The U.S. and Michigan Outlook for 2020–2022
Consensus Revenue Estimating Conference
May 15, 2020

Research Seminar in Quantitative Economics
High-Frequency Economic Indicators
Weekly Initial Unemployment Insurance Claims (U.S.)

U.S. (Thousand, NSA)
Weekly Economic Index (Lewis-Mertens-Stock)
Retail Sales

Percent change, year-over-year

- Johnson Redbook Retail Sales Index
- Department Stores
- Discount Stores

RSQE: May 2020
Hotel Occupancy and Revenue

Source: STR

RSQE: May 2020
7-Day Moving Average of Daily New Cases of COVID-19 (U.S.)

New Cases, 7-Day MA

- U.S. without New York state
- New York state

Source: New York Times

RSQE: May 2020
U.S. Economic Outlook
Assumptions, not recommendations!

Around 80% of deaths are among those over 65
  • A shift in strategy likely in favor of helping the vulnerable isolate
  • Ease restrictions on businesses gradually, with new safety protocols and capacity constraints in place

We expect/hope no largescale rebound in cases or “second wave”

Service industries with the highest perceived risk of infection won’t rebound until customers feel safe
  • Sit-in restaurants, air travel, public transportation, concerts, sporting events, etc.
  • We project these industries to return to ‘business as usual’ by mid-2021

We are cautiously optimistic about K-12 schools reopening in-person this fall/winter (with precautions)
  • Otherwise, there is likely to be large-scale absenteeism from work
  • Children’s susceptibility to severe illness from COVID-19 appears much lower than adults’
  • Children appear unlikely to be super-spreaders of COVID-19
Treasury and agency mortgage-backed security purchases

Fresh alphabet soup of programs:

- Commercial Paper Funding Facility, Primary Dealer Credit Facility, Money Market Mutual Fund Liquidity Facility, Primary Market Corporate Credit Facility, Secondary Market Corporate Credit Facility, Term Asset-Backed Securities Loan Facility, Paycheck Protection Program Liquidity Facility

Latest additions:

- Main Street Lending Program, Municipal liquidity facility

No negative interest rates in our forecast
Market Interest Rates

Percent

Conv. Mortgage
10-Year T-Note
3-Month T-Bill

2018 2019 2020 2021 2022

Forecast

RSQE: May 2020

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Fiscal Policy – Three Major COVID-19 bills so far

- **H.R. 6201, Families First Coronavirus Response Act**, about $200 bln
  - Key economic provisions: Medicaid match, UI tweaks, SNAP

- **CARES Act**, about $2.2 trln headline cost, $1.7 trln CBO estimated cost
  - Key provisions: personal tax rebates, major UI eligibility and benefit expansion, Paycheck Protection Program, aid to states for COVID-19 expenses, Employer payroll tax deferral, Funds for Treasury to backstop Fed’s risky lending

- **Paycheck Protection Program and Health Care Enhancement Act**, $480 bln CBO estimated cost
  - PPP funds nearly doubled, $100 bln to reimburse hospitals for expenses and lost revenues
Paycheck Protection Program extension/modification is likely
  • We expect another 8 weeks of coverage, more non-payroll costs covered

State and Local governments urgently need substantial help
  • We expect about $600 bln of aid through fiscal 2022

Unemployment benefits will need to be extended at least for 2021

President Trump wants a payroll tax cut
  • We expect a 2% payroll tax holiday split evenly between employers and employees
  • From mid-2020q3 through 2021
Oil Prices (West Texas Intermediate Crude)

Dollars per Barrel

Quarterly WTI
Annual WTI

Forecast

4th Quarter to 4th Quarter % Change

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<tr>
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<th>2022</th>
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*Implicit deflator for petroleum & products

RSQE: May 2020
Real GDP Growth

Percent, SAAR

Forecast

- 2.9
- 2.3
- 4.0
- 3.3
- 2.1

2018 2019 2020 2021 2022

RSQE: May 2020

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• 2020q2 average unemployment: 17.4%
• BLS estimates reported April unemployment rate would have been approximately 5 percentage points higher if not for misclassification
• Nearly all newly unemployed were on temporary layoff in April
Consumer Price Inflation (CPI-U)

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RSQE: May 2020
High-Frequency Indicators: Michigan
Weekly Initial Unemployment Insurance Claims (Michigan)
Seated Diners at OpenTable.com Restaurants (Michigan)

Percent change, versus Same Day in 2019

Source: OpenTable
Daily New Cases of COVID-19 (Michigan)

Source: New York Times

RSQE: May 2020
Michigan Economic Outlook
Annual Light Vehicle Sales, 1991–2022

Units (Millions)

- Total Light Vehicle Sales
- Detroit Three Sales

Forecast

RSQE: May 2020
The Short-Run Impact on Michigan Payroll Employment

- We estimate 54% of Michigan workers able to work onsite in April, increasing in May and June
- We estimate 33% of Michigan workers can perform jobs remotely (Dingel and Neiman 2020)
- Together, nearly 70% of workers able to do their jobs in April
- Additional 550,000 workers out of work because of decline in demand (“second round effects”)
- Approximately 725,000 workers not working but continued to be paid
  - Using sick or vacation leave, covered by Paycheck Protection Program, large firms avoiding layoffs
- Second quarter payroll employment decline of 23.5 percent (1,050,000 jobs)
  - Reflects ongoing resumption of economic activity in May and June
  - Consistent with pattern of initial unemployment insurance claims
Small business failures

- Small Business Association of Michigan: nearly one in seven small businesses in Michigan do not expect to survive
- Cross-tabs: smallest businesses most likely to expect to fail (consistent with other data sources)
- Extrapolating to larger businesses, approximately 4.9 percent of employees worked at businesses expected to fail

Shortfall in business formation

- Census Bureau’s Weekly Business Formation Statistics: “High Propensity Business Applications” have been approximately 34% lower during crisis
- With assumptions, estimate total annual employment shortfall from missing business formation of 1.8 percent

Reduced labor demand at continuing establishments (hardest to estimate, but they are all hard)

- Nationally, most layoffs so far are expected to be temporary

Estimate payroll employment shortfall of 9 percent by end of 2020

RSQE: May 2020
Michigan Payroll Employment, 2005q1–2022q4

• 2020q2: declines by 23.5%

RSQE: May 2020
Michigan Unemployment Rate, 2005q1–2022q4

- 2020q2 average: 22%
- Higher than national rate because of:
  - Michigan’s more cyclical economy;
  - The sharp decline in light vehicle sales; and
  - Michigan’s relatively heavy burden of the disease.
The CARES Act contains multiple provisions to shield incomes from the downturn in employment

Economic impact payments (“$1,200 checks”)
  • Estimate just over $8 billion to Michigan residents

Pandemic Unemployment Assistance/Compensation
  • Flat $600 benefit in addition to normal UI benefits available through July
  • Maximum weekly benefit now $962 in Michigan (normally $362 per week)

Access to UI benefits expanded
  • Maximum duration increased by 13 weeks
  • Job search requirements waived
  • Eligibility extended to self-employed and independent contractors

Outlook for Michigan Personal Income

RSQE: May 2020
Estimated Distribution of Weekly Earnings & Potential UI Benefits in Michigan, 2019 Average

RSQE analysis of Current Population Survey microdata using usual weekly earnings. Weekly earnings are topcoded at $2,884.61. Dashed line represents maximum weekly unemployment insurance benefit under Pandemic Unemployment Assistance and Compensation of $962 per week.
Estimated Distribution of Weekly Earnings & Potential UI Benefits in Michigan, 2020q2

Est. avg. total weekly wages and salaries **decline** by $1.13 billion relative to 2019.

Est. avg. total unemployment benefits **increase** by $1.08 billion relative to 2019.

Estimated weekly total earnings and benefits in 2020q2 come to **99.0%** of 2019 avg. ... IF all qualified workers apply and collect benefits.

RSQE analysis of Current Population Survey microdata provided by IPUMS using usual weekly earnings. Weekly earnings are topcoded at $2,884.61. Dashed line represents maximum weekly unemployment insurance benefit under Pandemic Unemployment Assistance and Compensation of $962 per week.

RSQE: May 2020