The Impact of the Pandemic and Lasting Lessons for Teaching Economics

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Conference on Teaching and Research in Economic Education

June 4, 2021

Lessons from the Financial Crisis for

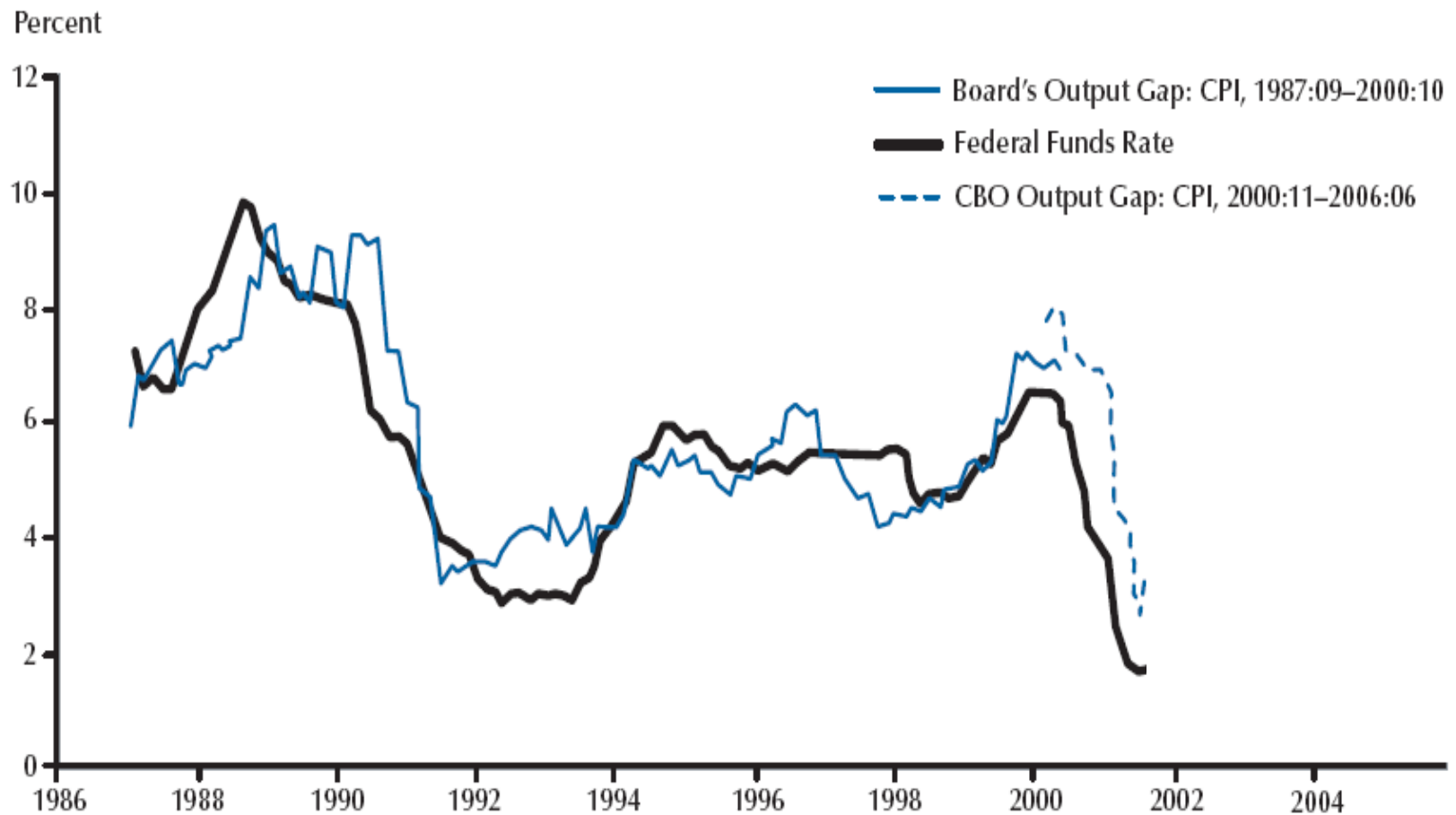# Teaching Economics

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June 2, 2011
(Not a Typo! Date of Talk Ten Years Ago at CTREE

Illustrative monetary policy chart from St Louis Fed February 2007, Bill Poole

Greenspan Years: Federal Funds Rate and Taylor Rule
(CPI $p^* = 2.0$, $r^* = 2.0$) $a = 1.5$, $b = 0.5$

Percent

Legend:
- Board's Output Gap: CPI, 1987:09–2000:10
- Federal Funds Rate
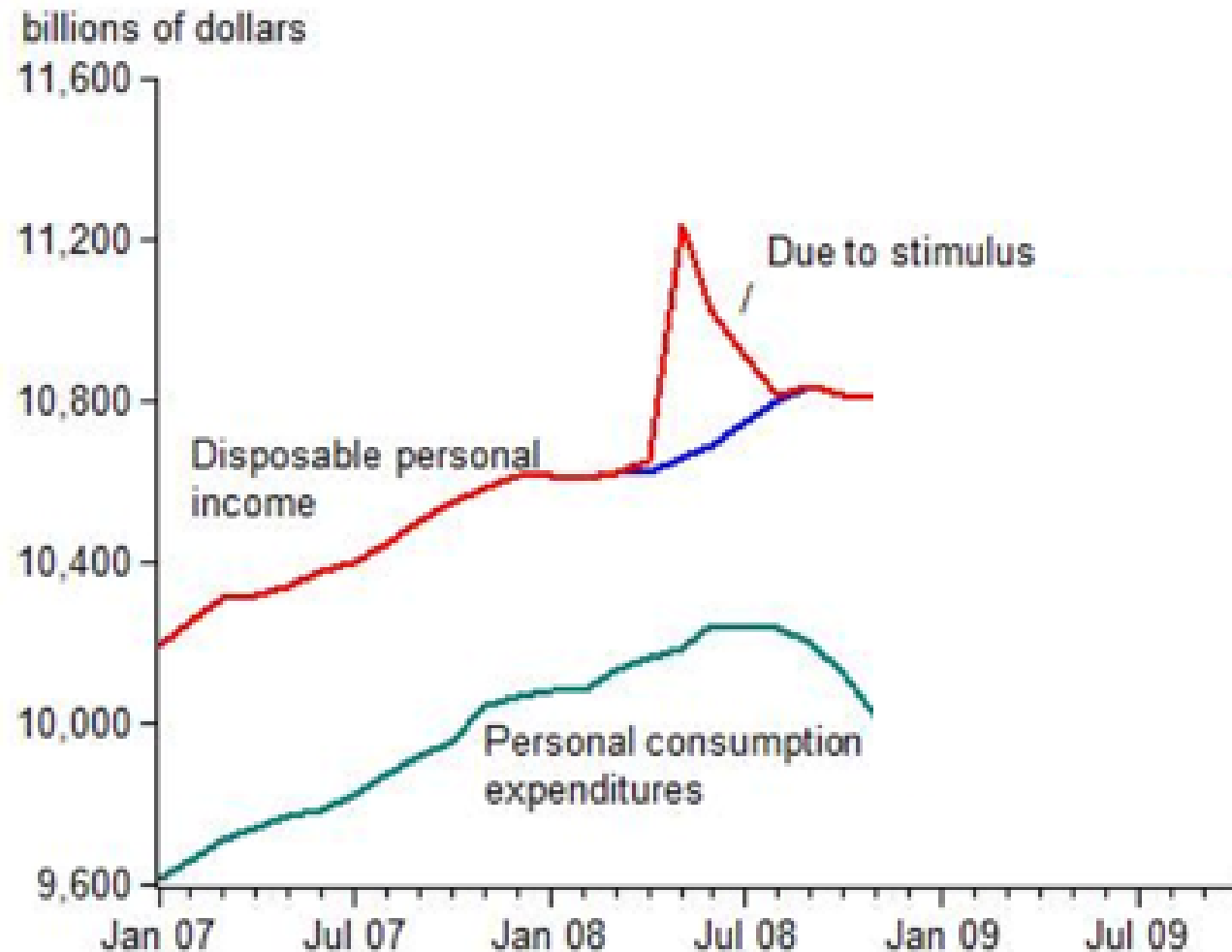- CBO Output Gap: CPI, 2000:11–2006:06

Illustrative monetary policy chart from St Louis Fed February 2007, Bill Poole

Greenspan Years: Federal Funds Rate and Taylor Rule
(CPI $p^* = 2.0$, $r^* = 2.0$) $a = 1.5$, $b = 0.5$
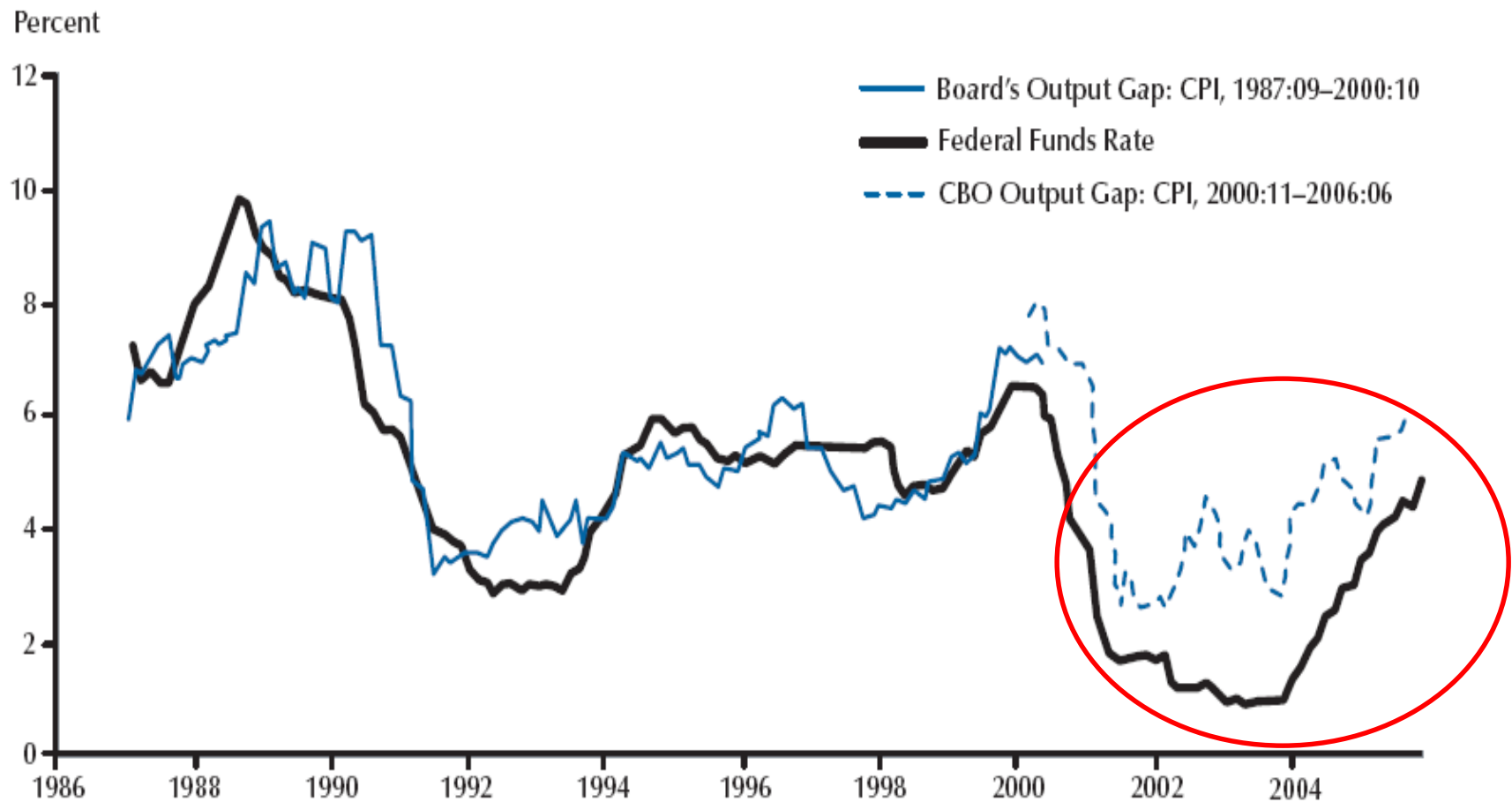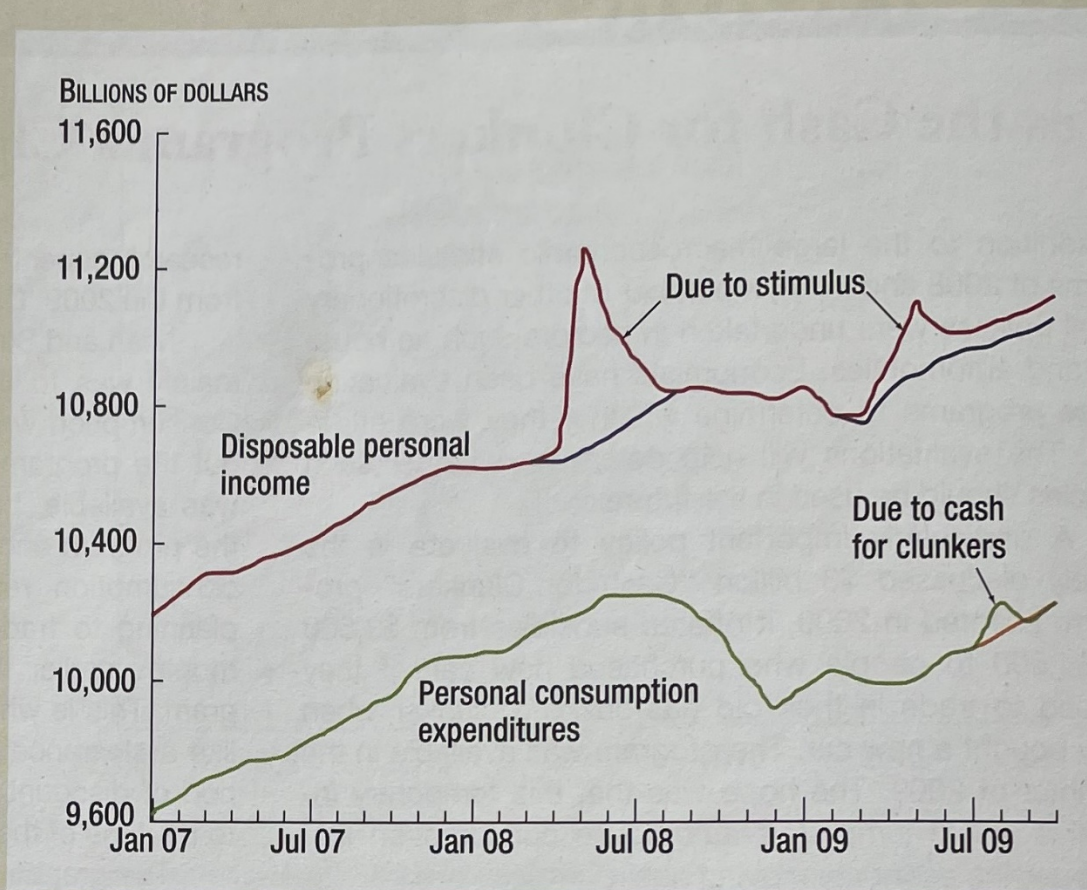
Temporary stimulus meets permanent income hypothesis

Taylor and Weerapana (2010)

Figure **26-10**

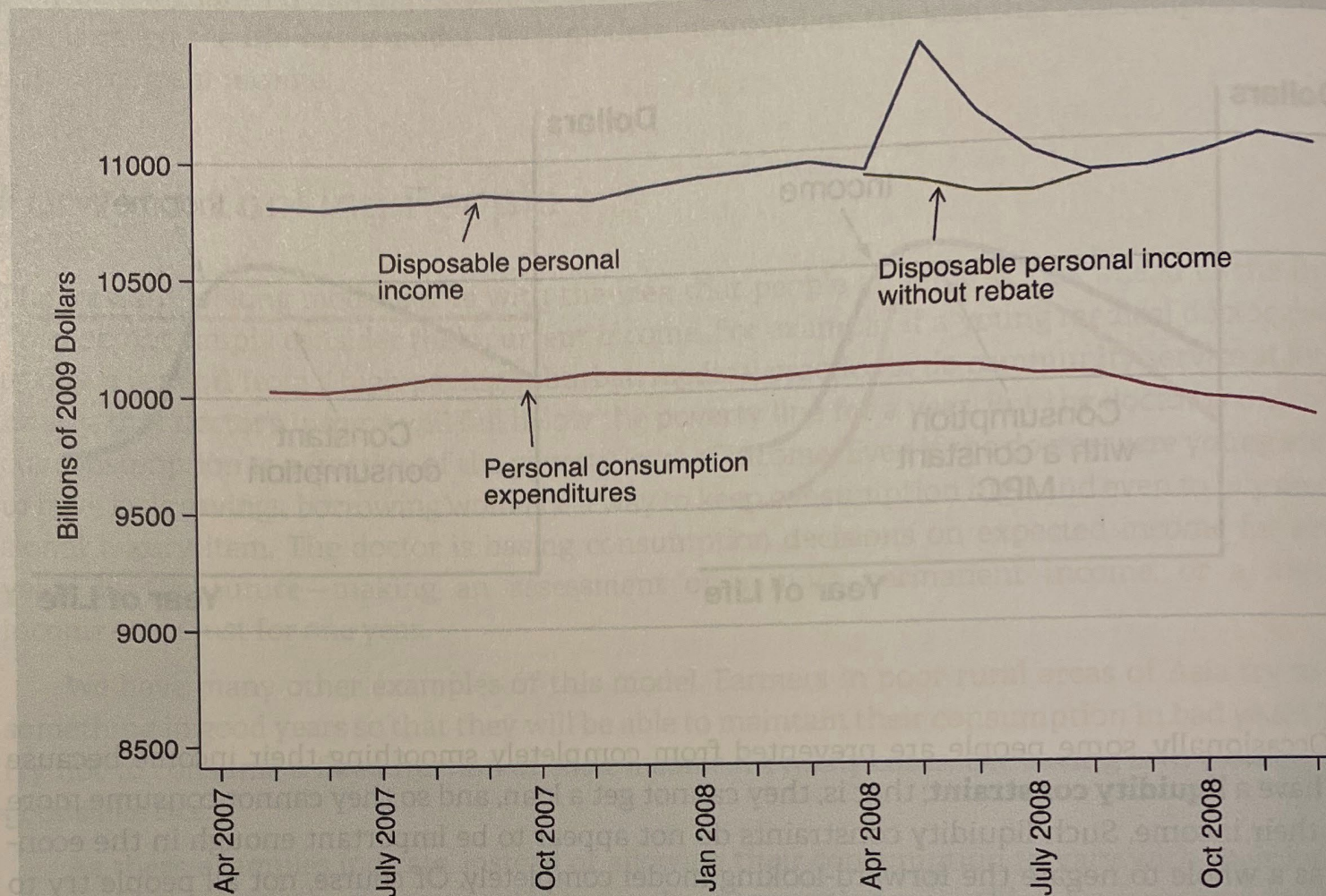**Income and Consumption during the Two Discretionary Stimulus Programs**

The 2008 and 2009 stimulus programs raised disposable personal income as checks were sent to people. The purpose was to jump-start consumption and stimulate aggregate demand. According to the data shown in this chart, consumption did not increase as a result of these programs. Economists who view the programs as effective argue that consumption would have declined more without the programs. See the Economics in Action box on the previous page for a discussion of the Cash for Clunkers program.

FIGURE 23.16 Some Evidence from the 2008 Stimulus Act in Favor of the Permanent Income Hypothesis

Temporary rebate payments in May through August 2008 increased disposable personal income but had no noticeable effect on consumption.


Disposable personal income

Disposable personal income without rebate

Personal consumption expenditures

Billions of 2009 Dollars

11000

10500

10000

9500

9000

8500

Apr 2007 July 2007 Oct 2007 Jan 2008 Apr 2008 July 2008 Oct 2008

Policy makers then doubled-down

- Discretionary fiscal stimulus of 2009 ($862 billion)
  - One-time payments again
- Cash for clunkers program
- Quantitative easing (QE)
  - In 2009: purchases of $1.25 trillion of mortgage backed securities, $300 billion of longer term Treasury bonds
  - In 2010 and 2011: purchases of $600 billion of longer term Treasury bonds.

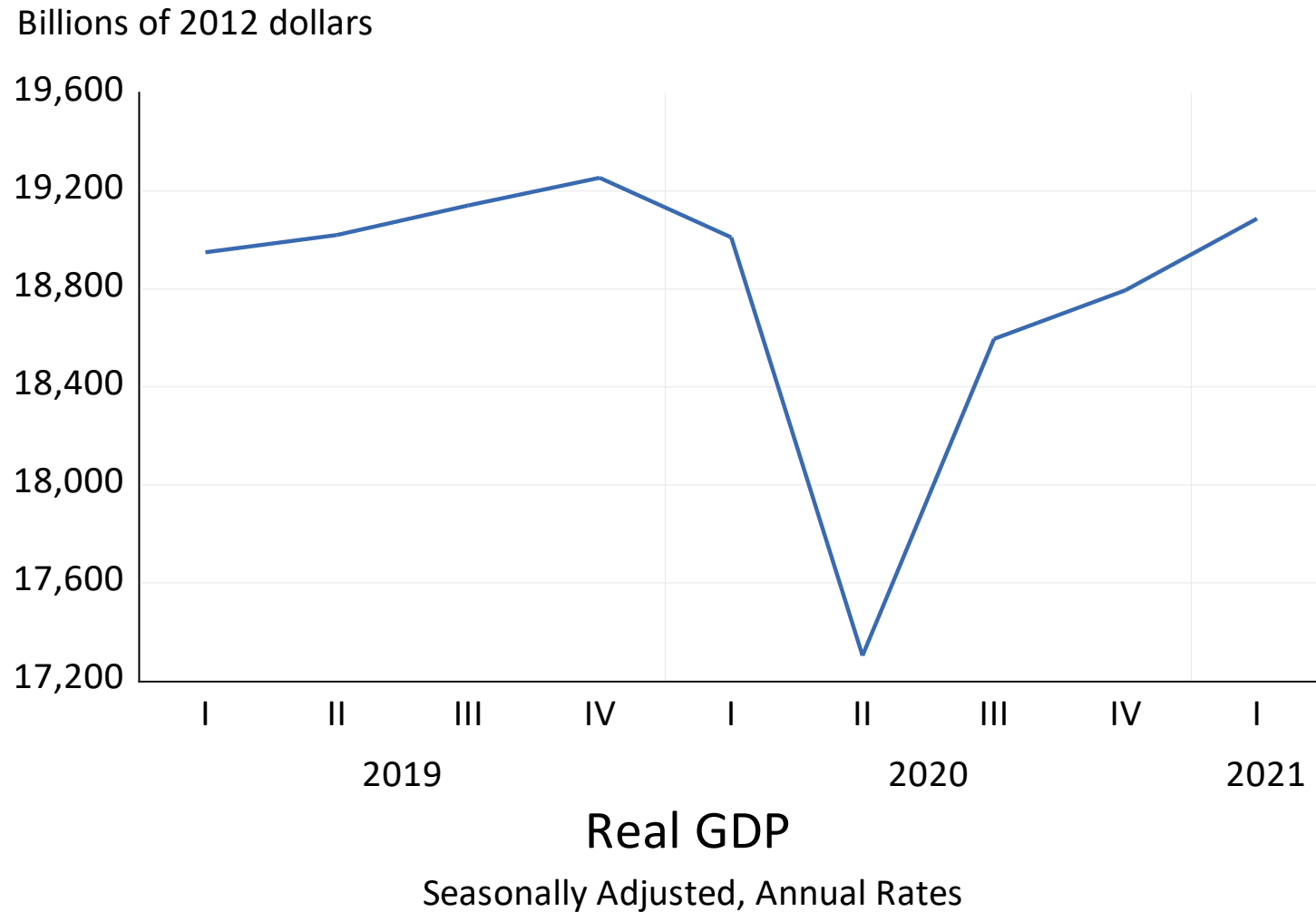# Temporary stimulus meets permanent income hypothesis again
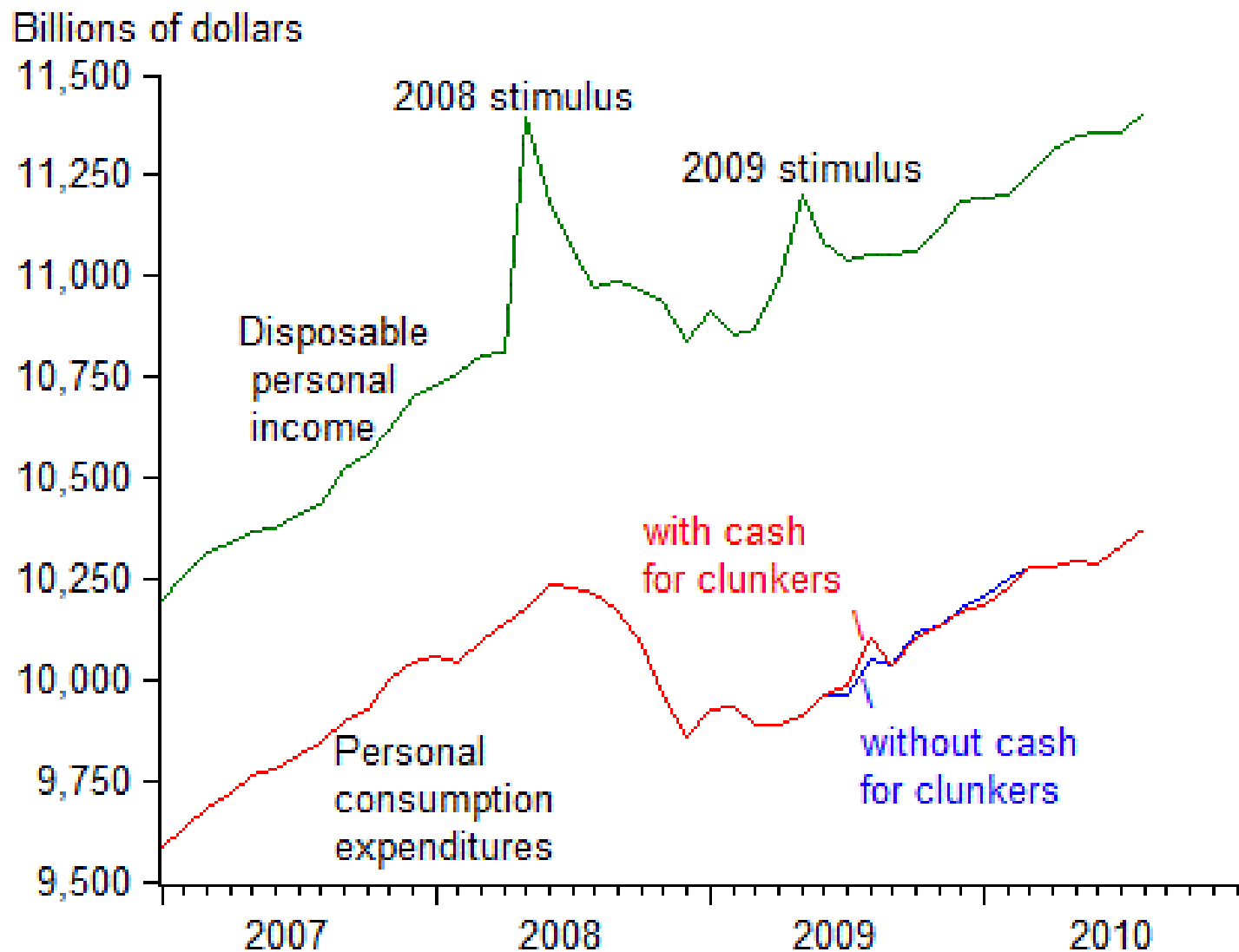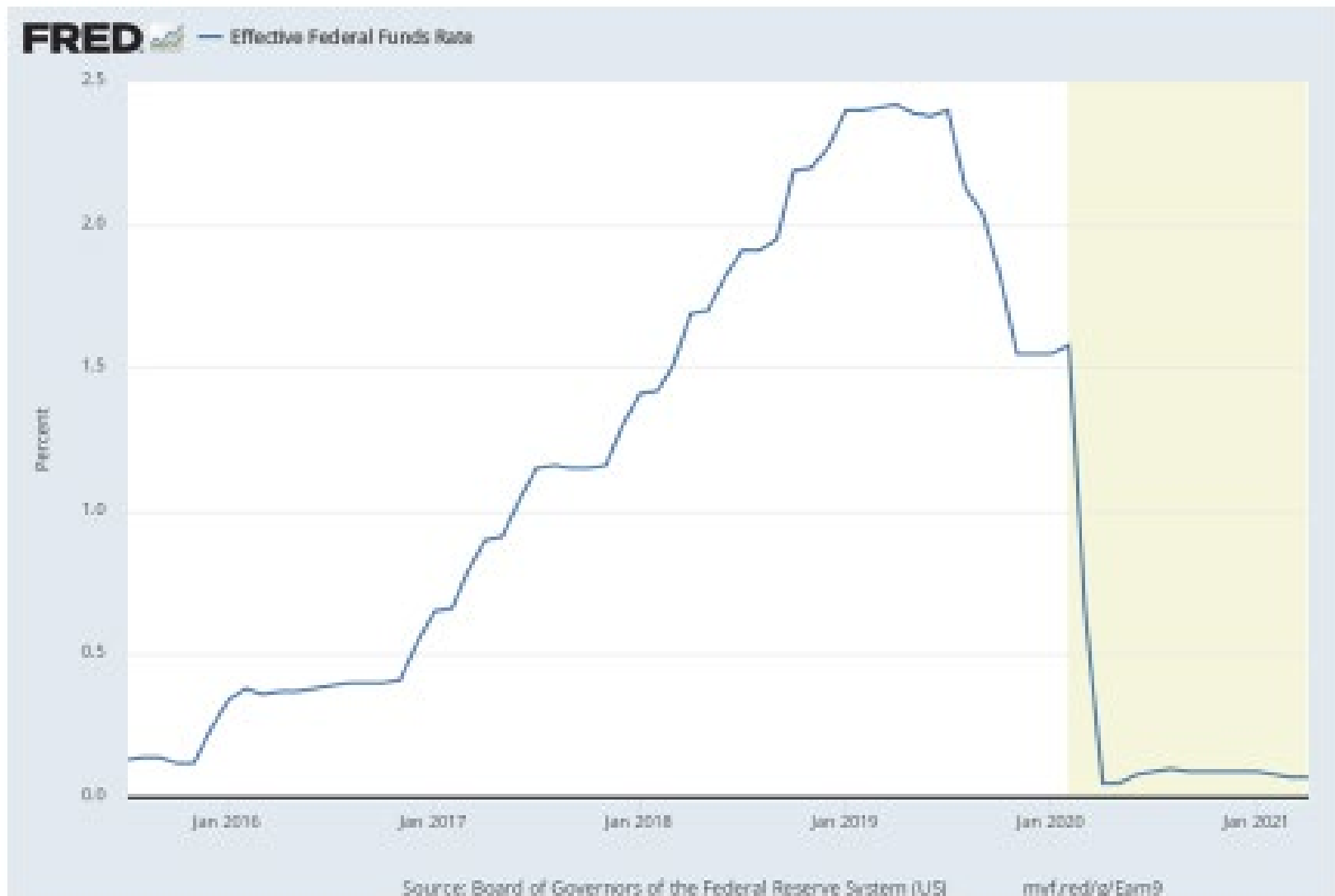
Implications for Economic Principles

- Need a reformulation?
  - Paul Samuelson (January 2009)
    - "today we see how utterly mistaken was the Milton Friedman notion that a market system can regulate itself…I wish Friedman were still alive so he could witness how his extremism led to the defeat of his own ideas"
- Events were consistent with basic economics?
  - The crisis was caused by a deviation from principles
- But of course there is much teaching, research and policy to do…

Implications for Teaching

- Many new illustrations of basic economics
- Interesting debates between economists
- More integration of micro and macro
  - interest rates too low for too long (macro)
  - housing markets including bubbles (micro)
  - stimulus package (macro)
  - regulatory capture and moral hazard (micro)
  - new instruments of monetary policy (macro)
  - risk premia in interest rates(micro)
  - debate over size of multipliers (macro)
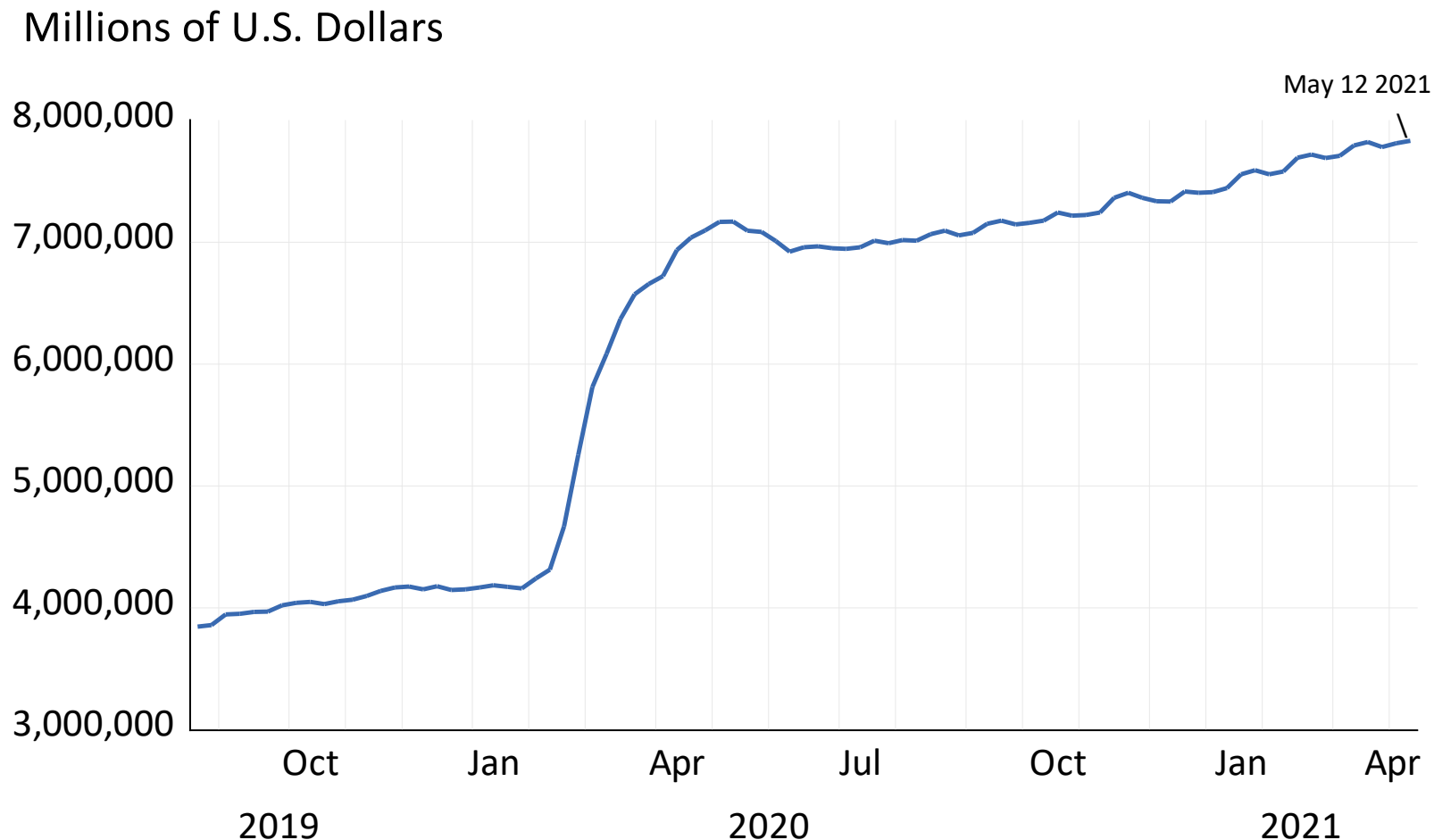 - cash for clunkers, first time home-buyer (micro)

The Pandemic hits

Billions of 2012 dollars

Real GDP

Seasonally Adjusted, Annual Rates

Fed sharply cuts the interest rate (federal funds rate),

Millions of U.S. Dollars

May 12 2021

8,000,000

7,000,000

6,000,000

5,000,000

4,000,000

3,000,000

Oct   Jan   Apr   Jul   Oct   Jan   Apr

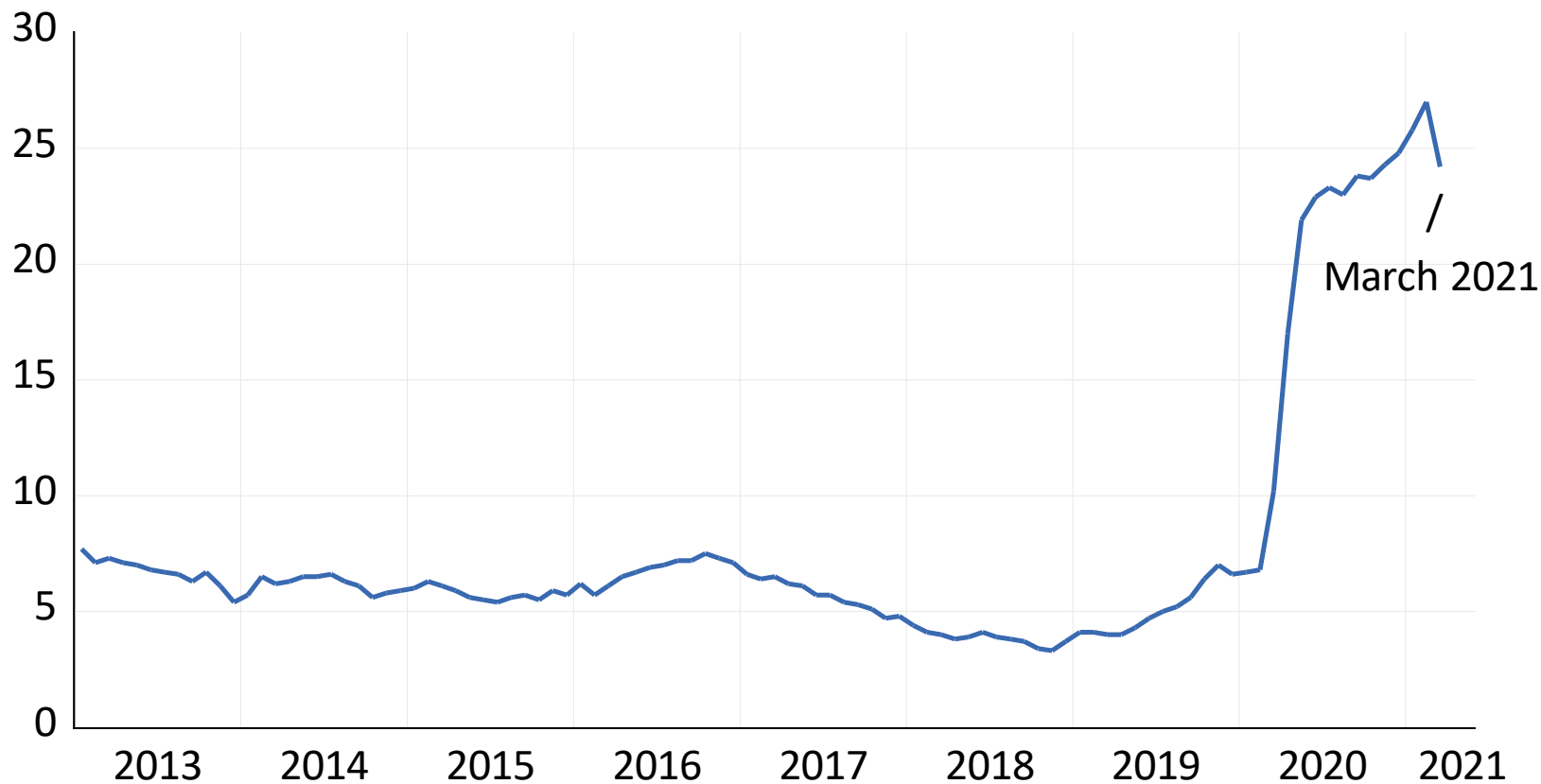2019   2020   2021

Fed's Balance Sheet

Total Assets, Weekly, Federal Reserve System

Source: FRED, Federal Reserve Bank of St. Louis. Wednesday Levels

Fed Restarts Quantitative Easing

Percent per year

Growth Rate of M2

From same month in previous year

Fed Increases Money Growth

Sections and tables on policy rules disappear from the Fed's 2020 *Monetary Policy Report*

But then they reappear!

- Strating in Fed's Feb. 2021 *Monetary Policy Report*
- But with a **big change:**
  - One rule is out, and another is in

Federal Reserve Board
February 2020

A. Monetary policy rules

Taylor (1993) rule	$R_t^{T93} = r_t^{LR} + \pi_t + 0.5(\pi_t - \pi^{LR}) + (u_t^{LR} - u_t)$
Balanced-approach rule	$R_t^{BA} = r_t^{LR} + \pi_t + 0.5(\pi_t - \pi^{LR}) + 2(u_t^{LR} - u_t)$
Adjusted Taylor (1993) rule	$R_t^{T93adj} = maximum \{R_t^{T93} - Z_t, 0\}$
Price-level rule	$R_t^{PL} = maximum \{r_t^{LR} + \pi_t + (u_t^{LR} - u_t) + 0.5(PLgap_t), 0\}$
First-difference rule	$R_t^{FD} = R_{t-1} + 0.5(\pi_t - \pi^{LR}) + (u_t^{LR} - u_t) - (u_{t-4}^{LR} - u_{t-4})$

NOTE: R_t^{T93}, R_t^{BA}, R_t^{T93adj}, R_t^{PL}, and R_t^{FD} represent the values of the nominal federal funds rate prescribed by the Taylor (1993), balanced-approach, adjusted Taylor (1993), price-level, and first-difference rules, respectively.

Federal Reserve Board
February 2021

A. Monetary policy rules

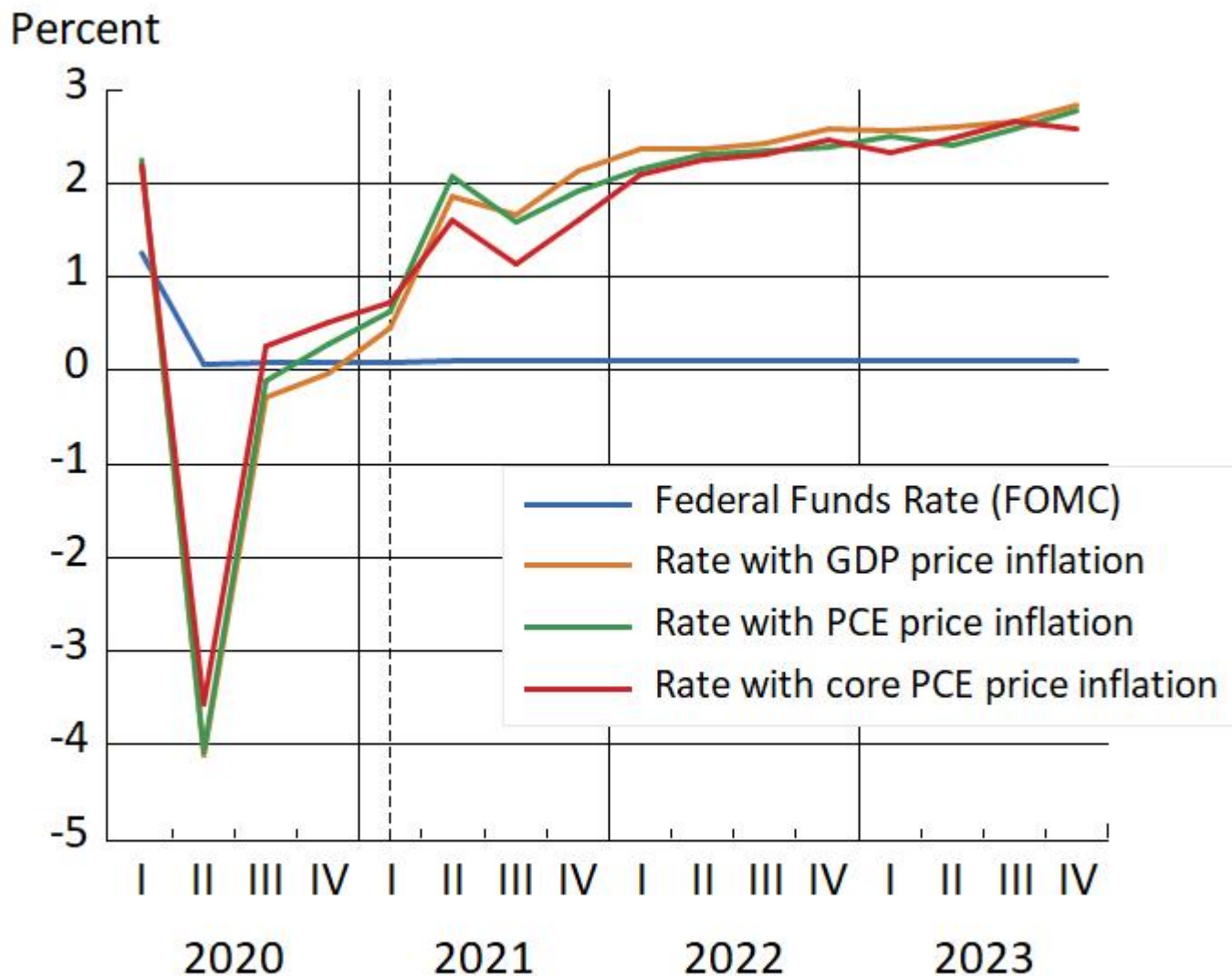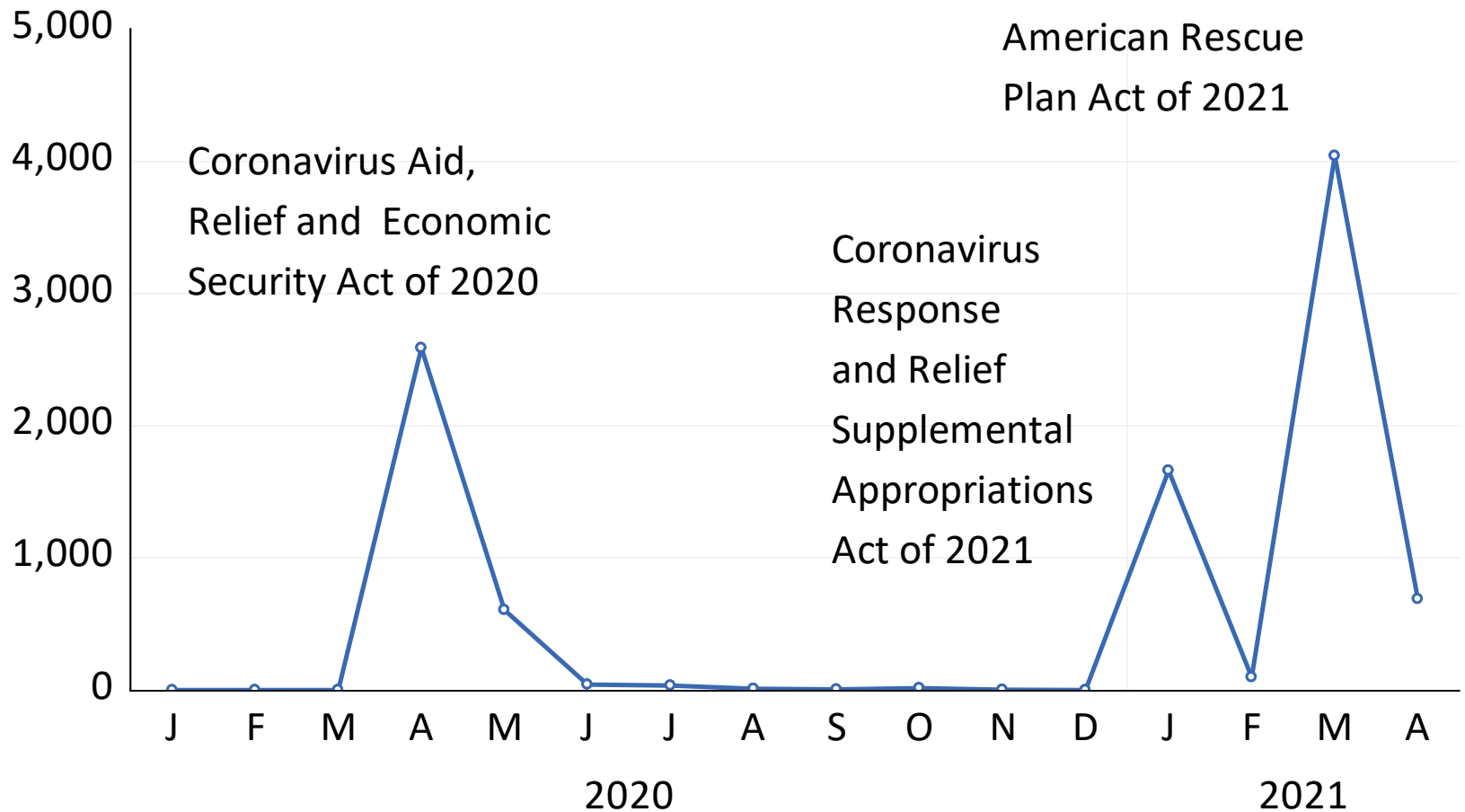|	
Taylor (1993) rule	$R_t^{T93} = r_t^{LR} + \pi_t + 0.5(\pi_t - \pi^{LR}) + (u_t^{LR} - u_t)$
Balanced-approach rule	$R_t^{BA} = r_t^{LR} + \pi_t + 0.5(\pi_t - \pi^{LR}) + 2(u_t^{LR} - u_t)$
Balanced-approach (shortfalls) rule	$R_t^{BAS} = r_t^{LR} + \pi_t + 0.5(\pi_t - \pi^{LR}) + 2min\{(u_t^{LR} - u_t), 0\}$
Adjusted Taylor (1993) rule	$R_t^{T93adj} = max\{R_t^{T93} - Z_t, \text{ELB}\}$
First-difference rule	$R_t^{FD} = R_{t-1} + 0.5(\pi_t - \pi^{LR}) + (u_t^{LR} - u_t) - (u_{t-4}^{LR} - u_{t-4})$

NOTE: R_t^{T93}, R_t^{BA}, R_t^{BAS}, R_t^{T93adj}, and R_t^{FD} represent the values of the nominal federal funds rate prescribed by the Taylor (1993), balanced-approach, balanced-approach (shortfalls), adjusted Taylor (1993), and first-difference rules, respectively.
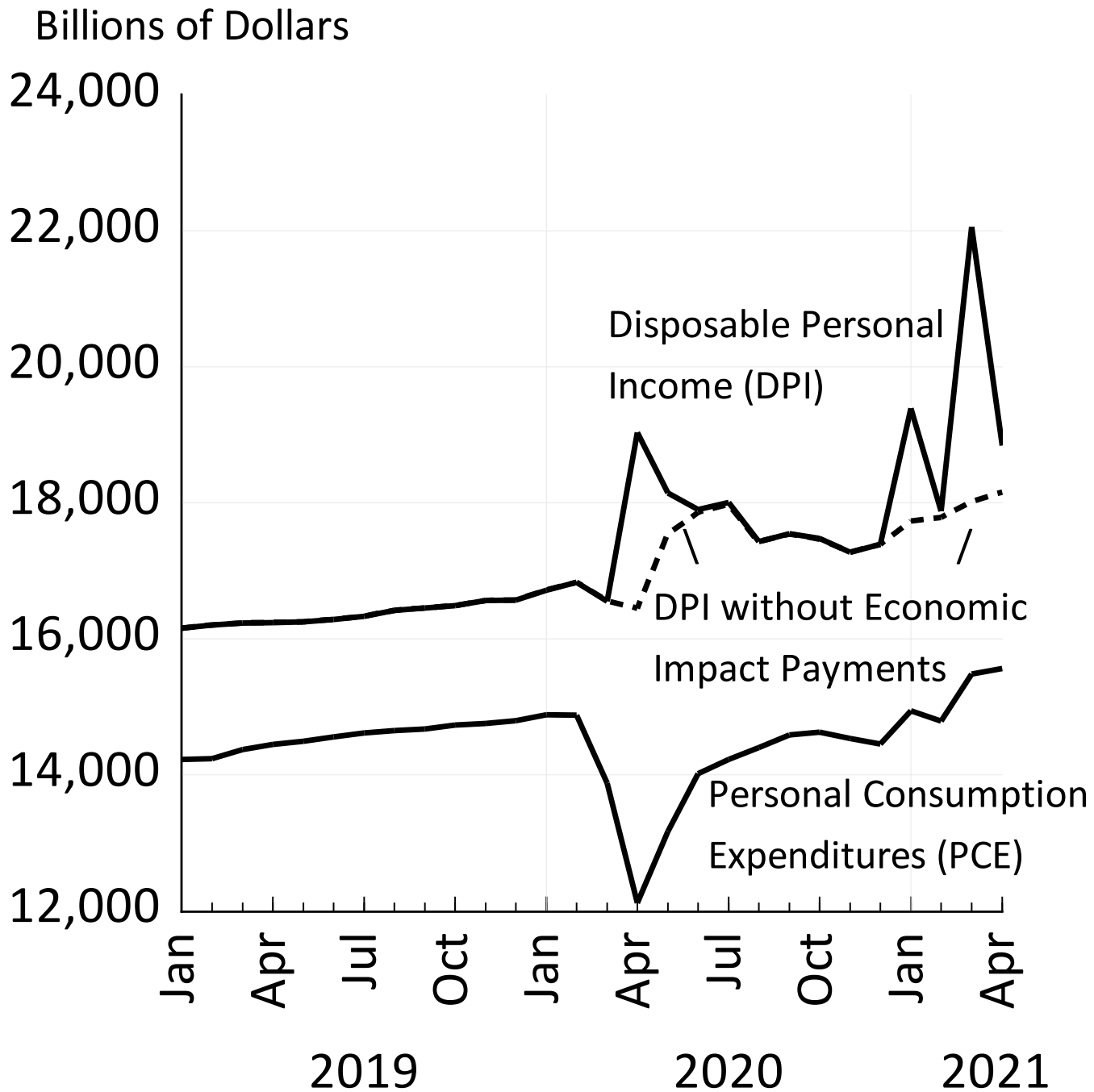
FOMC Projection of Federal Funds Rate and Monetary Policy Rules with Three Inflation Rates
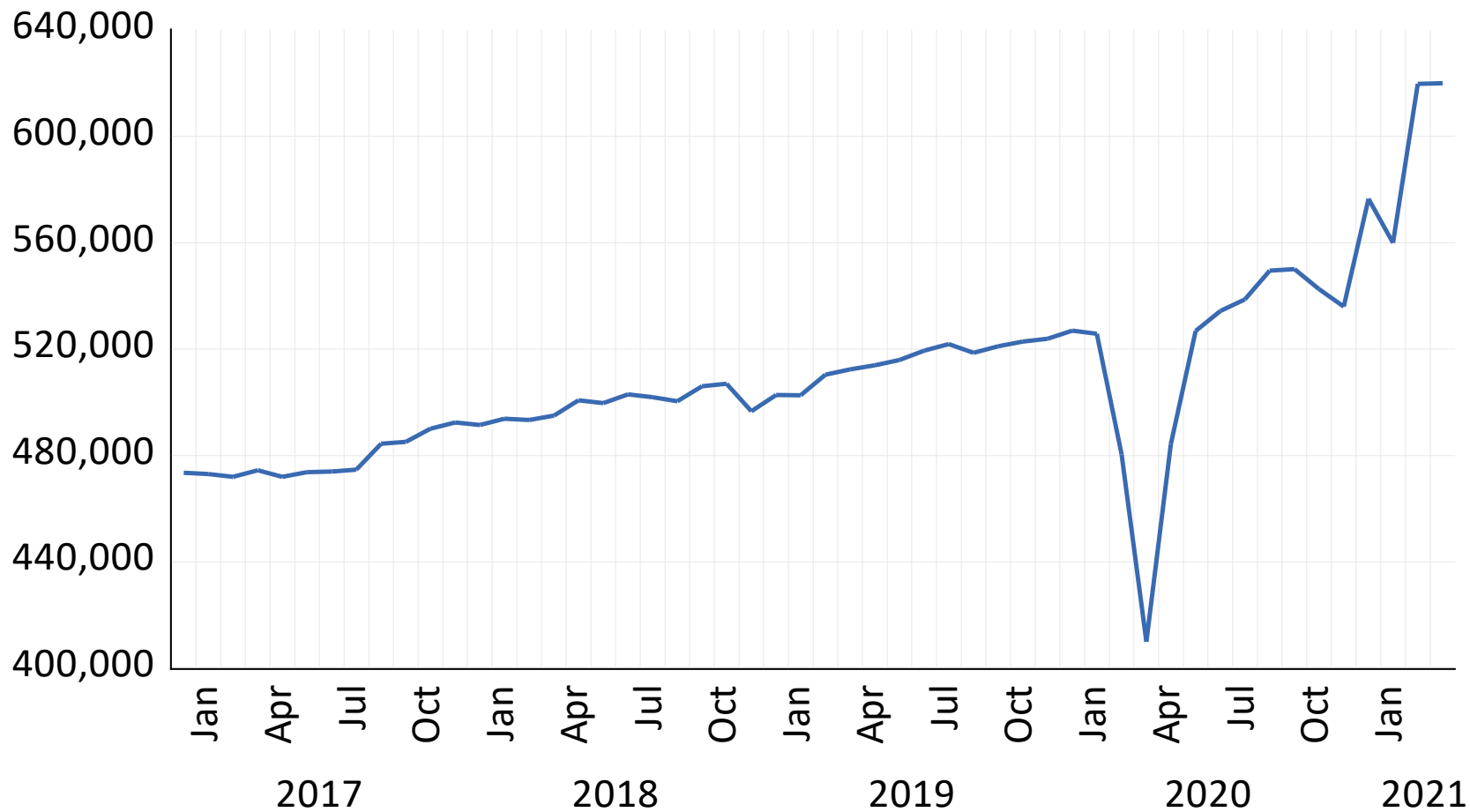
Billions of Dollars

5,000

4,000 — American Rescue Plan Act of 2021

Coronavirus Aid, Relief and Economic Security Act of 2020

3,000 — Coronavirus Response and Relief Supplemental Appropriations Act of 2021

2,000

1,000

0

J F M A M J J A S O N D J F M A

2020   2021

Economic Impact Payments (EIP) in Three Fiscal Packages
(Billions of Dollars, Seasonally Adjusted Annual Rates
From "Effect of Sected Federal Pandemic Response Programs
on Personal Income," various issues)

Billions of Dollars

24,000

22,000

20,000

Disposable Personal
Income (DPI)

18,000

DPI without Economic
Impact Payments

16,000

Personal Consumption

14,000

Expenditures (PCE)

12,000

Jan   Apr   Jul   Oct   Jan   Apr   Jul   Oct   Jan   Apr

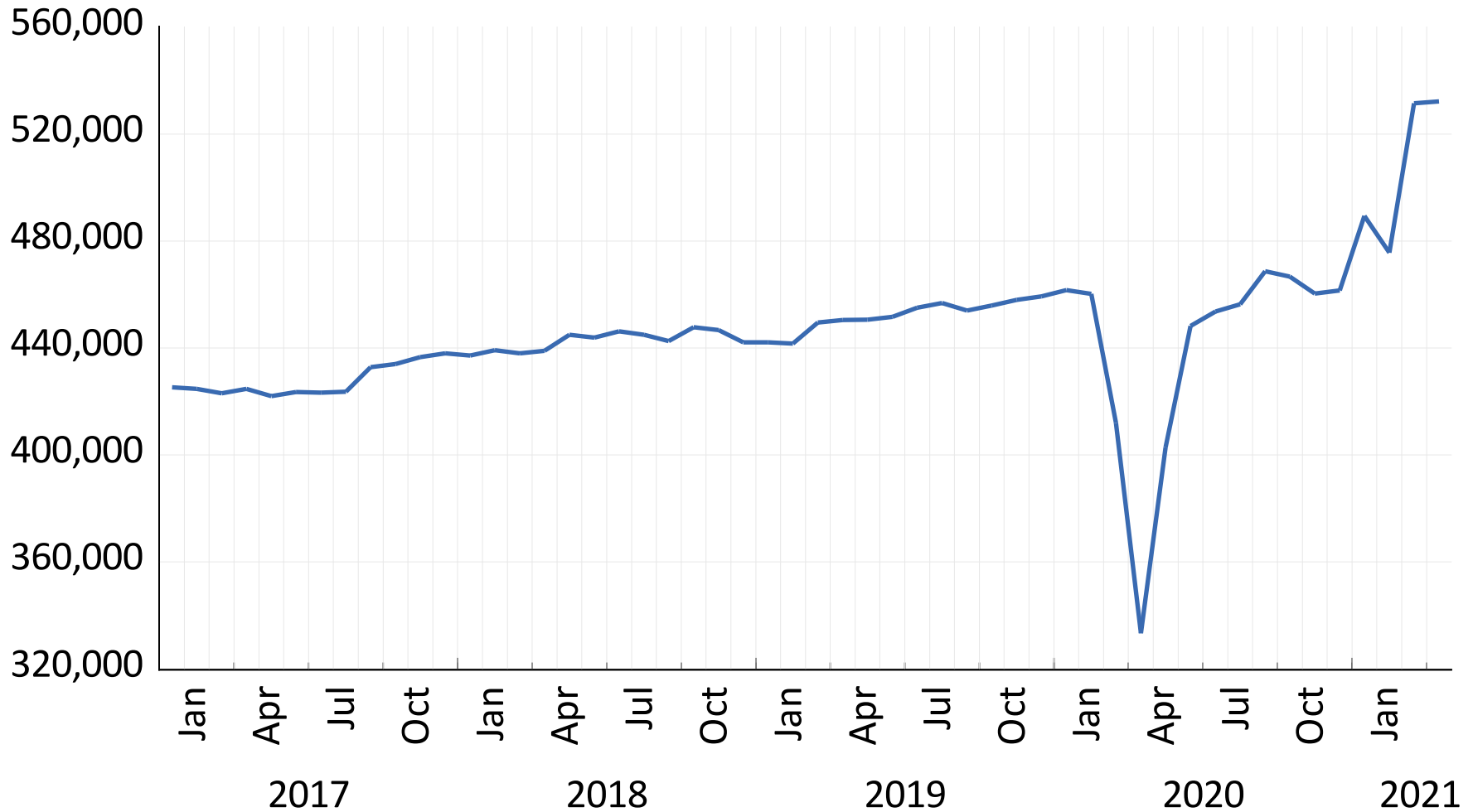2019   2020   2021

Millions of Dollars
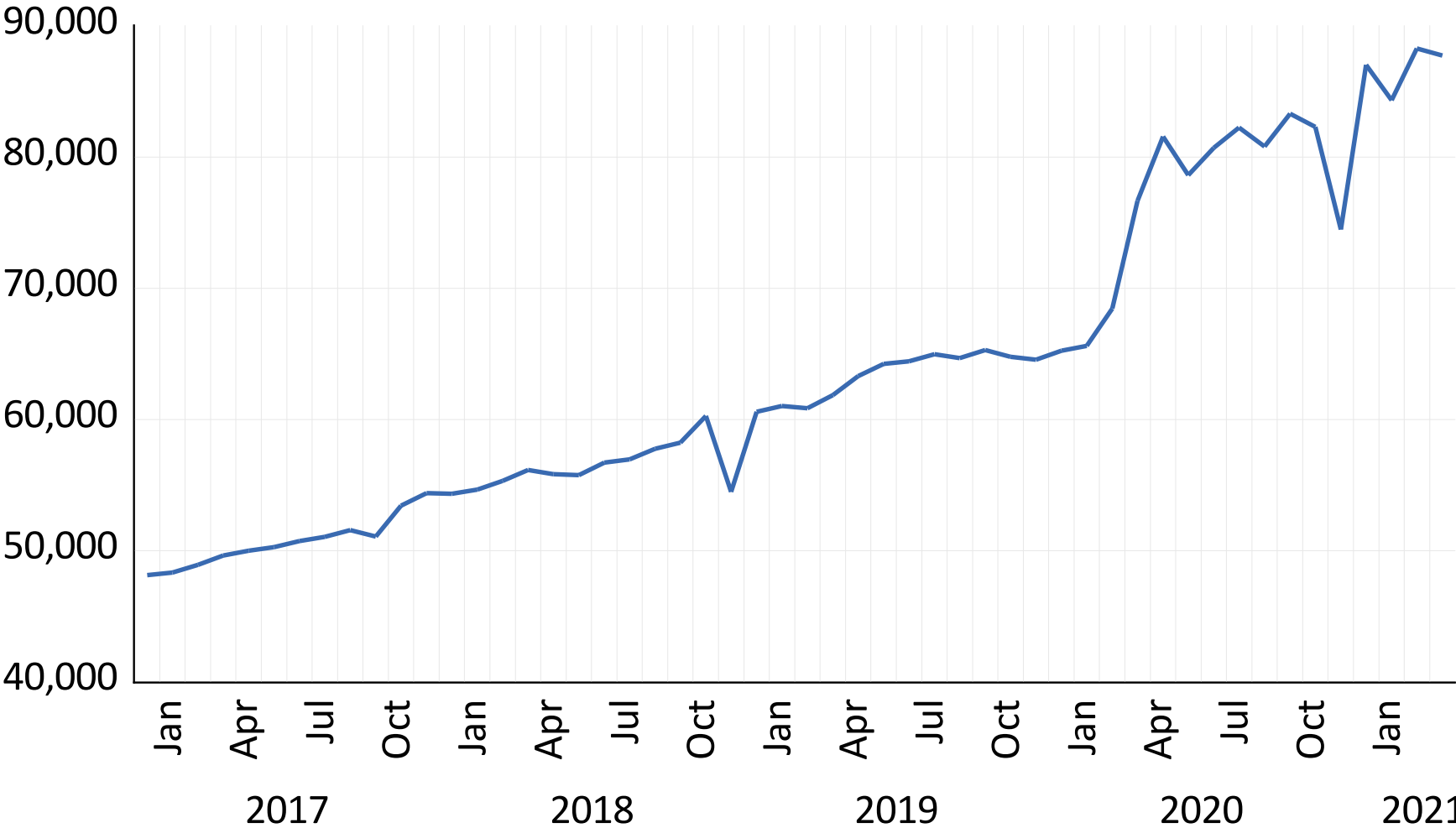
Retal Sales

Millions of Dollars

Retail Sales Less Non-Store Sales

Millions of Dollars

Non-Store Retail Sales

- Lesson: Basic Economics still works well
- But keep trying new things; bring it on
  - Black board, overhead, powerpoint, Youtube
  - Growth first in macro, use experiments,…
  - Surprise side economics
    - Adam Smith shows up; talks through the sound system
    - Skits with children
    - Throwable microphones
  - What has been revealed in this crisis:
    - income distribution, impact on disadvantaged…
- Technology keep changing:
  - Developed online course in 2014
  - Gave lecture in lecture hall; then studio, film, and mixed in graphs.
    - Used as a MOOC and a course for credit for 2014-2019
  - In spring 2020, gave regular course online, same in summer 2020 & fall 2020; now doing MOOC with 5700 students all over the world.
  - Two online courses in summer; live lectures next fall.

Zoom, or In-person, or Hybrid

- Better performance?
  - Turn that video on!
- Can do more things; guests, demos.
- Can replay slow or fast, or later…
  - Poll from 20 years ago
- Office hours; on line
- Miss one-on-one back and forth.
  - After class, hallways, walking around campus
- Hybrid in future: 3 and 1, or 2 and 2?

Economic Decisions and the Role of Economic Policy

- Predictable policy framework

- Rule of law

- Reliance on market economy
  - Freely determined prices

- Good incentives

- Specific role of government
  - Market Failure
  - Government failure too

Biggest New Issue: Computer Science and AI

- As the world becomes more integrated, computerized, and quantified, the field of *economics is more important than ever*.
- Applying the latest in artificial intelligence, machine learning, deep learning, or big data while *ignoring economics is a recipe for disaster*.
- In fact, it is possible—as never before in history—to make economic ideas work better in practice to improve people's lives.
 - Many examples…

Still Have Fun

- Double auctions
- California Raisins (Heard It Through the Grapevine)
- Sarah and Steve in Golden Balls
- History of Rock Music class
- We're cash. We're cash. We're Money
- Keynes-Hayek fight of the century
- Beat Cal Routine (BE+ATC+AL)
- Top Gun school for central bankers
- Merle Hazard's "Inflation and Deflation"
- Economic 1 Forecasting contest
- Great guests: Caroline, Susan, Chad (Olivia Andrew Jack)

How Do We Make this Happen?
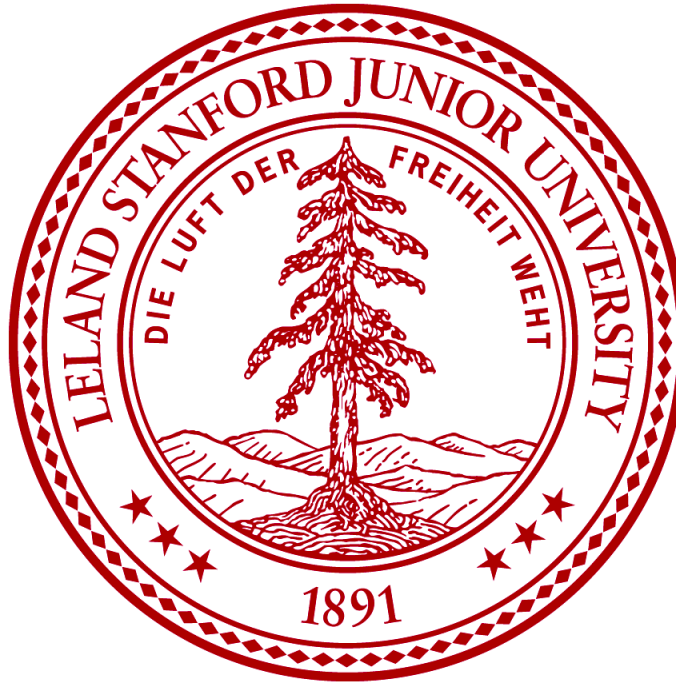
Let the Wind of *Economic* Freedom Blow