

# Mismatch Unemployment in the US and France

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# The Mismatch Hypothesis

- Both US and France have recently experienced periods of high unemployment.
- The Mismatch Hypothesis: a portion of unemployment is due to a “misalignment” between the distribution of vacancies and that of job seekers across sectors.
- Job seekers may be seeking employment in occupations, industries or locations different from those where the available jobs are.
- Mismatch results in a lower job finding rate and hence higher unemployment.



# Methodology I

- We construct a “*Mismatch Index*” that measures the fraction of hires “lost” because of mismatch.
- The benchmark is an ideal allocation of job seekers to jobs that would arise in the absence of frictions in the labor market.
- This optimal allocation requires that—weighted by matching efficiency in each sector—vacancy-unemployment ratios be equated across sectors.
- If there is a relative abundance of vacancies in one sector, mismatch could be reduced by “moving” job seekers to that sector.



# Methodology II

- The Mismatch Index can be used to compute how far the actual job finding rate in the economy is from the “optimal” job finding rate that would prevail in the absence of mismatch.
- Through this, we compute how much lower the unemployment rate would be in the absence of mismatch.
- *Mismatch Unemployment* measures the difference between the observed unemployment rate and this counterfactual unemployment rate.



## Data Sources: US

- Data on vacancies by occupation and county come from the *Help Wanted OnLine (HWOL)* series, produced by The Conference Board (going back to 2005).
  - Information is collected from thousands of online job boards and job search engines.
- Data on job vacancies by industry are collected in the *Job Openings and Labor Turnover Survey (JOLTS)*, produced by the Bureau of Labor Statistics (going back to 2001).
- Data on unemployed job seekers come from the *Current Population Survey (CPS)*, also collected by the Bureau of Labor Statistics.



# Data Sources: France

- Data on both vacancies and job seekers going back to 1997 come from the register of the French employment agency (*Pôle emploi*).
  
- Limitations:
  - The data on vacancies represent only about 1/3 of total job openings.
  - Some unemployed workers may not register with Pôle emploi.
  - Hires are measured as transitions from unemployment to employment, but might be underestimated due to job seekers not properly reporting their reason for deregistering.
  
- Advantages:
  - Provide measures at high frequency and disaggregated level.
  - Job seekers include workers in part-time/temporary jobs searching for permanent jobs.



# Results

- Mismatch in France appears to be less cyclical than in the US.
- Mismatch unemployment represents a smaller share of total unemployment in France than in the US at the peak at the Great Recession.
- However, mismatch unemployment is more persistent in France.
- As in the US, geographic mismatch is smaller than that by occupation (but, need to look at a finer scale).
- Caveat: Pôle emploi data on vacancies and job seekers cover only a subset of all job openings and job seekers.



# Comparison of Data Granularity

<b>Category</b>	<i>USA</i>		<i>France</i>	
	<b>Description</b>	<b>No. of Codes</b>	<b>Description</b>	<b>No. of Codes</b>
Industry	JOLTS NAICS Codes	17		
Occupation	HWOL	23	Pôle Emploi FAP Codes	18
Geography	U.S. States	51	Départements	96

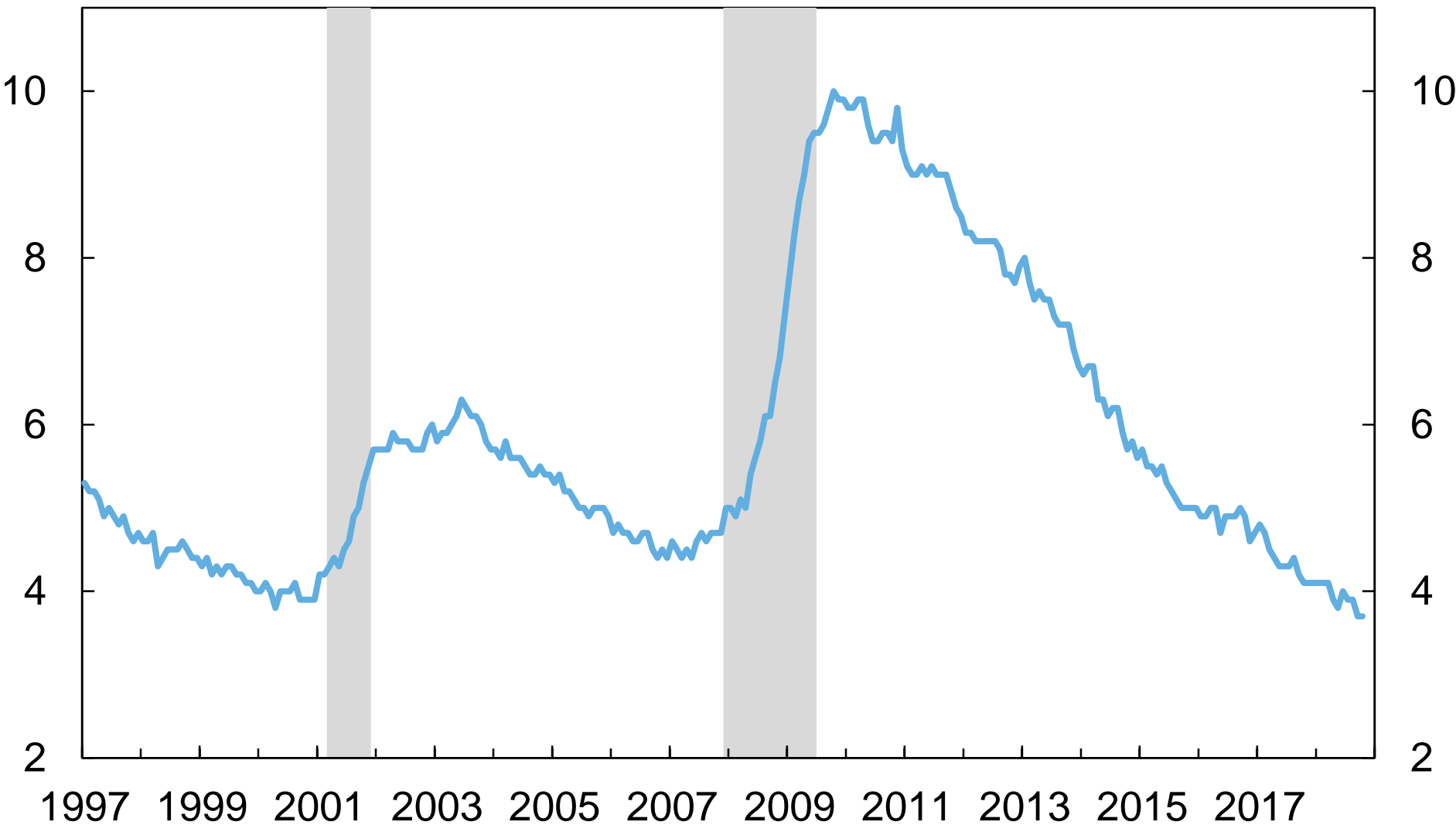




# USA: Unemployment Rate

Percentage Points

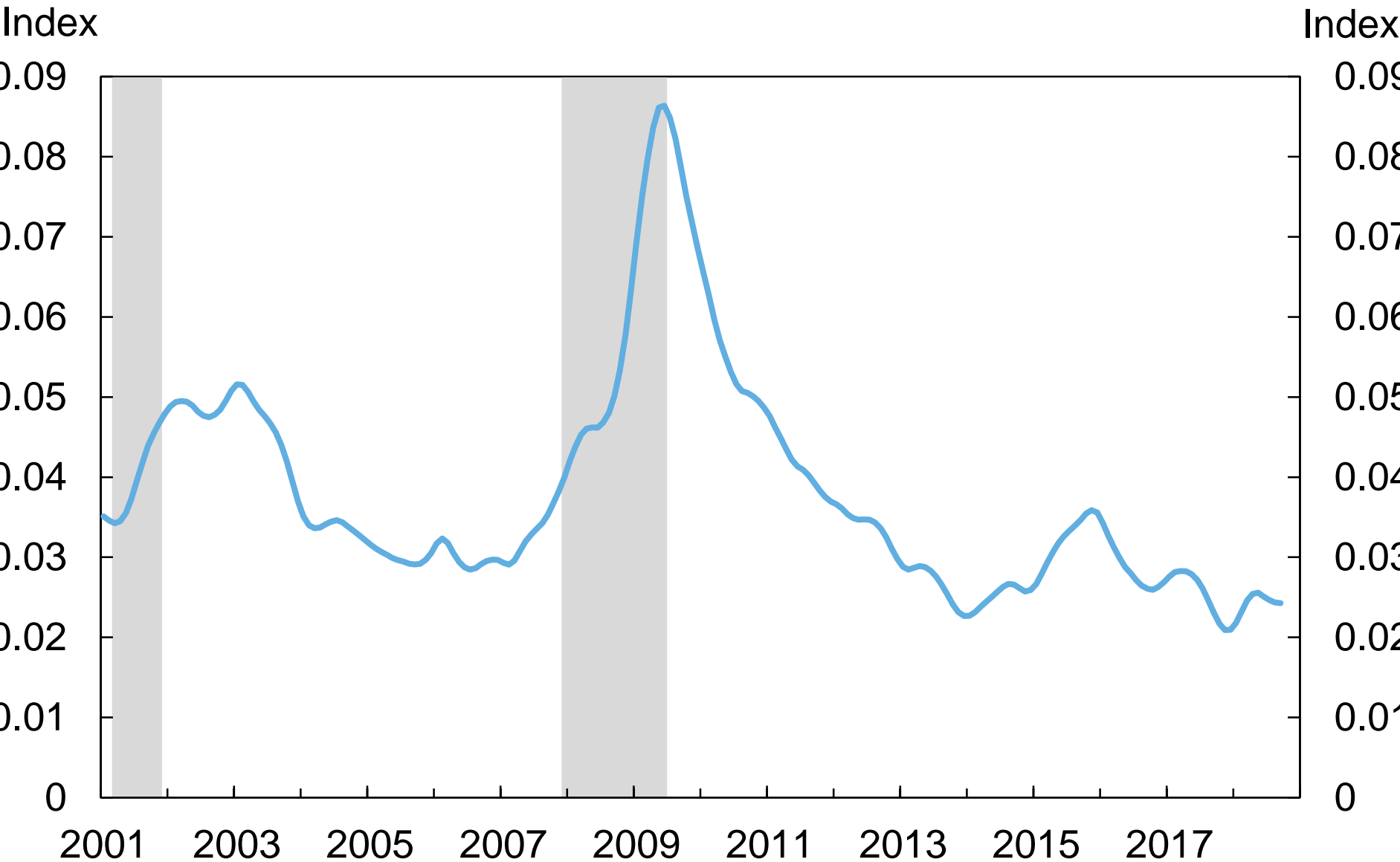
Percentage Points



Source: Bureau of Labor Statistics

Note: Shading shows NBER recessions.

# USA: Industry Mismatch Index



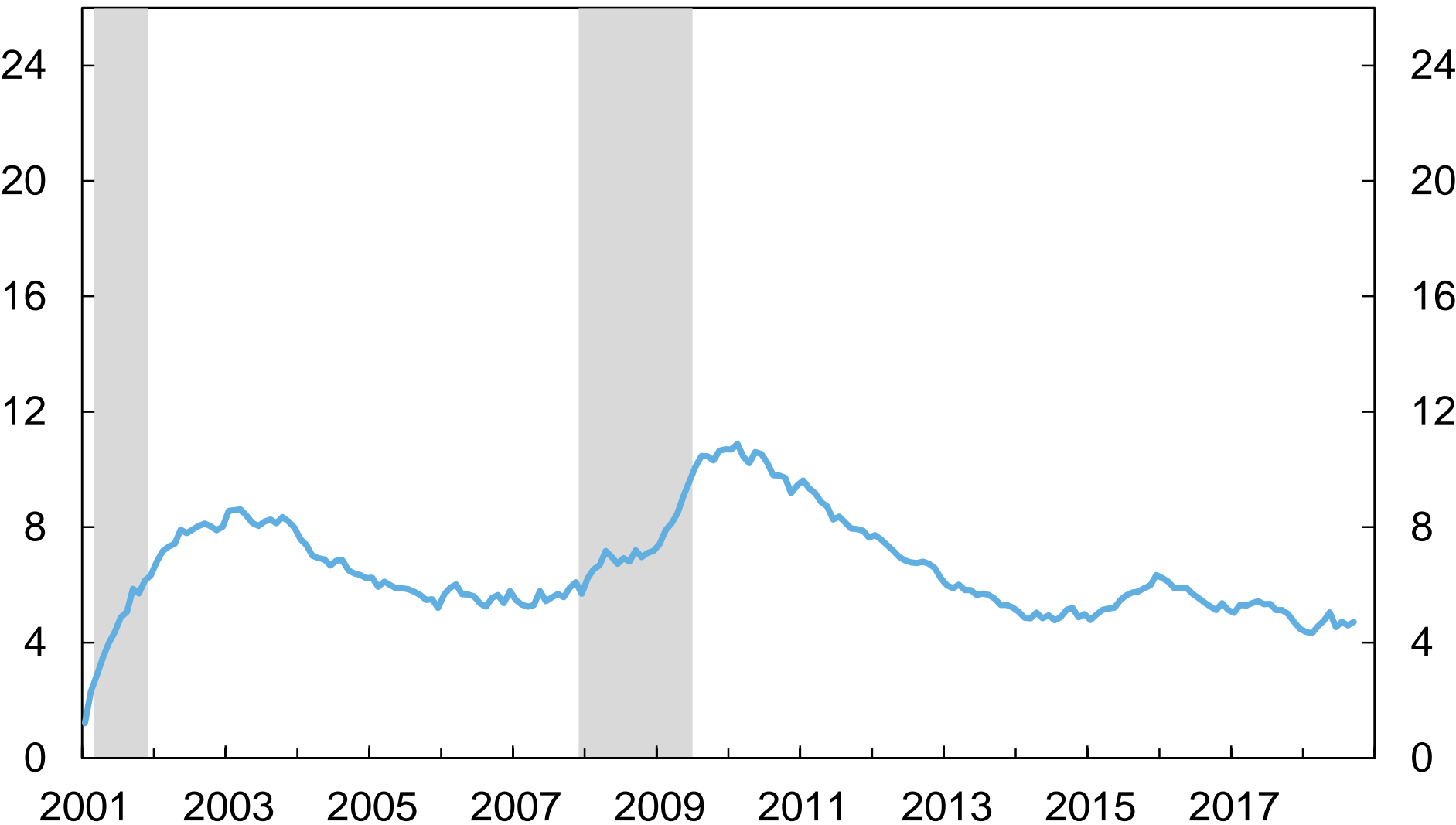
Source: JOLTS, BLS

Note: Shading shows NBER recessions. <sup>10</sup>

# USA: Share of Unemployment from Industry Mismatch

Percent

Percent



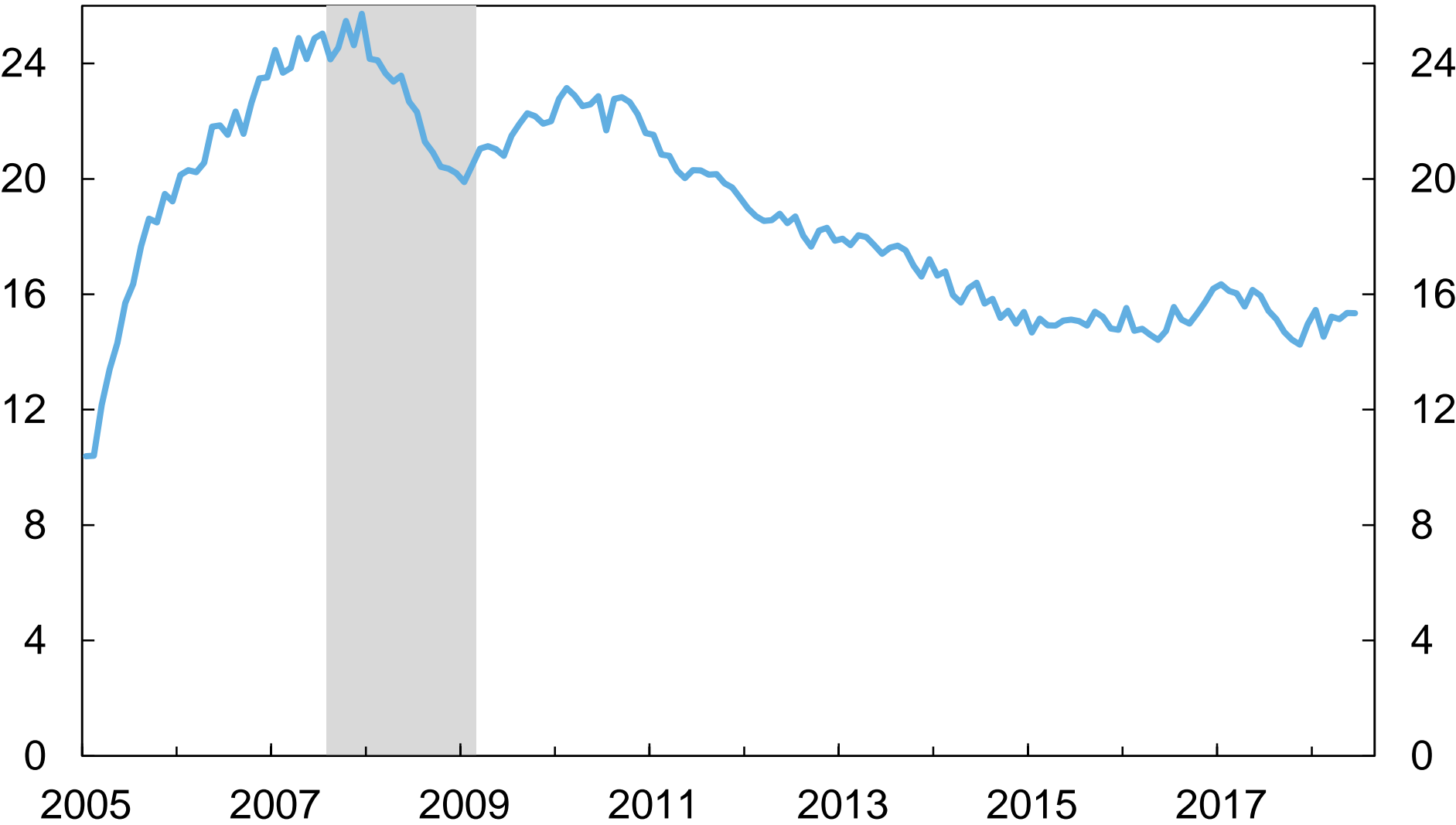
Source: JOLTS, BLS

Note: Shading shows NBER recessions.

# USA: Share of Unempl. from Occupation Mismatch

Percent

Percent



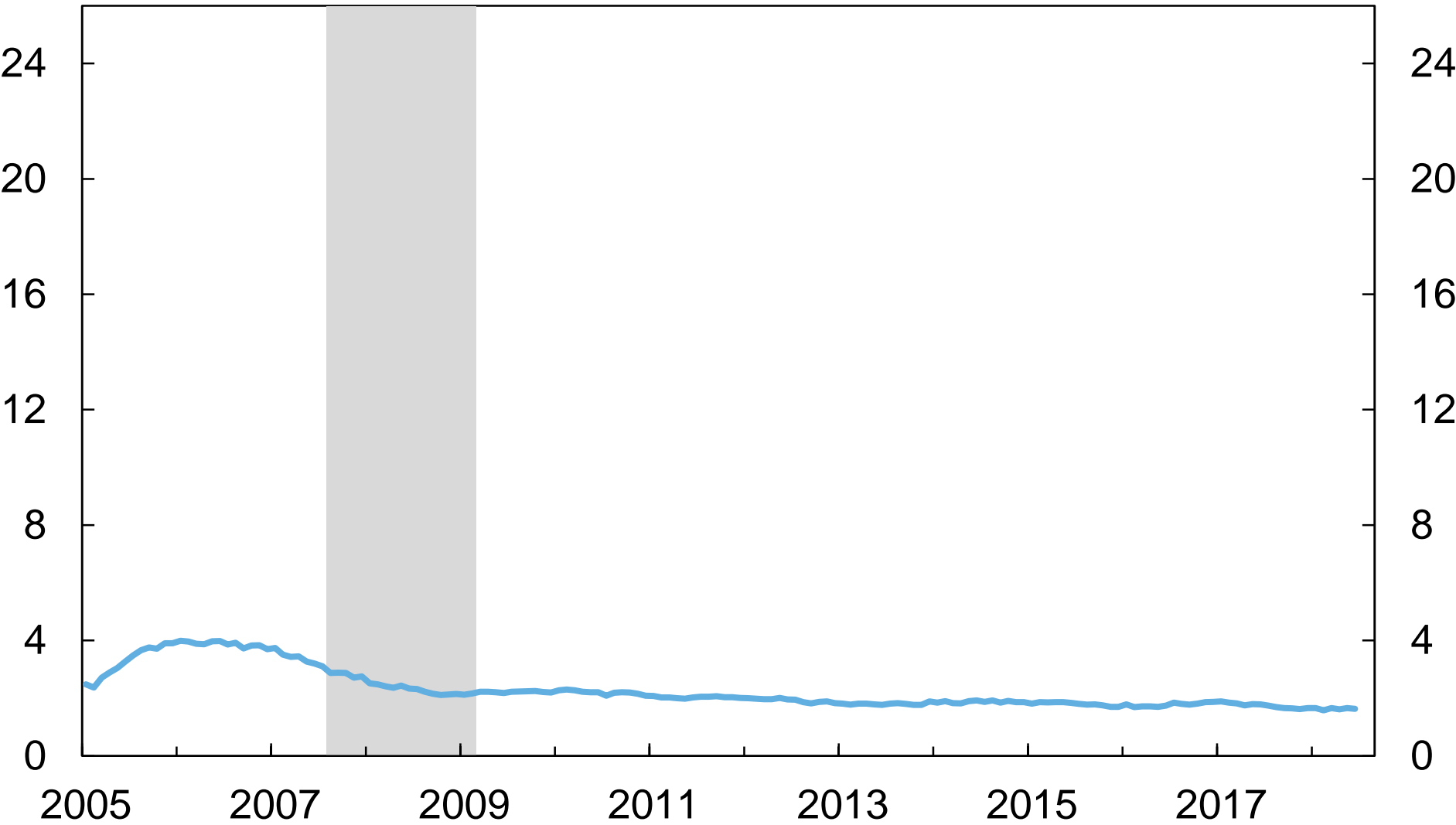
Source: BLS, HWOL

Note: Shading shows NBER recessions.<sup>12</sup>

# USA: Share of Unempl. from State Geo. Mismatch

Percent

Percent



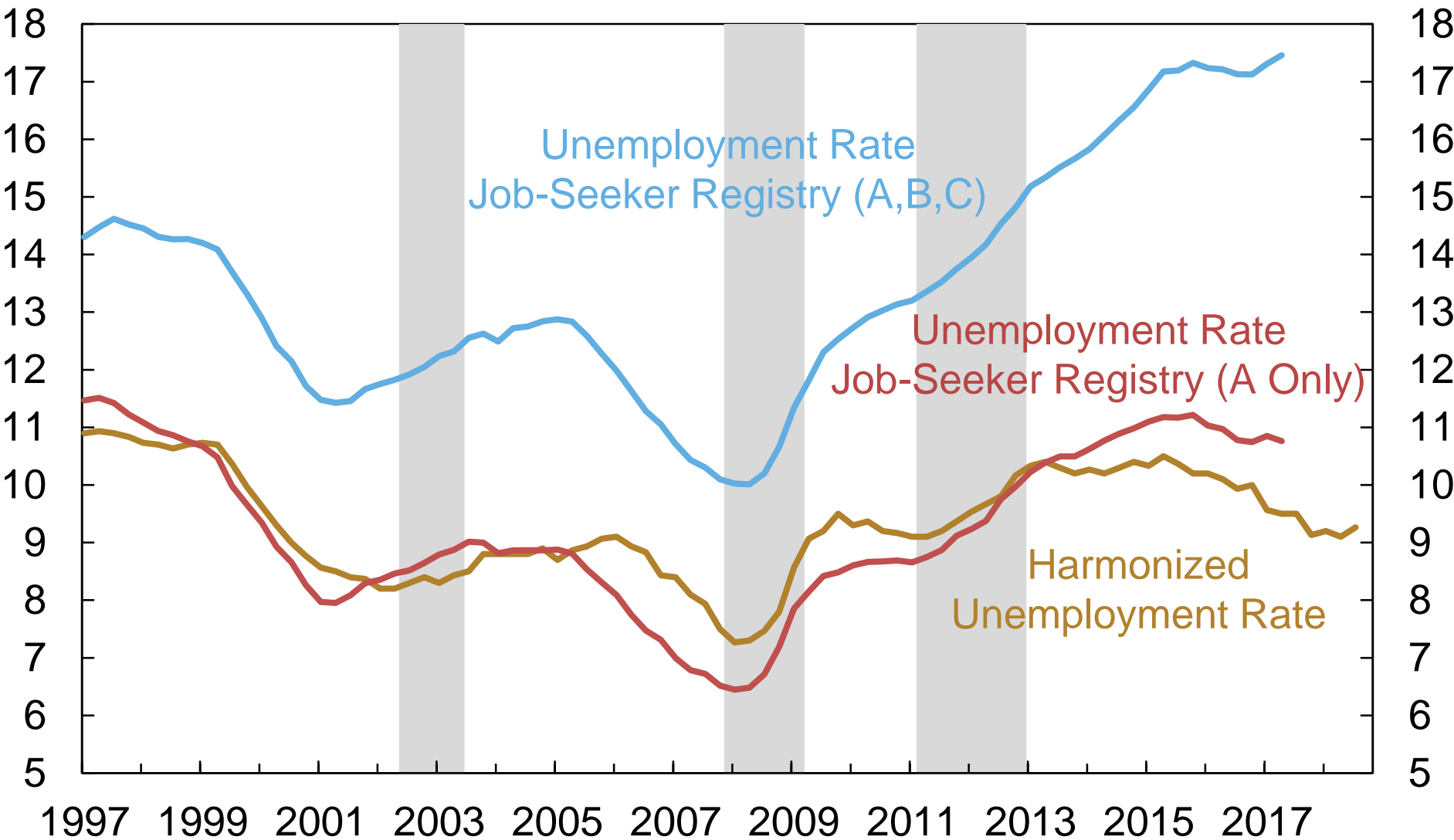
Source: BLS

Note: Shading shows NBER recessions. <sup>13</sup>

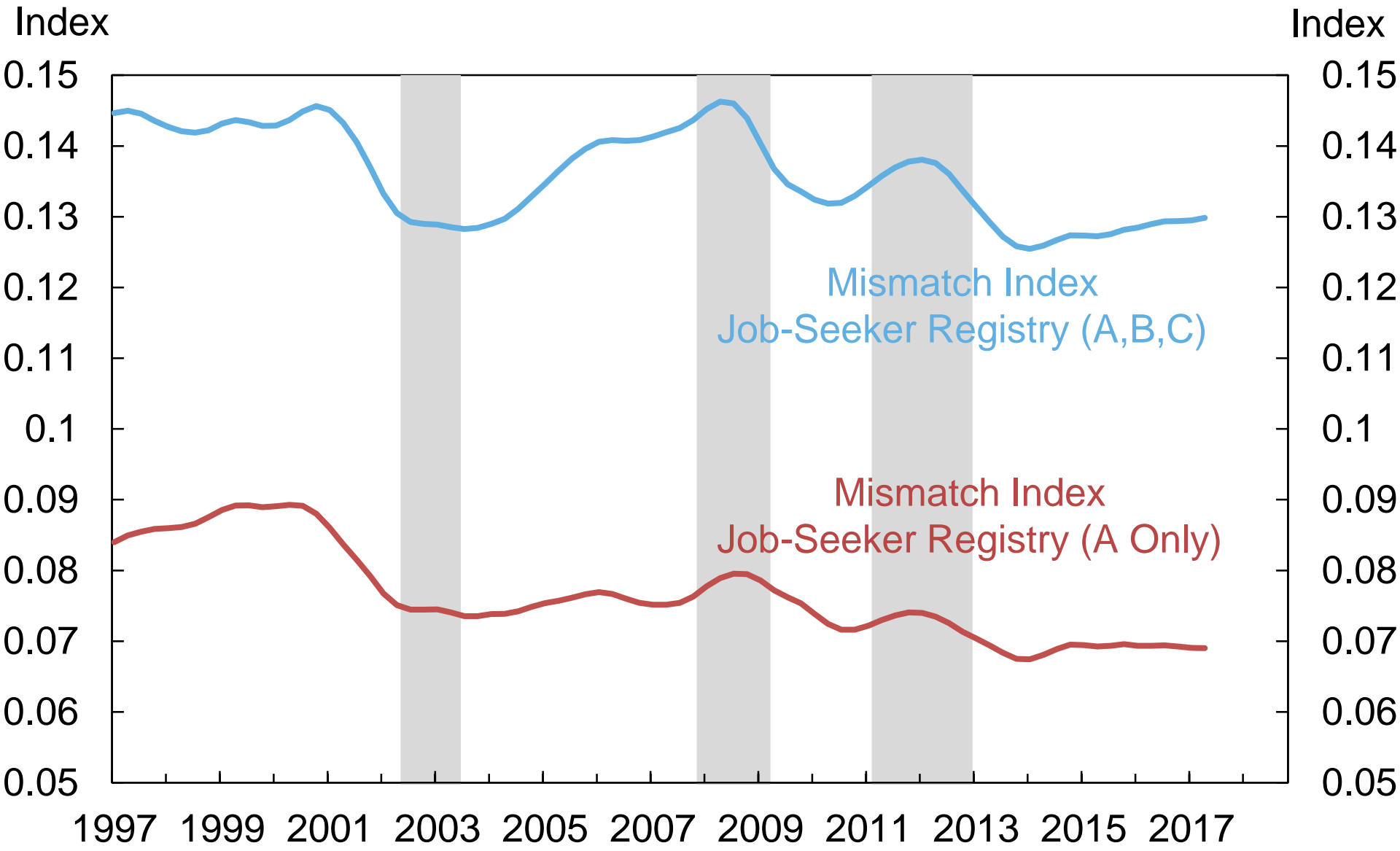
# France: Unemployment Rate

Percentage Points

Percentage Points



# France: Occupation Mismatch Index



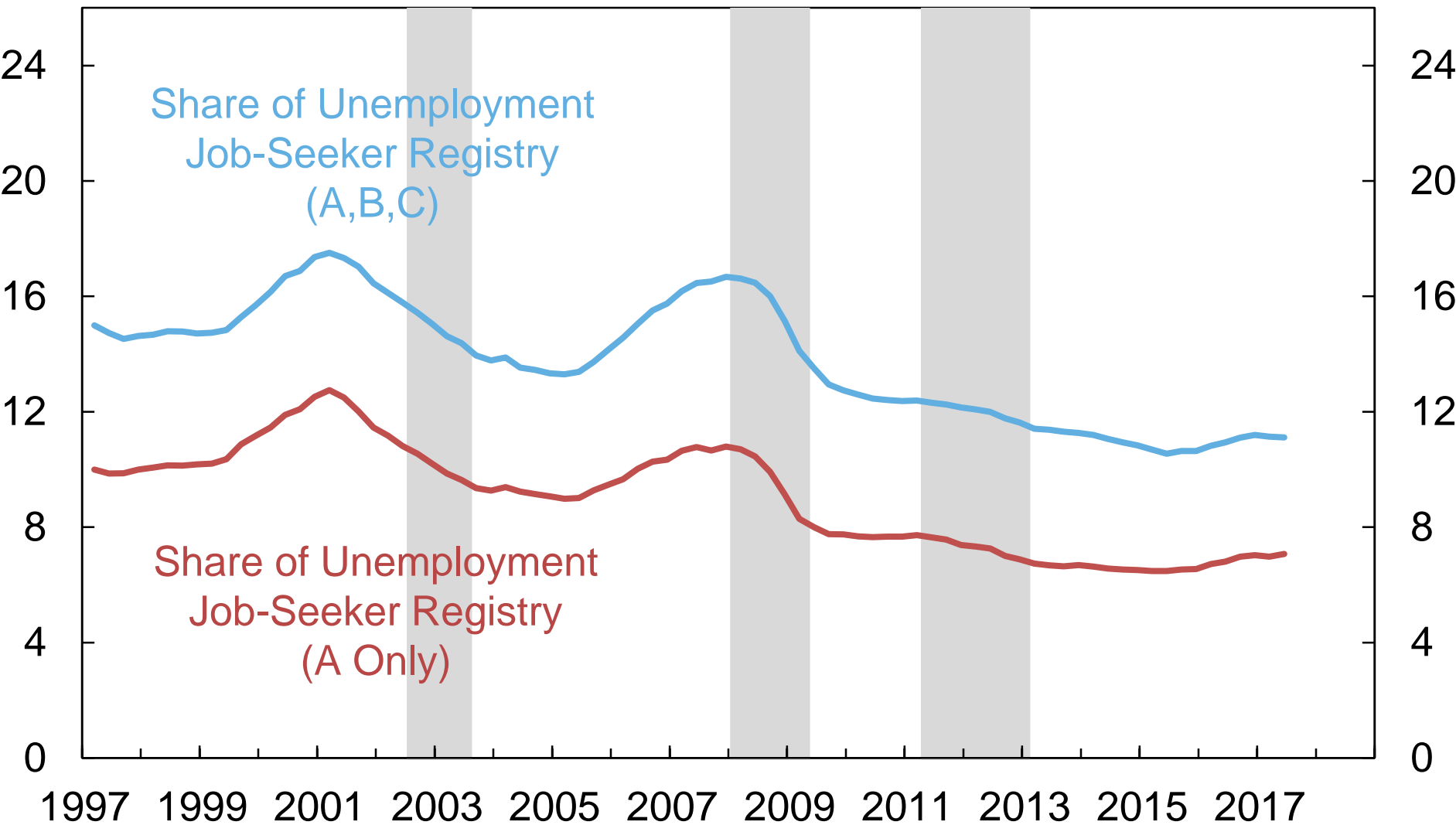
Source: Ministère du Travail

Note: Shading shows NBER recessions. <sup>15</sup>

# France: Share of Unempl. from Occupation Mismatch

Percent

Percent

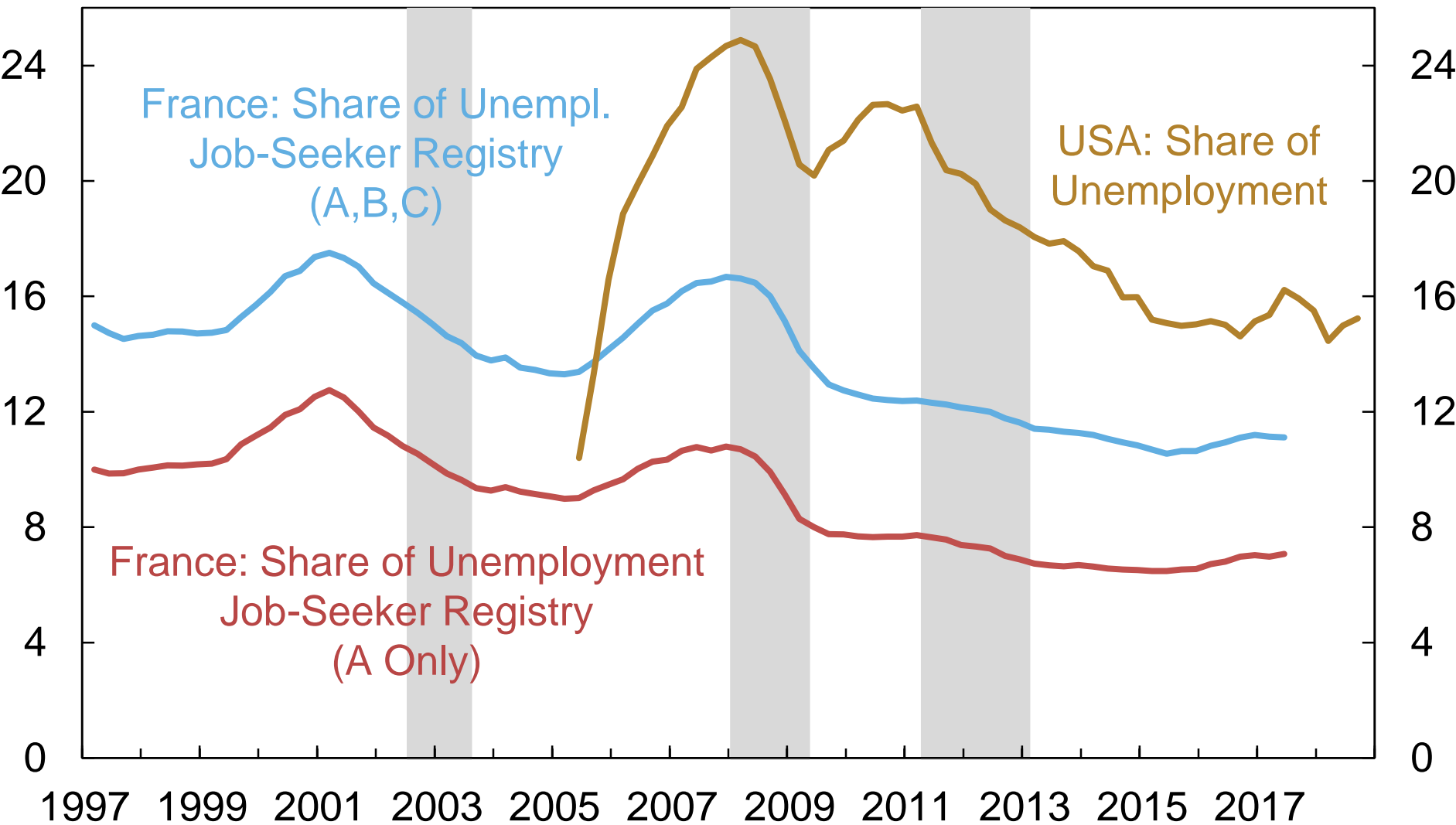




# Share of Unemployment from Occupation Mismatch

Percent

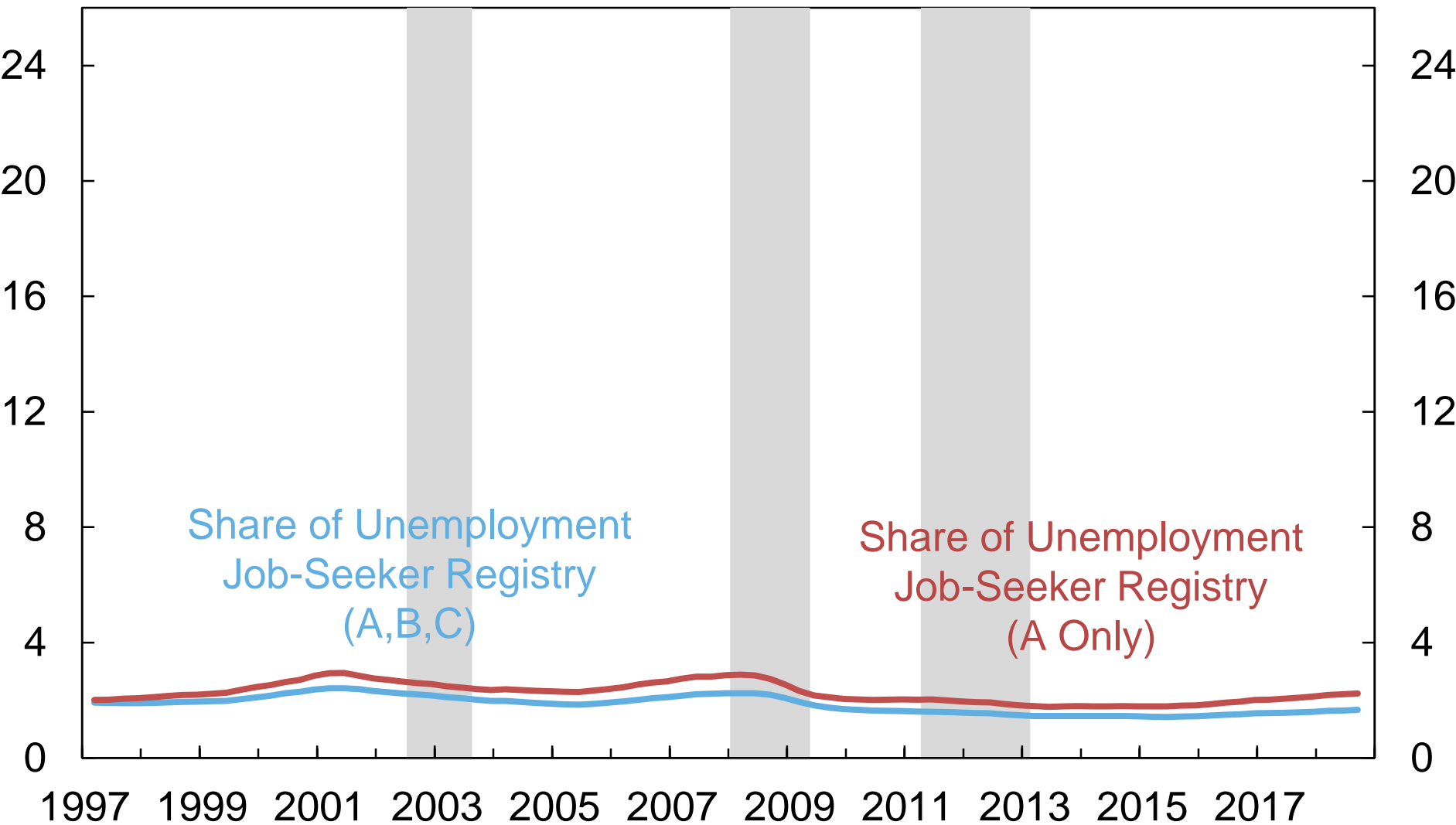
Percent



# France: Share of Unempl. from Geographic Mismatch

Percent

Percent



Source: Ministère du Travail

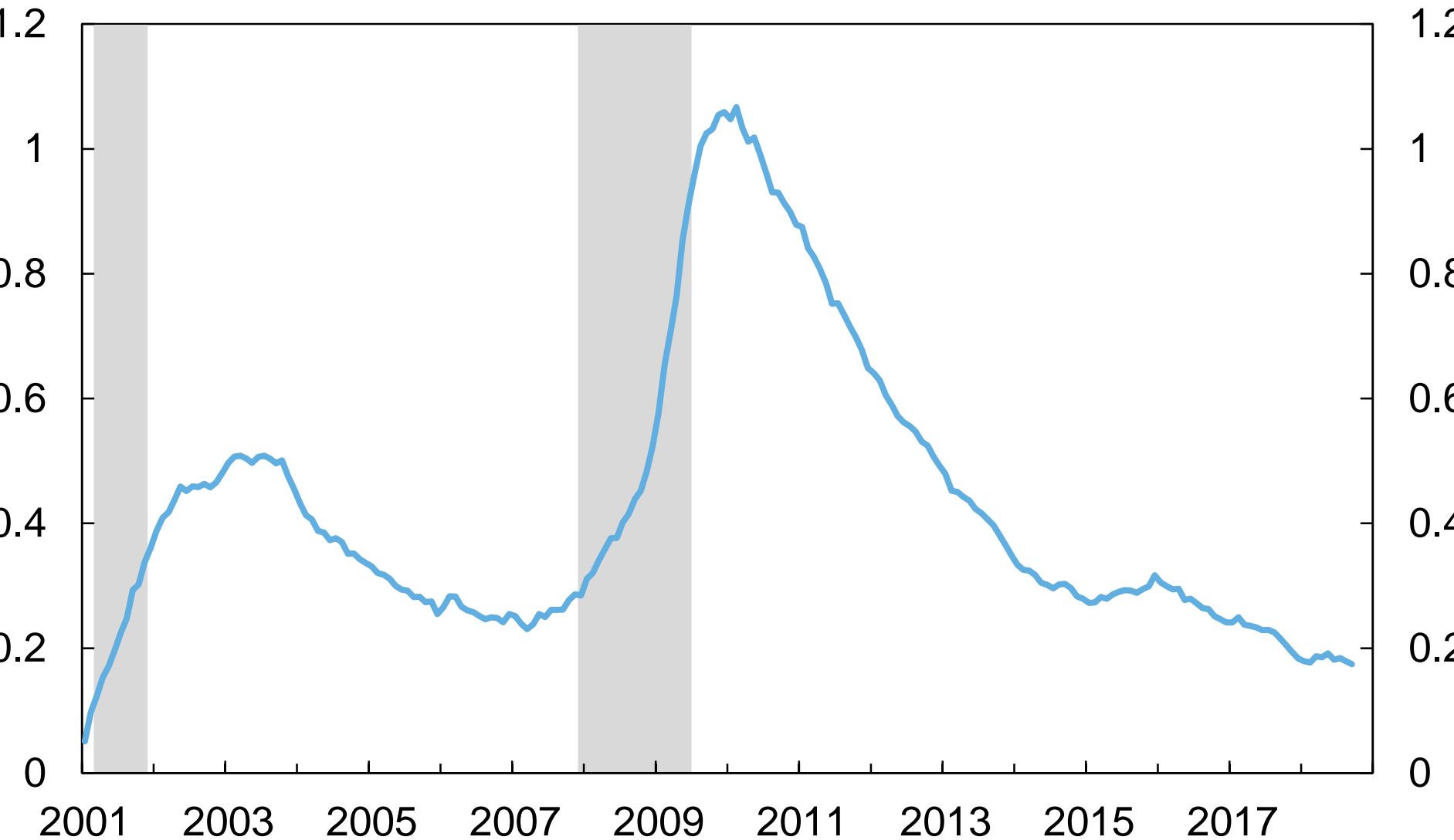
Note: Shading shows NBER recessions.

# Appendix Slides

# USA: Industry Mismatch Unemployment

Percentage Points

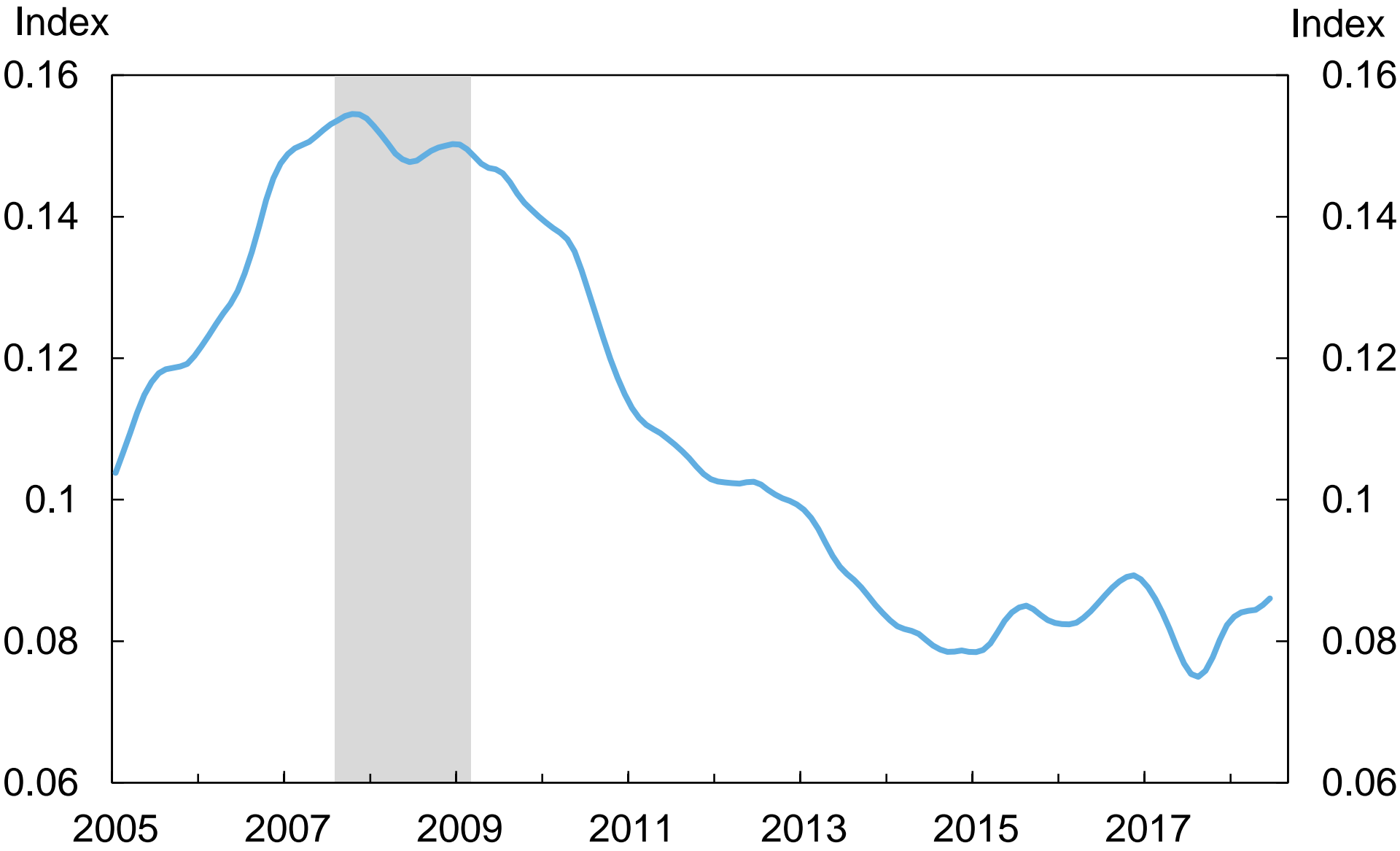
Percentage Points



Source: JOLTS, BLS

Note: Shading shows NBER recessions. <sup>20</sup>

# USA: Occupation Mismatch Index



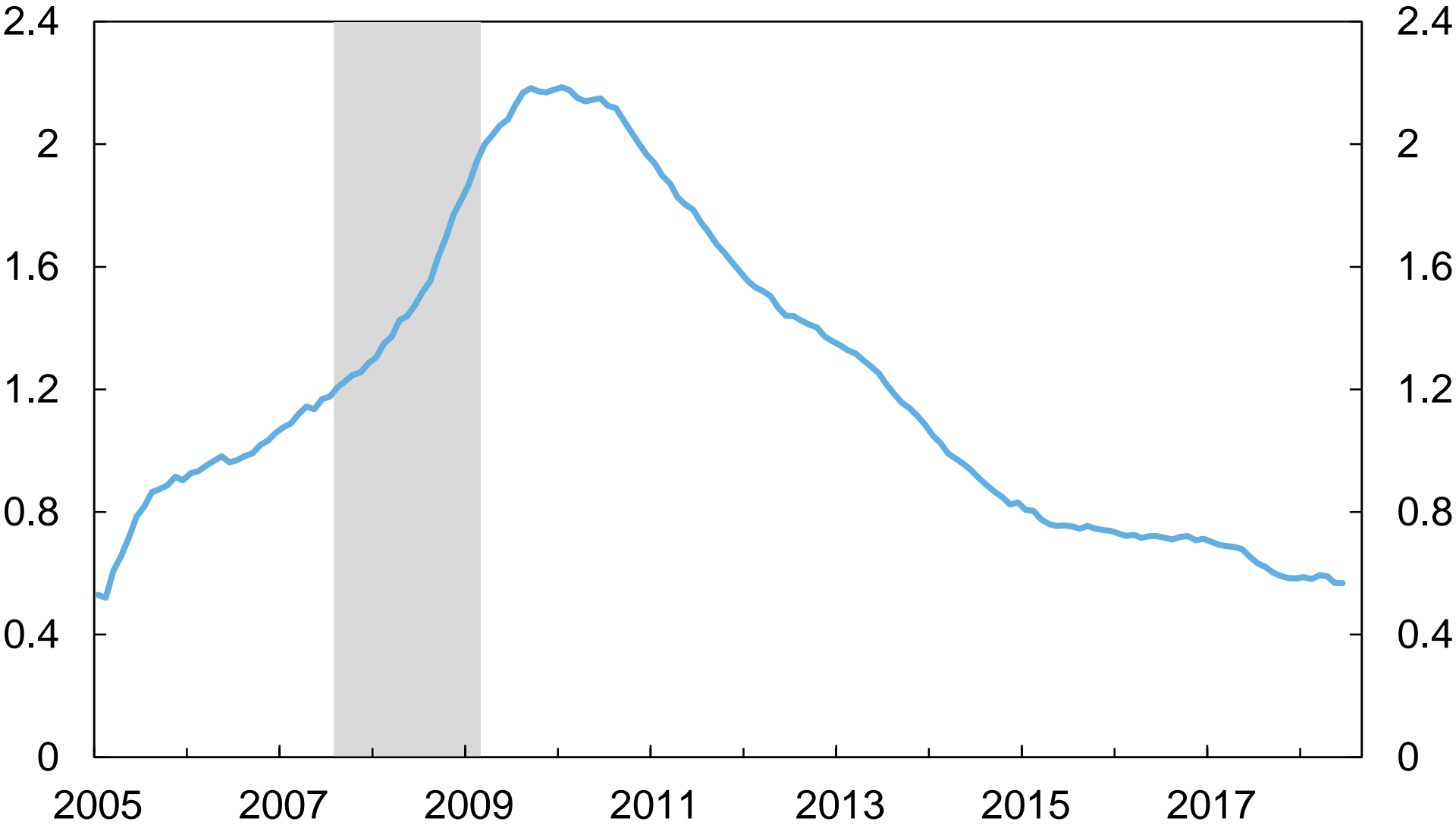
Source: BLS, HWOL

Note: Shading shows NBER recessions. <sup>21</sup>

# USA: Occupation Mismatch Unemployment

Percentage Points

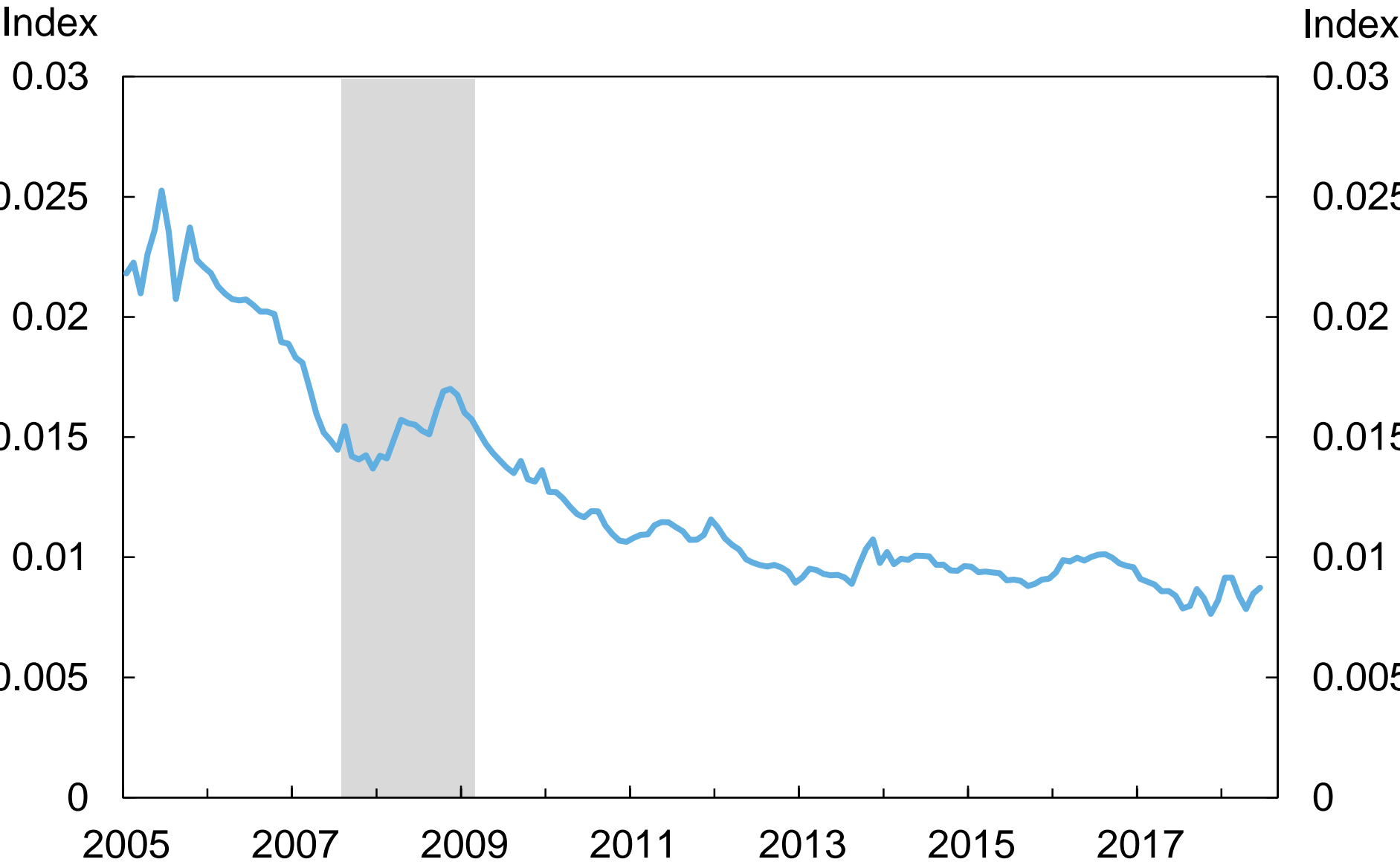
Percentage Points



Source: BLS, HWOL

Note: Shading shows NBER recessions. <sup>22</sup>

# USA: State Geography Mismatch Index



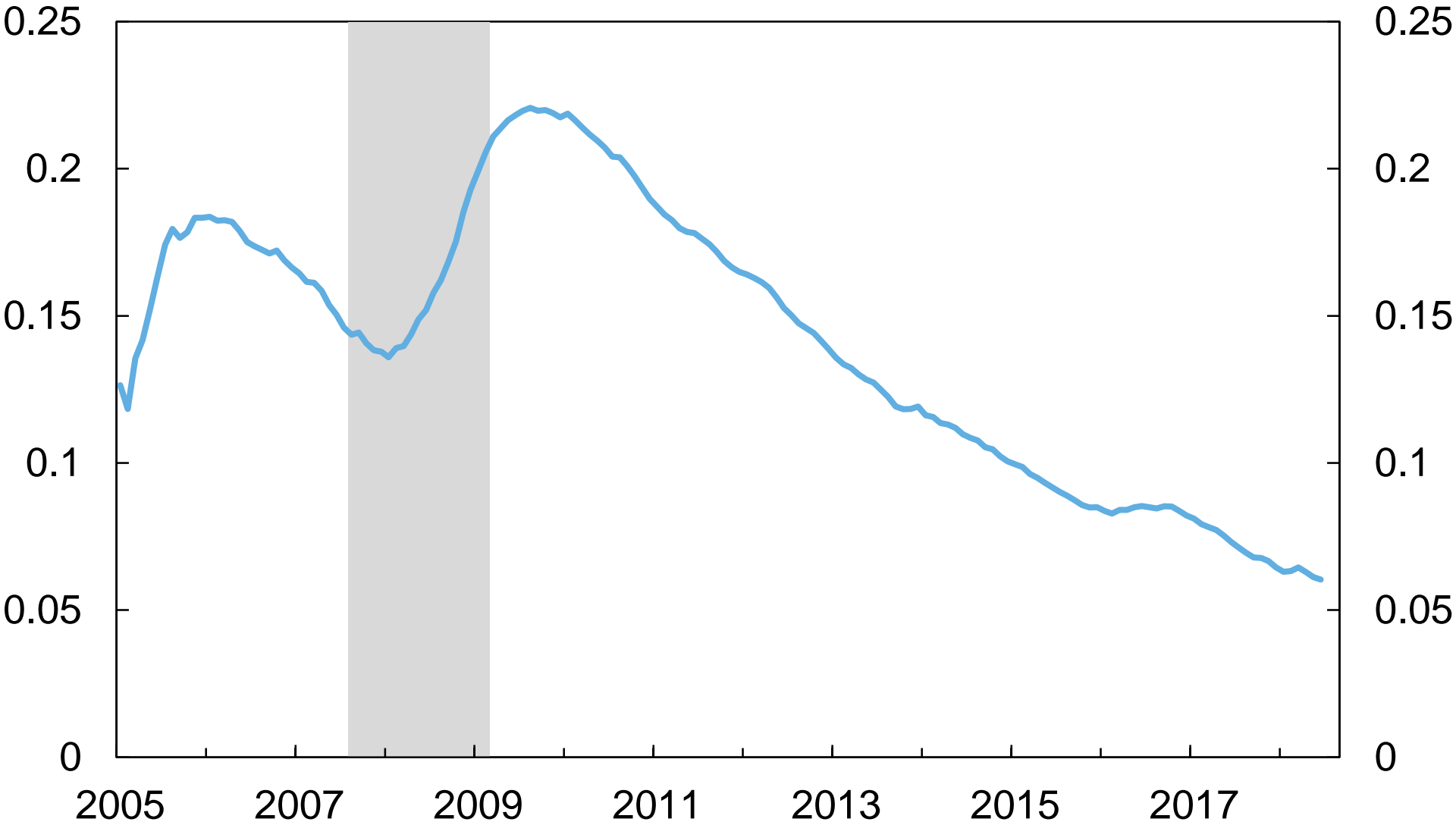
Source: BLS

Note: Shading shows NBER recessions. <sup>23</sup>

# USA: State Geography Mismatch Unemployment

Percentage Points

Percentage Points

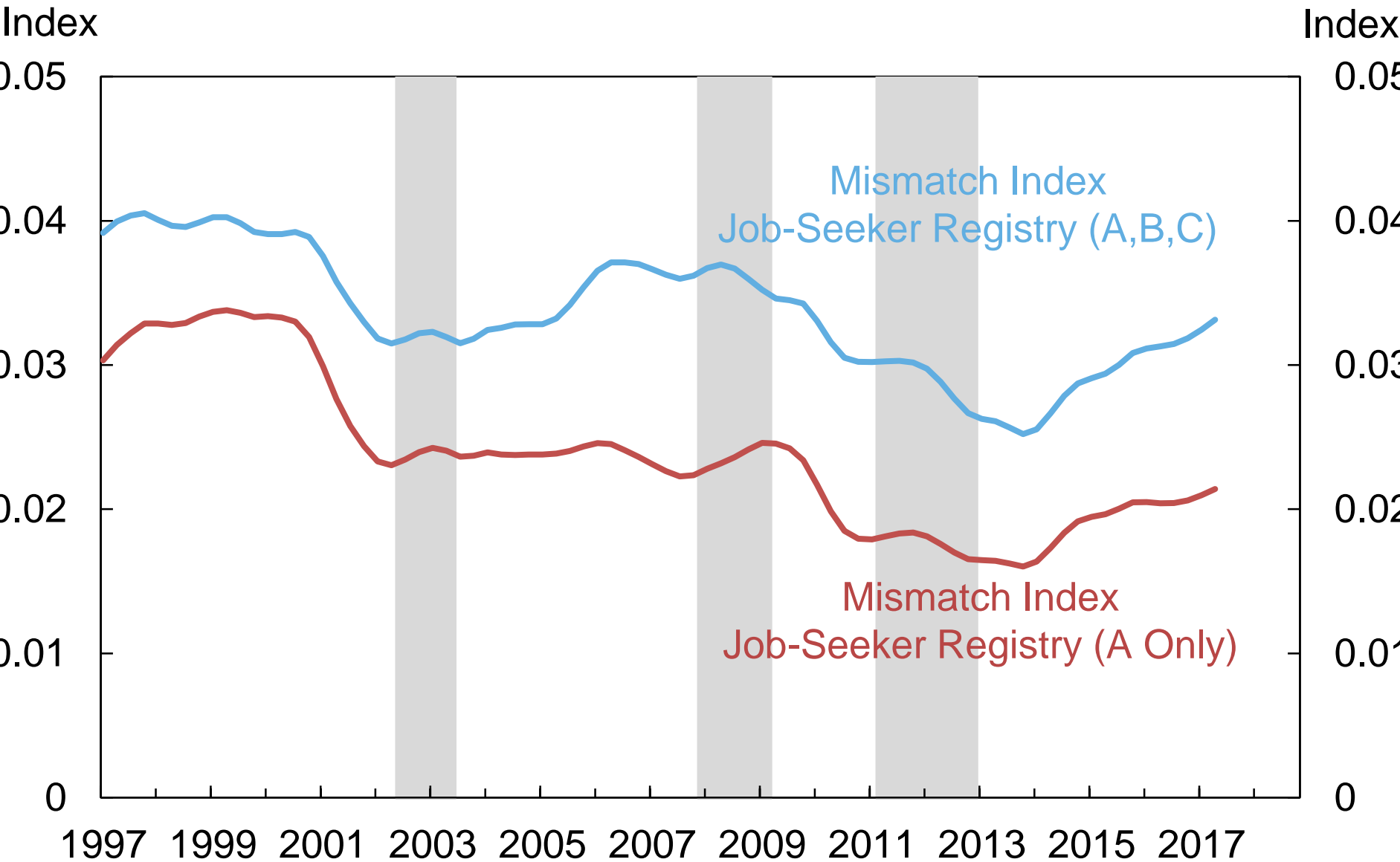


Source: BLS

Note: Shading shows NBER recessions. <sup>24</sup>



# France: Occupation Mismatch Index – Fixed Weights



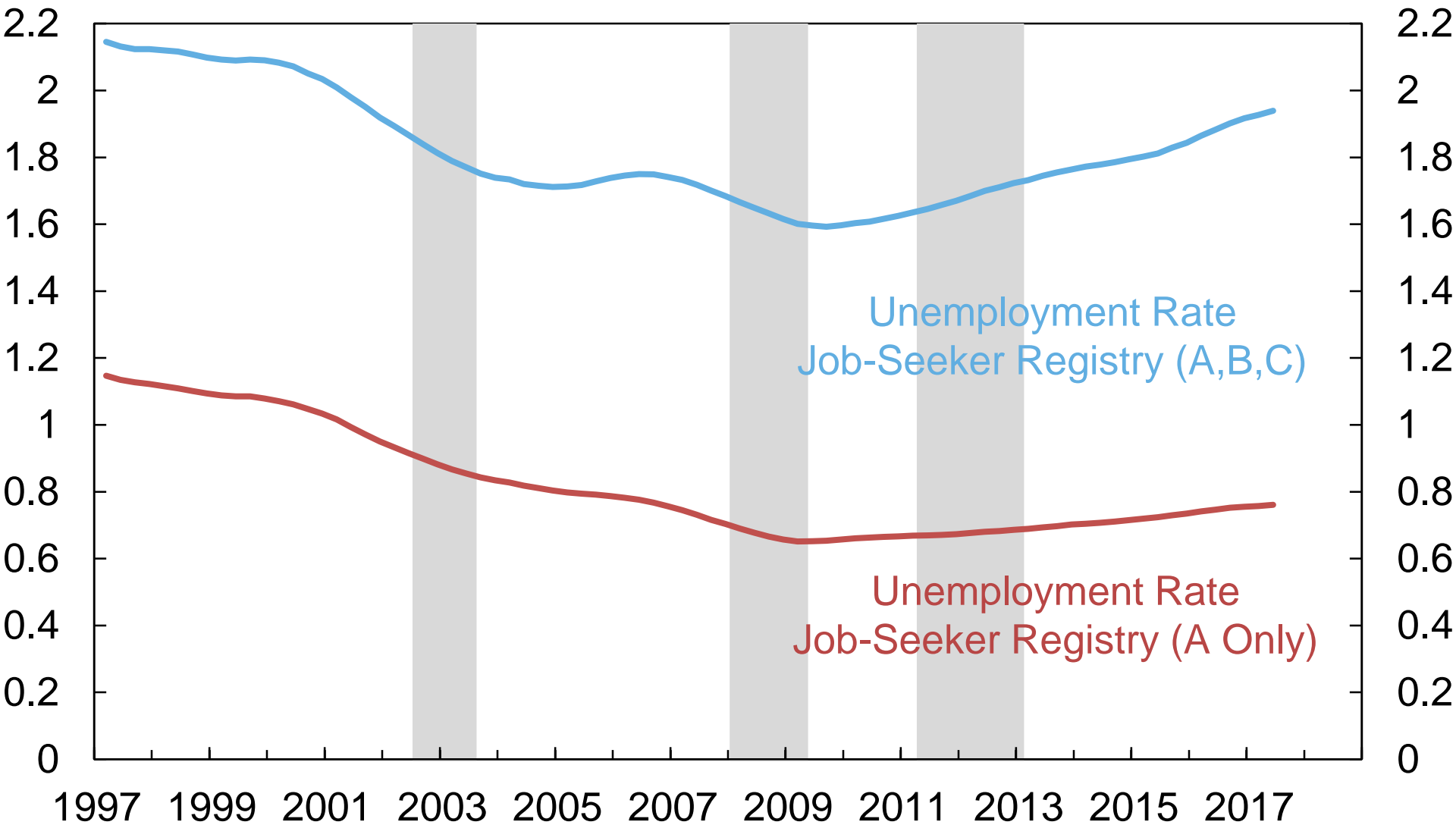
Source: Ministère du Travail

Note: Shading shows recessions. <sup>25</sup>

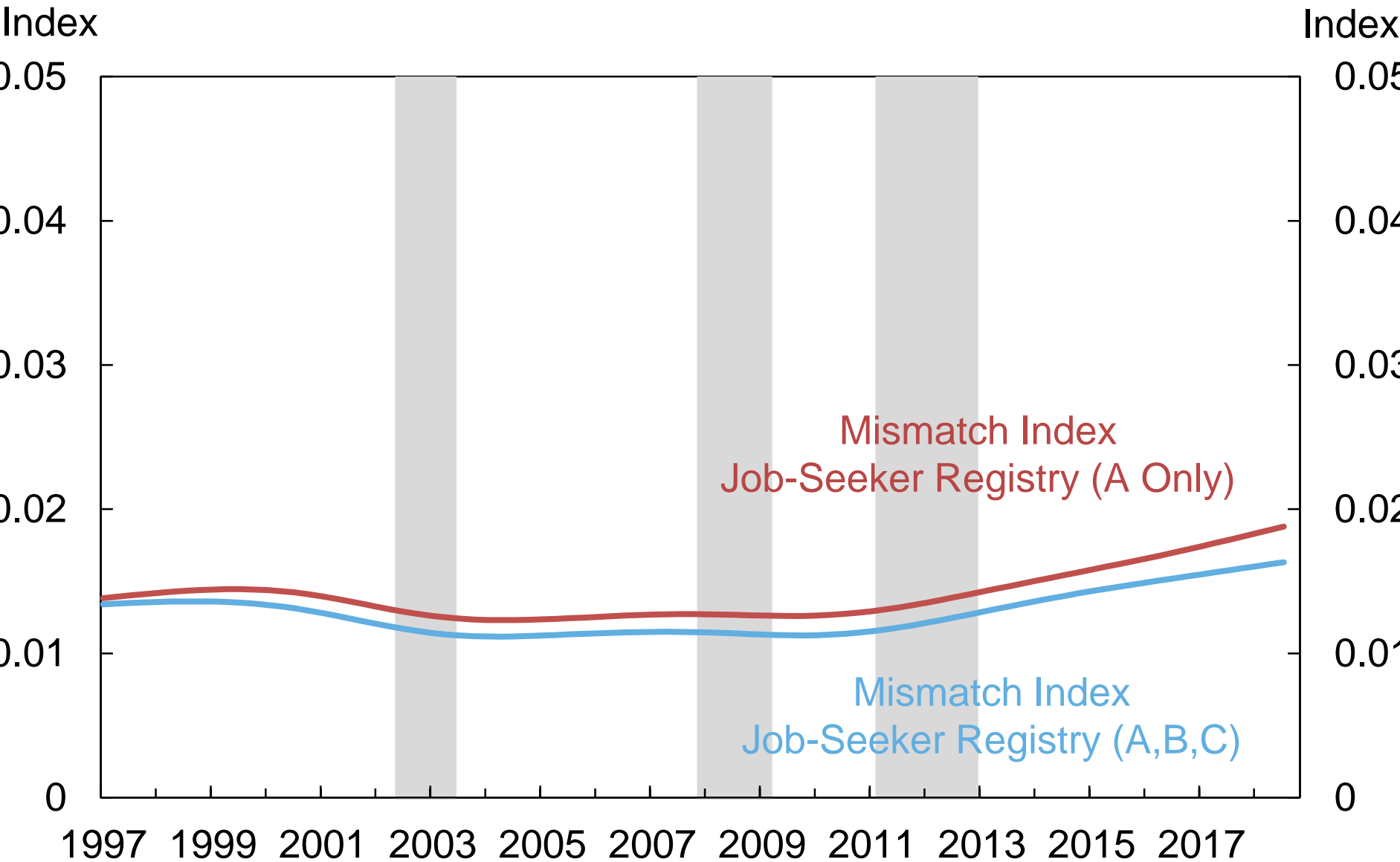
# France: Occupation Mismatch Unemployment

Percentage Points

Percentage Points



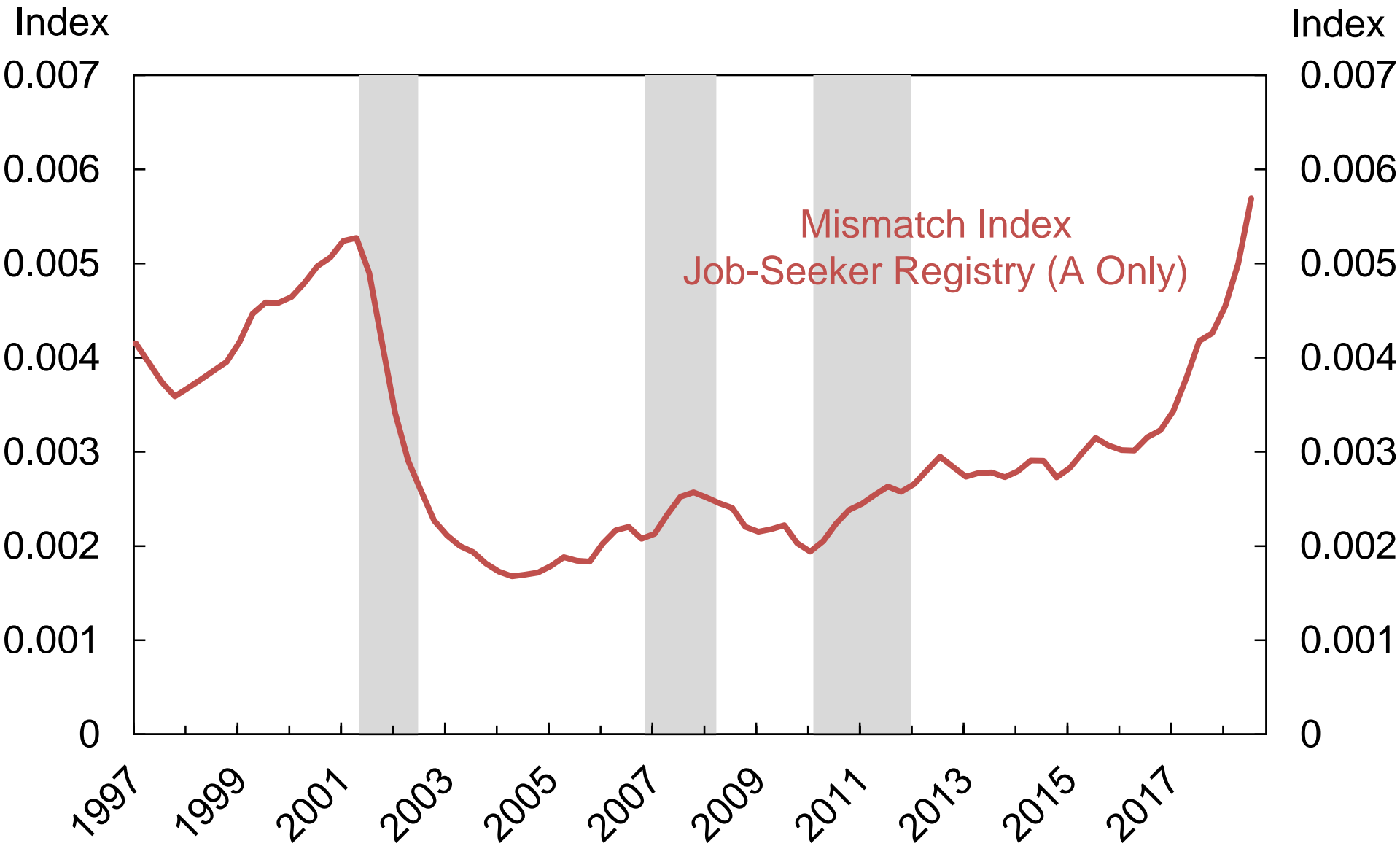
# France: Geographic (Département) Mismatch Index



Source: Ministère du Travail

Note: Shading shows recessions.

# France: Geographic (Région) Mismatch Index



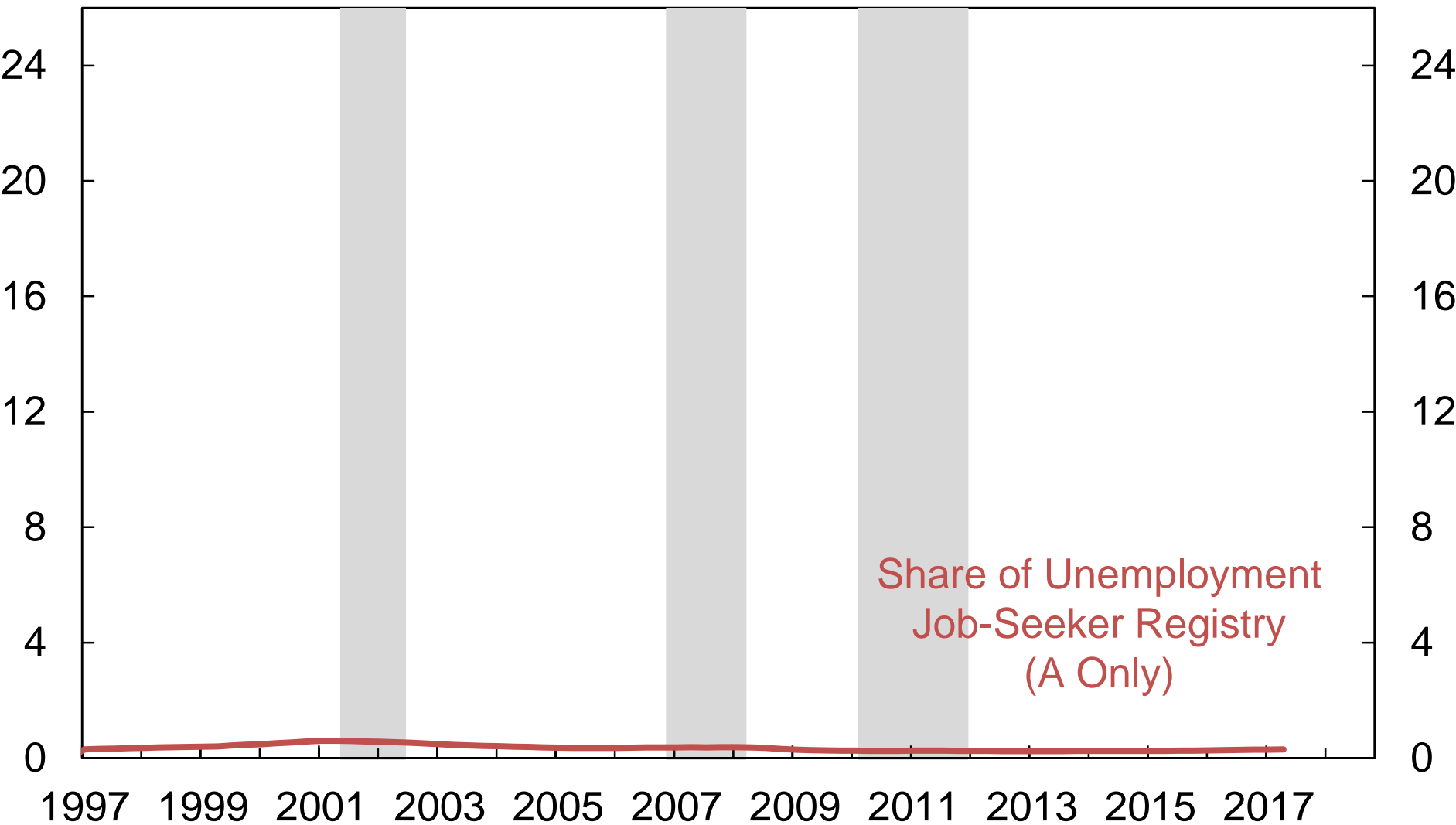
Source: Ministère du Travail, INSEE via Haver DLX

Note: Shading shows recessions.

# France: Share of Unempl. from Geo. (Région) Mismatch

Percent

Percent



Source: Ministère du Travail, INSEE via Haver DLX

Note: Shading shows recessions.