum to 100%. The five unemployment probabilities in **each row** also sum to 100%. Explain your most likely combination and one plausible alternative. What new evidence would change your probabilities?

**Link the forecasts:** For each unemployment outcome, add across rows [payroll-range probability x probability of that unemployment outcome given the payroll range]. These five overall probabilities must sum to 100%. Do not assume that payroll growth mechanically determines unemployment.

## 4. TRADING | WHAT JUSTIFIES YOUR POSITION?

Under the proposed 100/0 final payout, and at the time of your trading, compare each security's price / 100 with your probability. Which appears over- or underpriced? Record your intended trade, available bid or ask, and reasoning in **Notes**. How do your positions in the two markets reflect one consistent view of the labor market?

## 5. DEBRIEF | WHAT DID THE RELEASE TEACH YOU?

Record the initially reported payroll change and both one-decimal unemployment rates from the **same release**. Calculate the rate change and every security's payoff. Which indicators helped or misled you? What do participation and household employment suggest about the outcome? Keep later revisions separate from settlement. Distinguish forecast quality from trading profit.

**DISCUSS:** Did the release indicate stronger labor demand, changing labor supply, or both? Identify one improvement to your next forecast; one successful trade does not establish forecasting skill.