Economics 435
Macroeconomic Policy
9/23/2021

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UW Madison
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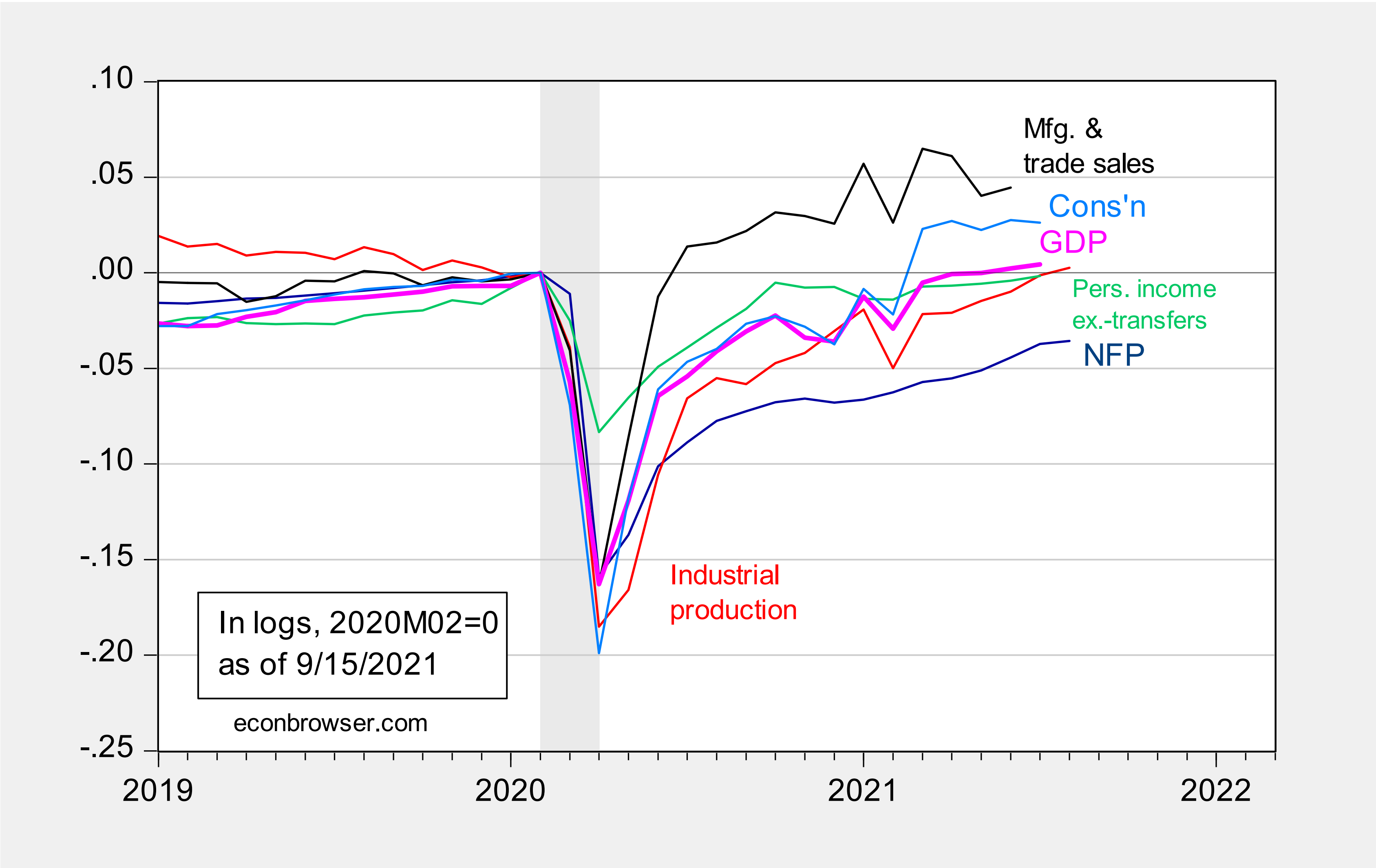
Outline

- Economic indicators now
- The unique nature of the recession
- Analysis
- Implied policy responses

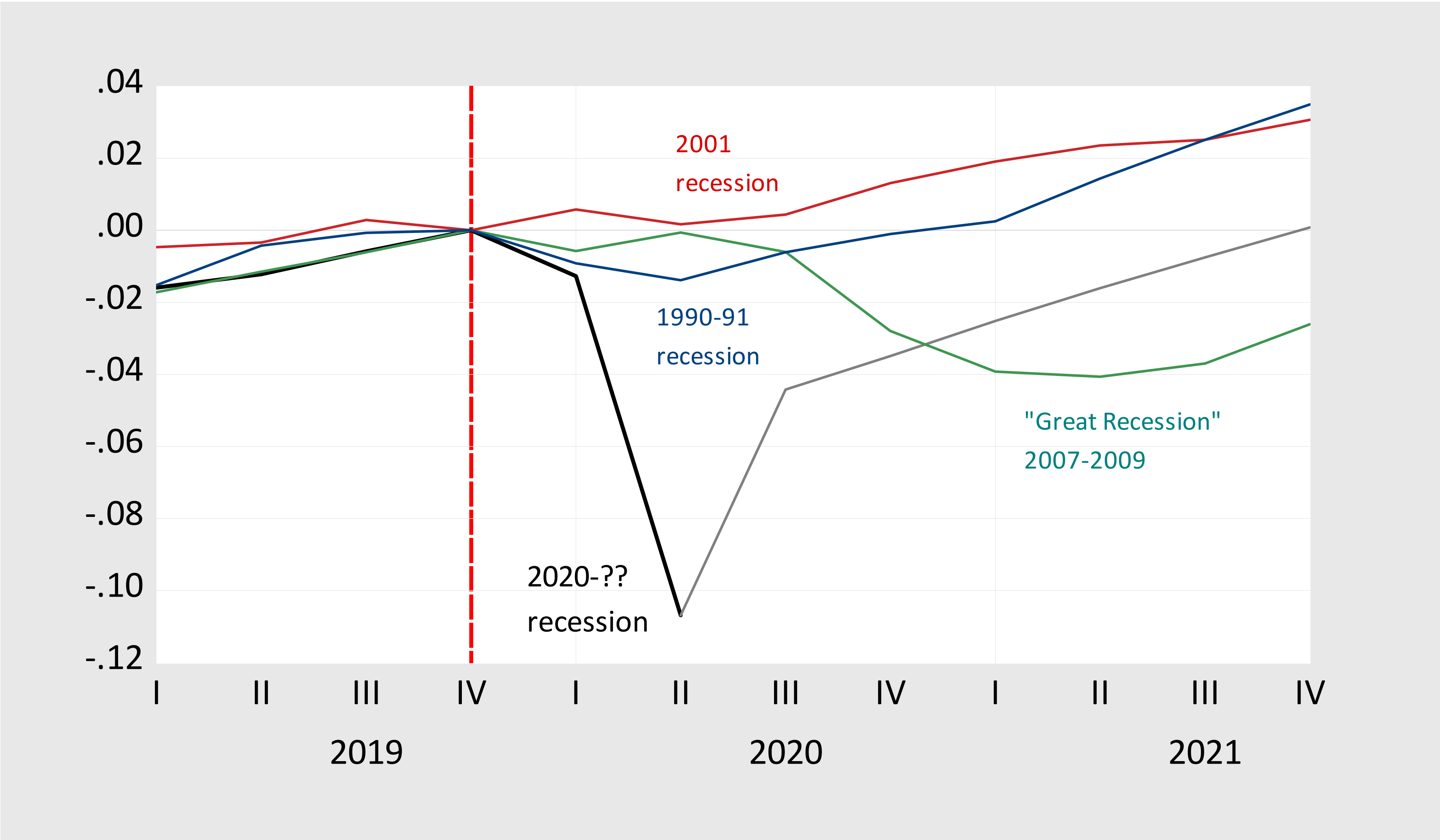
Economic Indicators Now

Conventional Macroeconomic Indicators

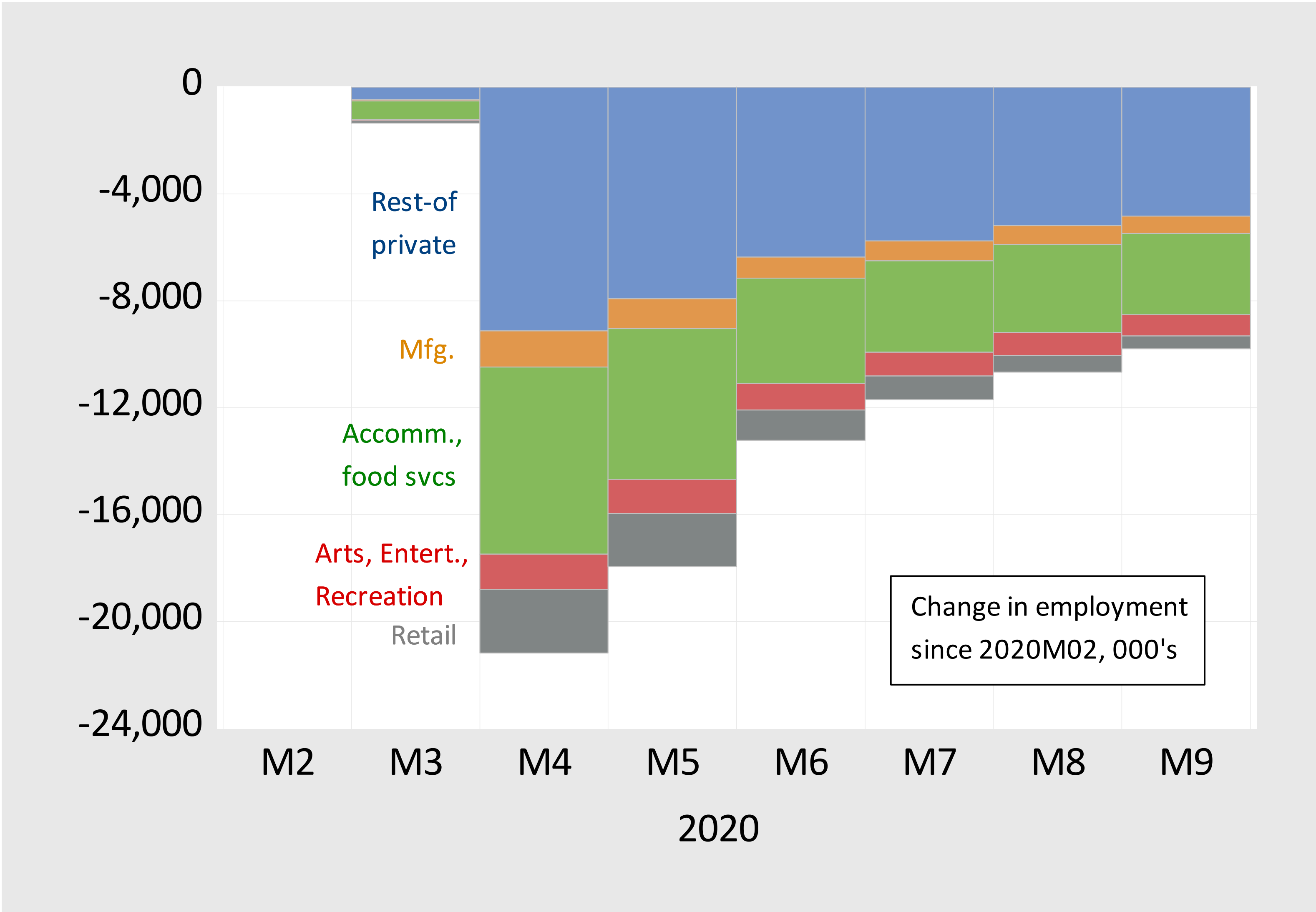


Unique Nature of the Recession

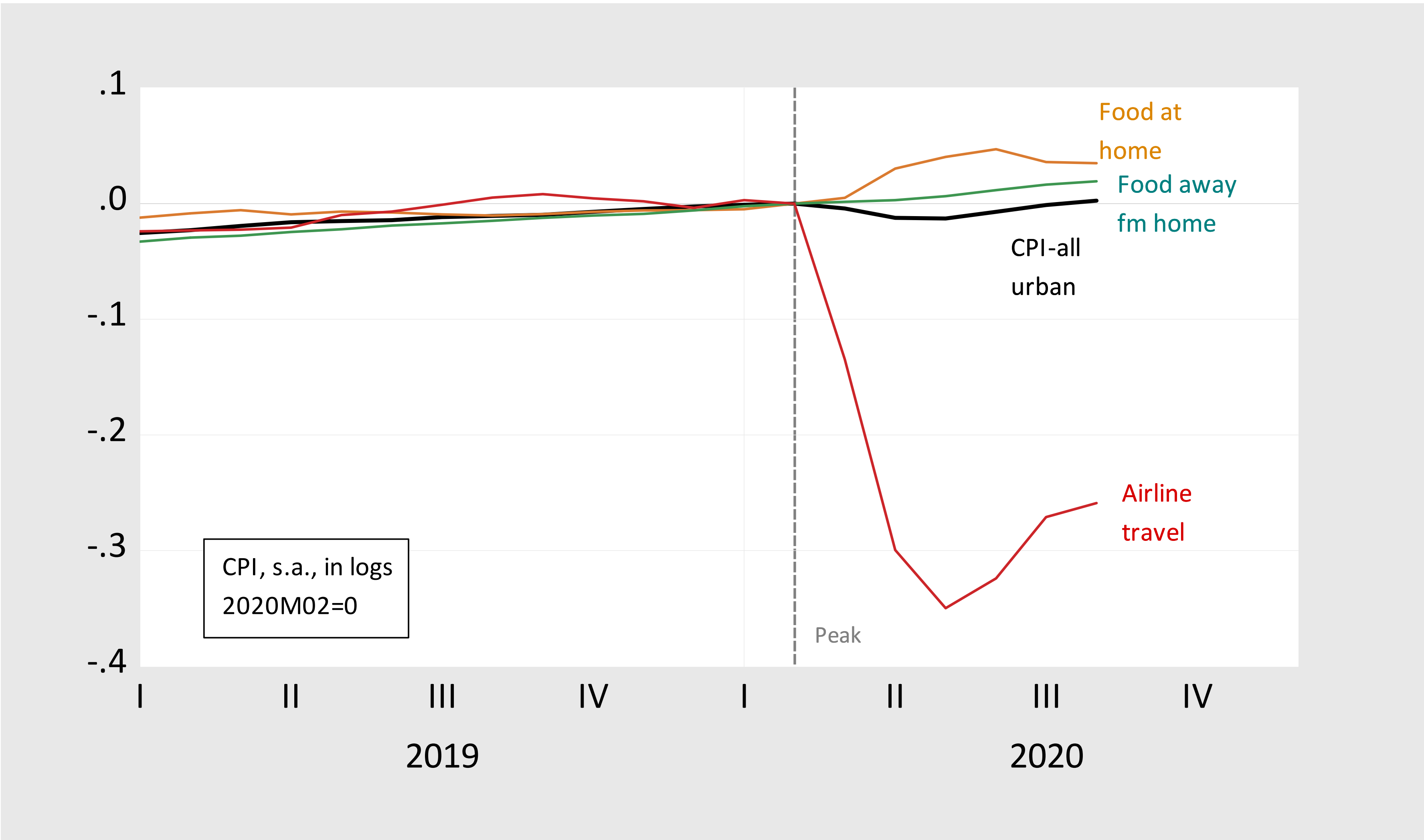
Deep, Short Recession



Concentrated Impact

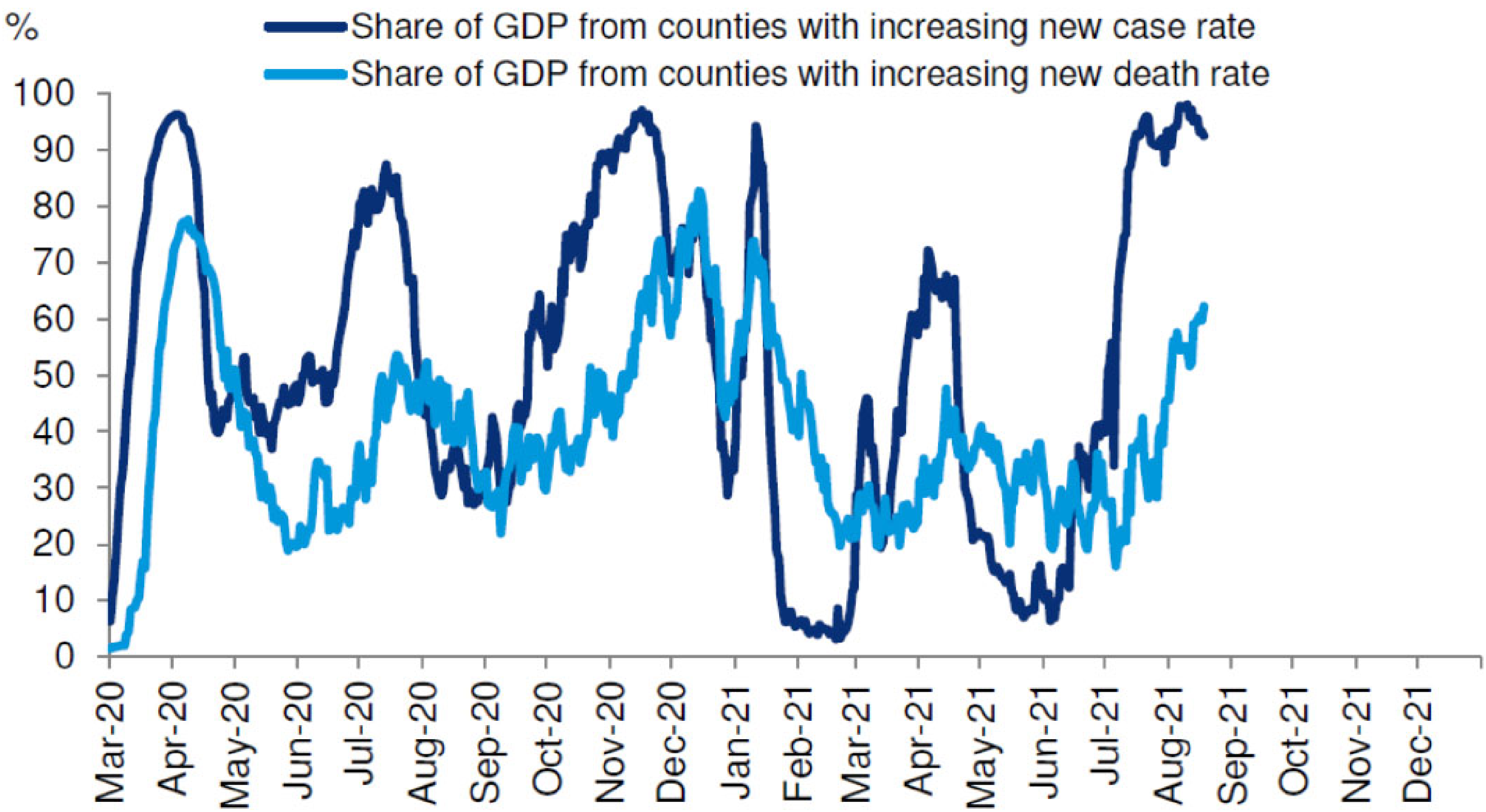


Concentrated Impact



Leading to Stop and Go

Figure 17: Share of GDP from counties with increasing new cases picking up

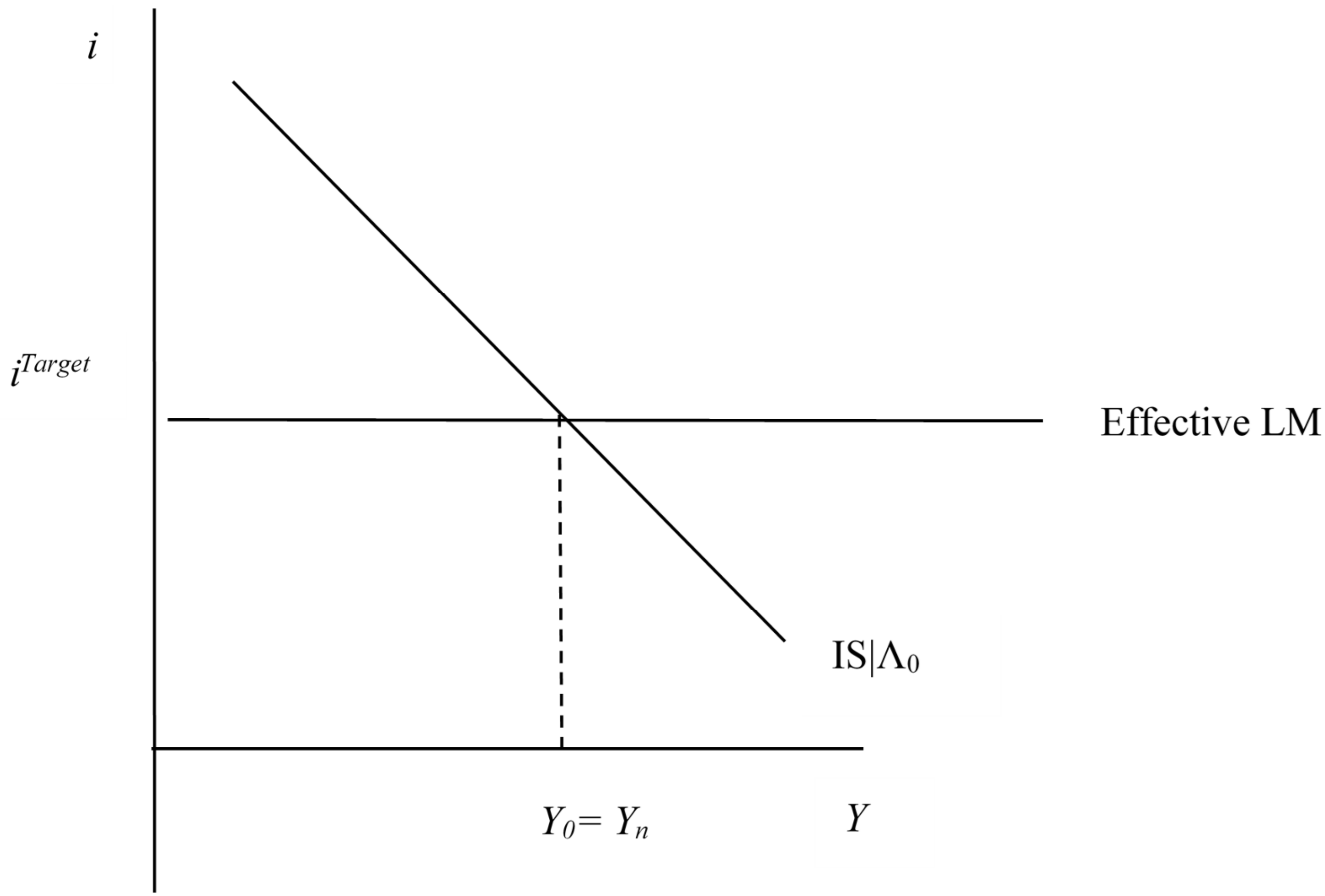


Source : BEA, USAFacts, Haver Analytics, Deutsche Bank

"Covid-19 impact tracker" (19 Oct 2021) Deutsche Bank US Economic Perspectives

Analysis

Standard IS-LM Analysis w/Interest Rate Targeting



Three Phases

- Pandemic & lockdown

And following Blanchard’s chapter

- “post-lockdown but pre-vaccine” phase
- “post-vaccine” phase

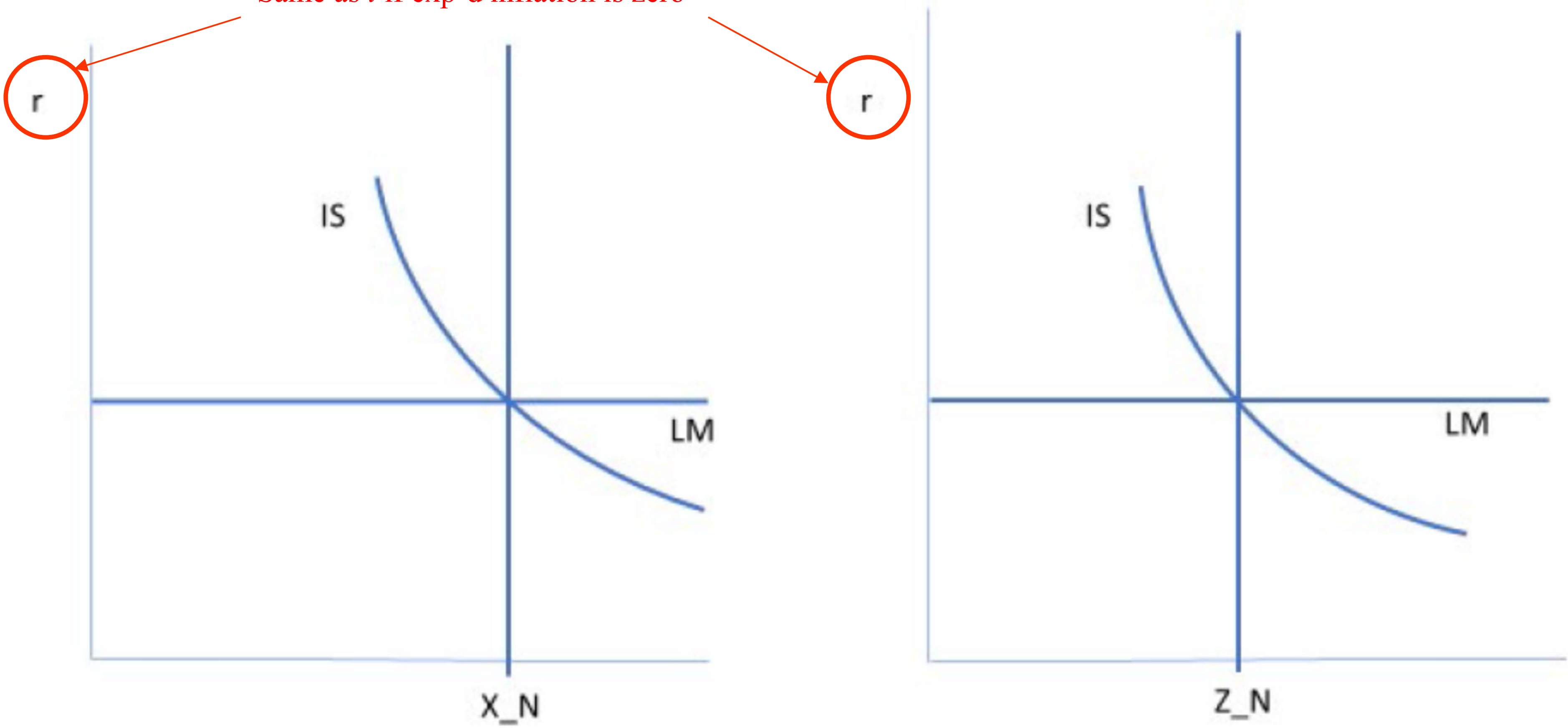
Pandemic & Lockdown

- Model as two sectors
- Affected sector: hotels, airlines, restaurants, and suppliers (output X)
- Non-affected sector: all else (output Z)
- Outputs are somewhat substitutable
- Central bank targets short term rate
- Start at natural rate in both sectors, (Z_n, Z_n)

Pandemic & Lockdown

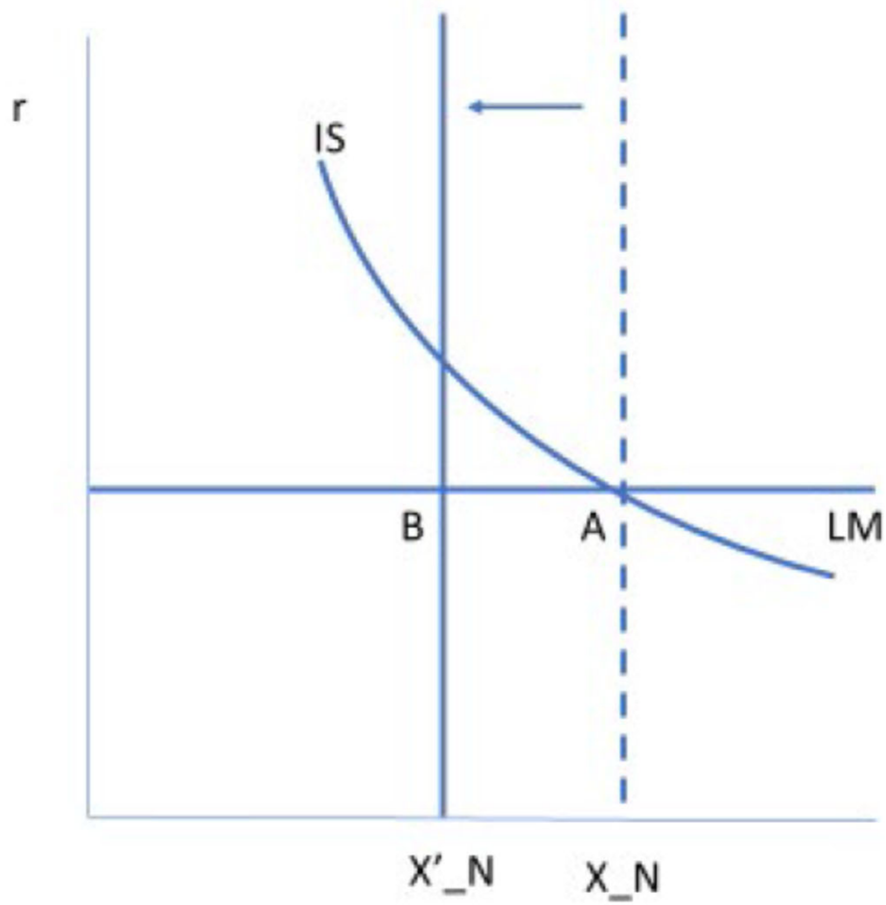
Figure 3. Initial equilibrium in both sectors

Same as *i* if exp'd inflation is zero



Pandemic & **Lockdown**

Figure 4. Decrease in output in the affected sector



Pandemic & Lockdown

Three Effects

- To the extent that goods produced by the two sectors are substitutable, there is an increase in the demand for the goods produced by the non-affected sector. If people cannot go to cinemas, they watch more Netflix. If they cannot go to restaurants, they order more take-out. This effect increases demand, shifting the IS curve to the right.

Pandemic & Lockdown

Three Effects

- To the extent that people lose their jobs in sector X, then, unless fiscal policy compensates (more on this below), the large decrease in their income leads to a large decrease in demand for goods Z. For example, a laid-off worker from the airline industry may delay buying a car. This effect decreases demand, leading to a shift in the IS curve to the left.

Pandemic & Lockdown

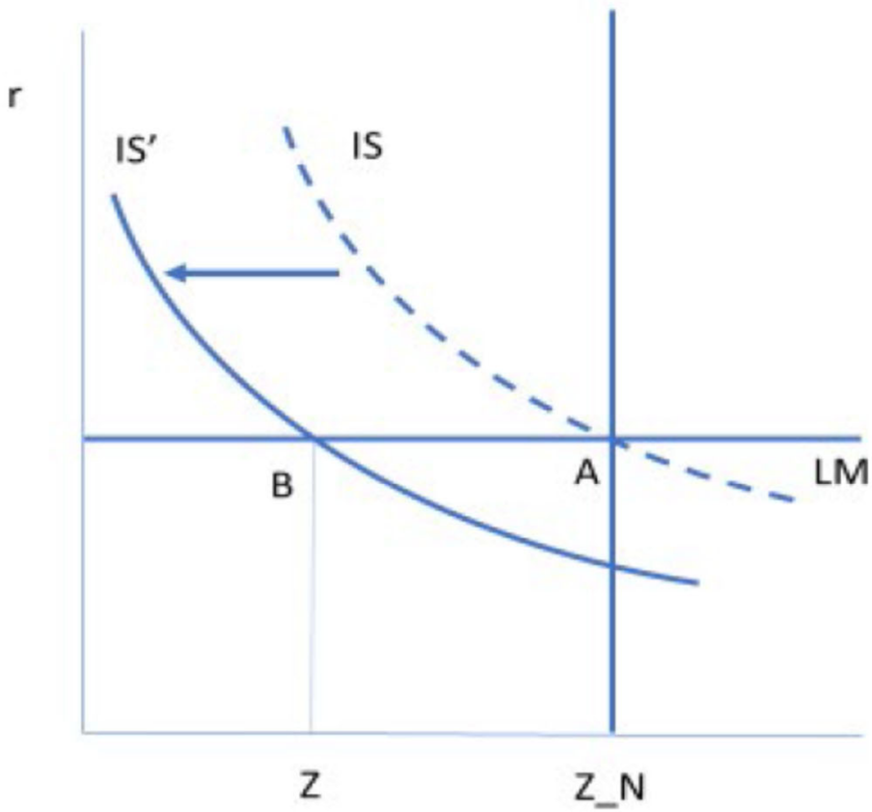
Three Effects

- Given the uncertainty about long the COVID will last (e.g. whether the government has the infection under control; whether and when there will be a widely available vaccine; and whether jobs in the affected sector will come back), consumers are likely to worry about the future, and thus do precautionary saving and limit their consumption. This again will shift the IS curve to the left.

Pandemic & Lockdown

Three Effects

Figure 5. The decrease in output in the non-affected sector, absent a macroeconomic policy response



Assumes 2[nd], 3[rd] effects overwhelm 1[st] effect

Fiscal Response

Table 1.

The Effects of Pandemic-Related Legislation on the Deficit

Billions of Dollars

					Total	
	2020	2021	2022	2023	2020–2023	2024–2030
Paycheck Protection Program and Related Provisions[a]	616	13	0	0	628	0
Enhanced Unemployment Compensation	370	71	0	0	442	0
Recovery Rebates for Individuals[b]	272	20	0	0	292	0
Direct Assistance for State and Local Governments	150	*	0	0	150	0
Other Spending Provisions[c]	359	218	101	21	700	13
Other Revenue Provisions[d]	539	253	-186	-182	425	-50
Federal Reserve's Emergency Lending Facilities	11	0	0	0	11	0
Total	**2,317**	**576**	**-85**	**-160**	**2,648**	**-37**

Sources: Congressional Budget Office; staff of the Joint Committee on Taxation.

The years shown are federal fiscal years.

Positive numbers indicate an increase in the deficit.

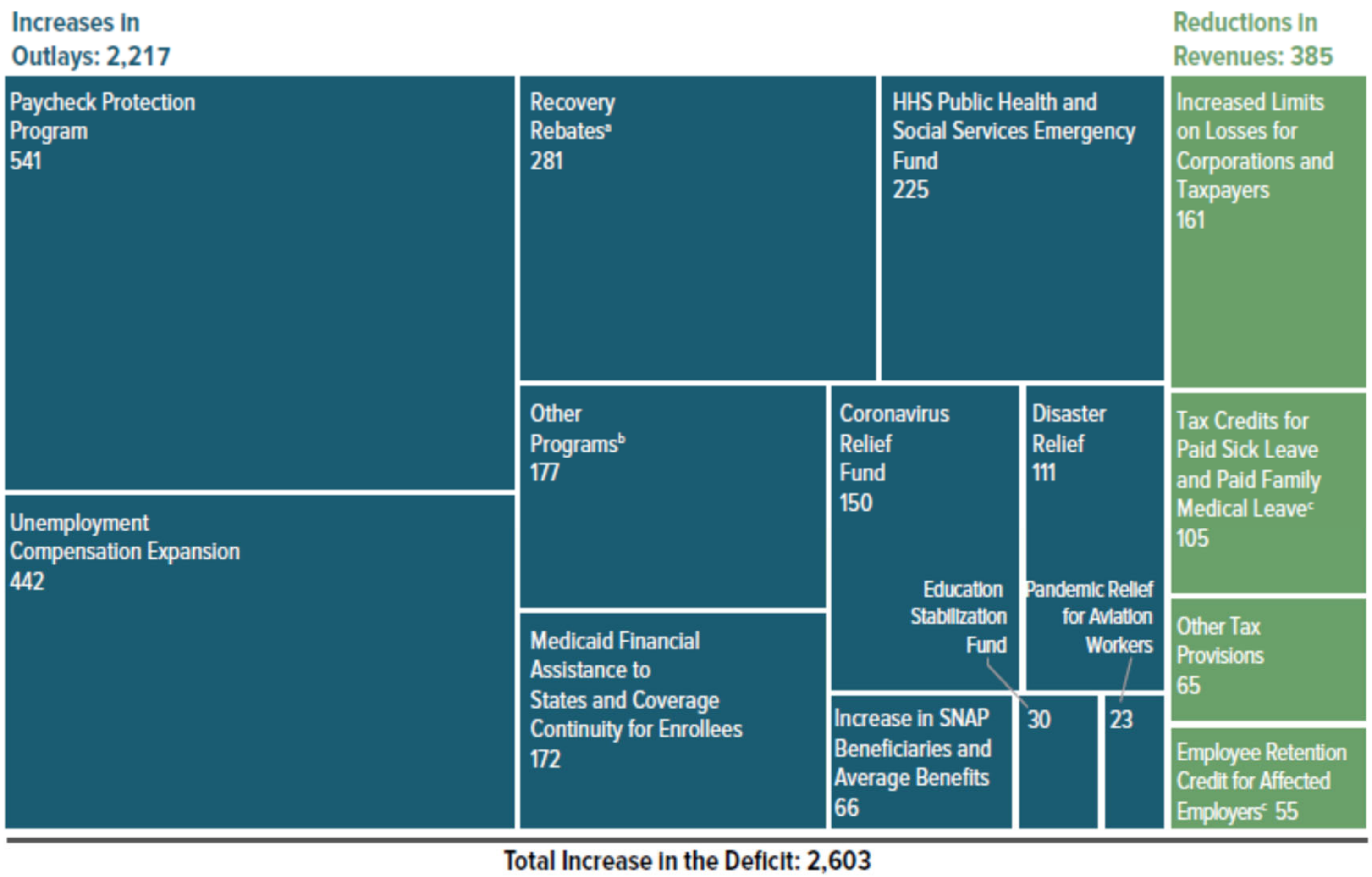
CBO, Economic Effects of Pandemic Legislation, Sept 2020
https://www.cbo.gov/system/files/2020-09/56537-pandemic-legislation.pdf

Fiscal Response

Figure A-2.

Deficit Increases Over the 2020–2030 Period From Legislation Enacted to Address the Coronavirus Pandemic, by Major Provision

Billions of Dollars



CBO, An Update to the Budget Outlook, Sept. 2020.

Fiscal Response

Table 2.

The Effects of Pandemic-Related Legislation on Real GDP

Percent

	2020				2021				Annual			
Policy	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2020	2021	2022	2023
Paycheck Protection Program and Related Provisions[a]	0	0.9	1.4	1.0	0.7	0.4	0.2	0.1	0.8	0.3	*	*
Enhanced Unemployment Compensation	0	1.1	1.8	1.5	0.8	0.5	0.3	0.1	1.1	0.4	*	*
Recovery Rebates for Individuals[b]	0	1.1	0.8	0.6	0.6	0.3	0.1	0.1	0.6	0.3	*	*
Direct Assistance for State and Local Governments	0	0.3	0.9	0.8	0.4	0.2	0.1	*	0.5	0.2	*	*
Other Spending Provisions[c]	0	1.2	2.3	1.9	1.8	1.4	1.1	0.7	1.3	1.3	0.4	0.1
Other Revenue Provisions[d]	0	0.4	0.7	0.4	0.3	0.8	0.3	0.2	0.3	0.4	-0.1	-0.1
Federal Reserve's Emergency Lending Facilities	0	*	0.2	0.3	0.4	0.3	0.2	0.2	0.1	0.3	*	*
Total	**0**	**5.0**	**8.1**	**6.4**	**5.0**	**4.0**	**2.4**	**1.3**	**4.7**	**3.1**	**0.3**	**0.1**
Memorandum:												
Real GDP Without the Effects of the Legislation												
Real GDP (Billions of 2012 dollars)	4,744	4,064	4,103	4,250	4,369	4,466	4,596	4,680	17,161	18,112	19,158	19,617
Growth since previous quarter (Percent)	-1.3	-14.3	1.0	3.6	2.8	2.2	2.9	1.8	n.a.	n.a.	n.a.	n.a.
Growth at annualized rates (Percent)	-5.0	-46.2	3.9	15.1	11.7	9.2	12.2	7.5	-10.0	5.5	5.8	2.4
Real GDP in CBO's Current Economic Forecast												
Real GDP (Billions of 2012 dollars)	4,744	4,266	4,436	4,522	4,588	4,646	4,706	4,740	17,968	18,679	19,222	19,631
Growth since previous quarter (Percent)	-1.3	-10.1	4.0	1.9	1.5	1.3	1.3	0.7	n.a.	n.a.	n.a.	n.a.
Growth at annualized rates (Percent)	-5.0	-34.6	17.0	7.9	6.0	5.1	5.3	2.9	-5.8	4.0	2.9	2.1

Source: Congressional Budget Office.

These values are presented as a percentage of an implied projection of real GDP that does not include the effects of pandemic-related legislation—a projection computed by removing the estimated effects of the legislation from CBO's July economic forecast. However, CBO did not construct a comprehensive projection of what the economy would have looked like without those legislative effects. See Congressional Budget Office, *An Update to the Economic Outlook: 2020 to 2030* (July 2020), www.cbo.gov/publication/56442.

CBO, Economic Effects of Pandemic Legislation, Sept 2020
https://www.cbo.gov/system/files/2020-09/56537-pandemic-legislation.pdf

Fiscal Response

Table 3.

The Effects of Pandemic-Related Legislation on the Deficit and on GDP, Fiscal Years 2020 to 2023

Policy	Effect on the Deficit (Billions of Dollars)[a]	Cumulative Effect on GDP (Billions of Dollars)	Cumulative Effect on GDP per Dollar of Effect on the Deficit (Dollars)
Paycheck Protection Program and Related Provisions[b]	628	231	0.37
Enhanced Unemployment Compensation	442	301	0.68
Recovery Rebates for Individuals[c]	292	177	0.61
Direct Assistance for State and Local Governments	150	133	0.89
Other Spending Provisions[d]	700	621	0.89
Other Revenue Provisions[e]	425	100	0.24
Total[f]	**2,637**	**1,564**	**0.59**

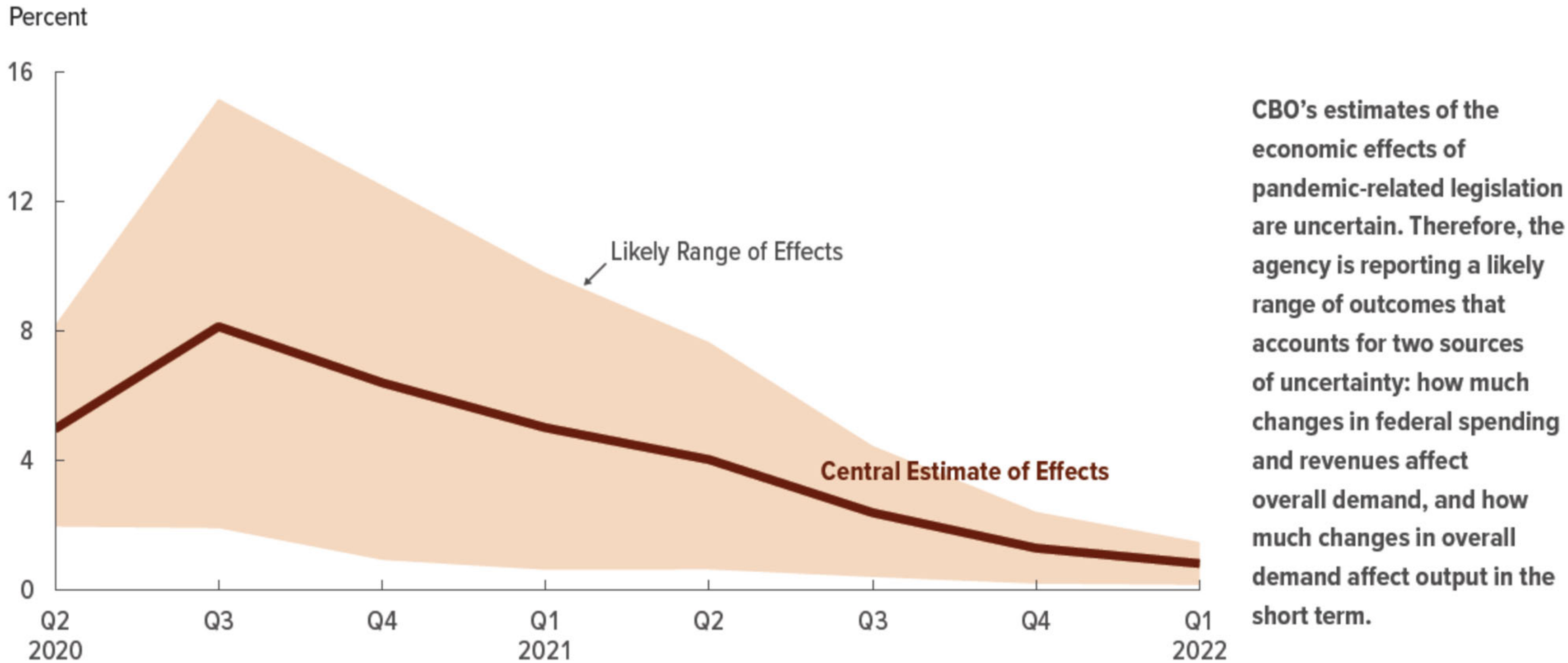
Sources: Congressional Budget Office; staff of the Joint Committee on Taxation.

CBO, Economic Effects of Pandemic Legislation, Sept 2020
https://www.cbo.gov/system/files/2020-09/56537-pandemic-legislation.pdf

Fiscal Response

Figure 1.

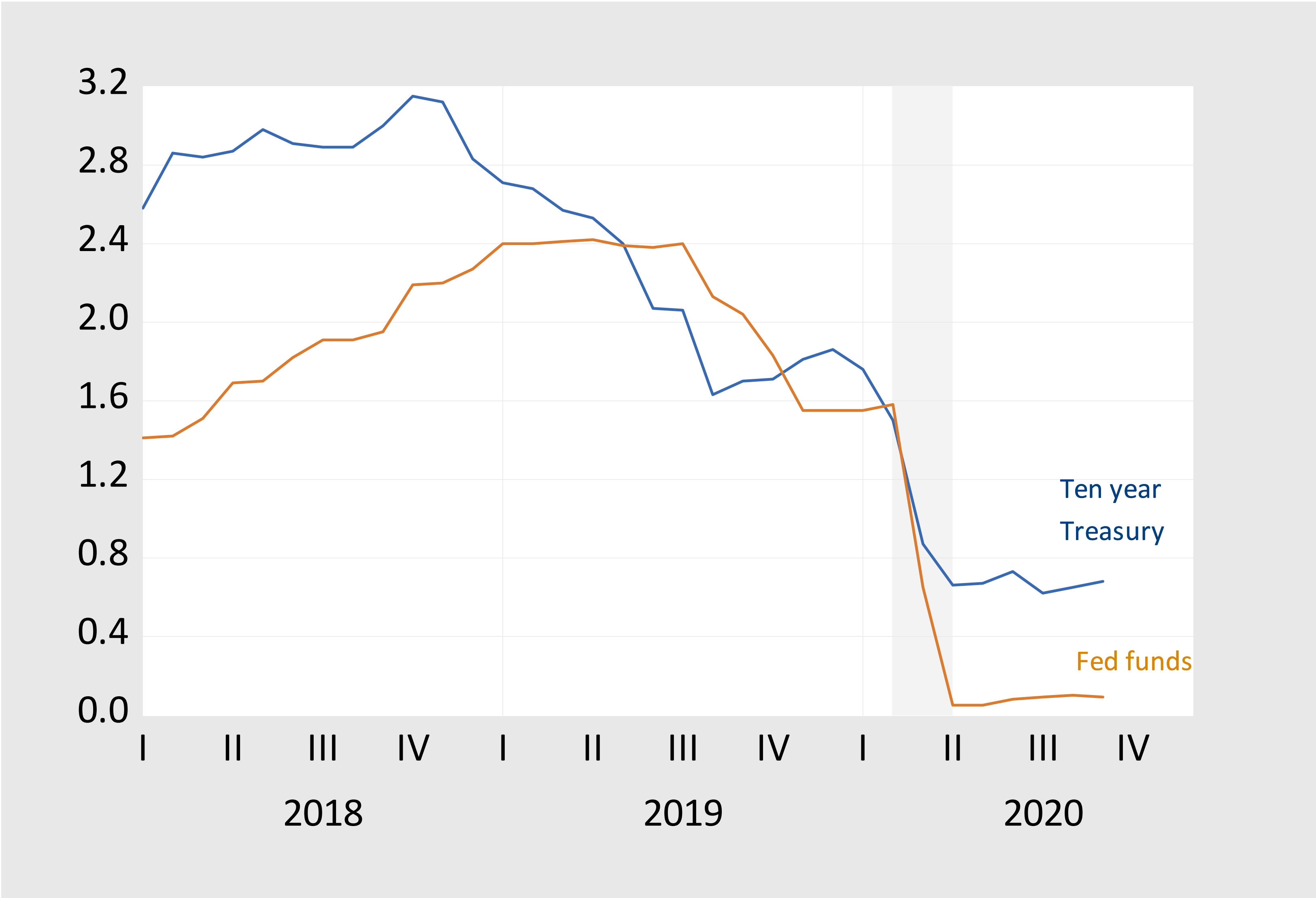
The Likely Range of the Effects of Pandemic-Related Legislation on Real GDP



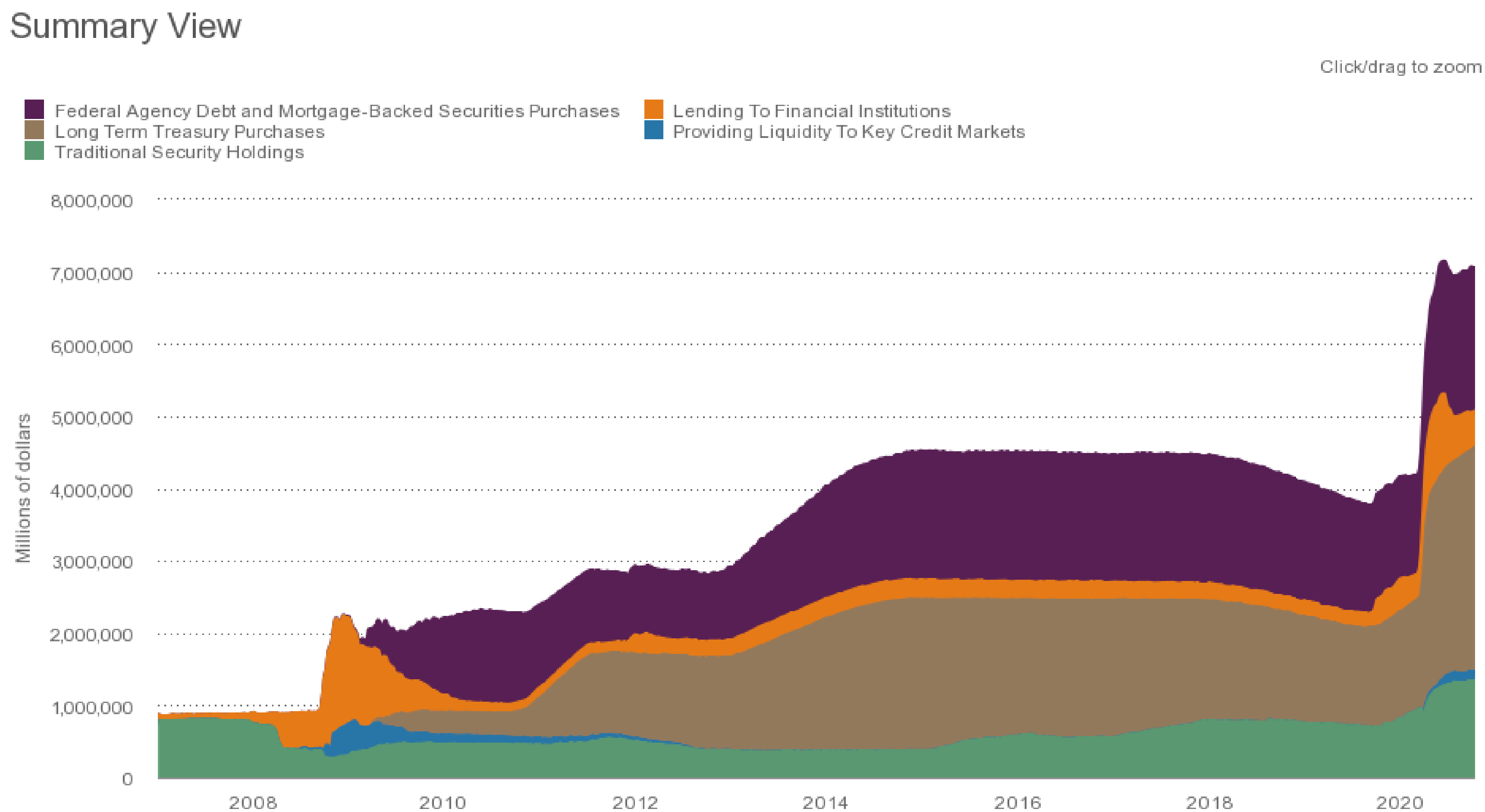
Source: Congressional Budget Office.

CBO, Economic Effects of Pandemic Legislation, Sept 2020
https://www.cbo.gov/system/files/2020-09/56537-pandemic-legislation.pdf

Monetary Response (I)



Monetary Response (II)

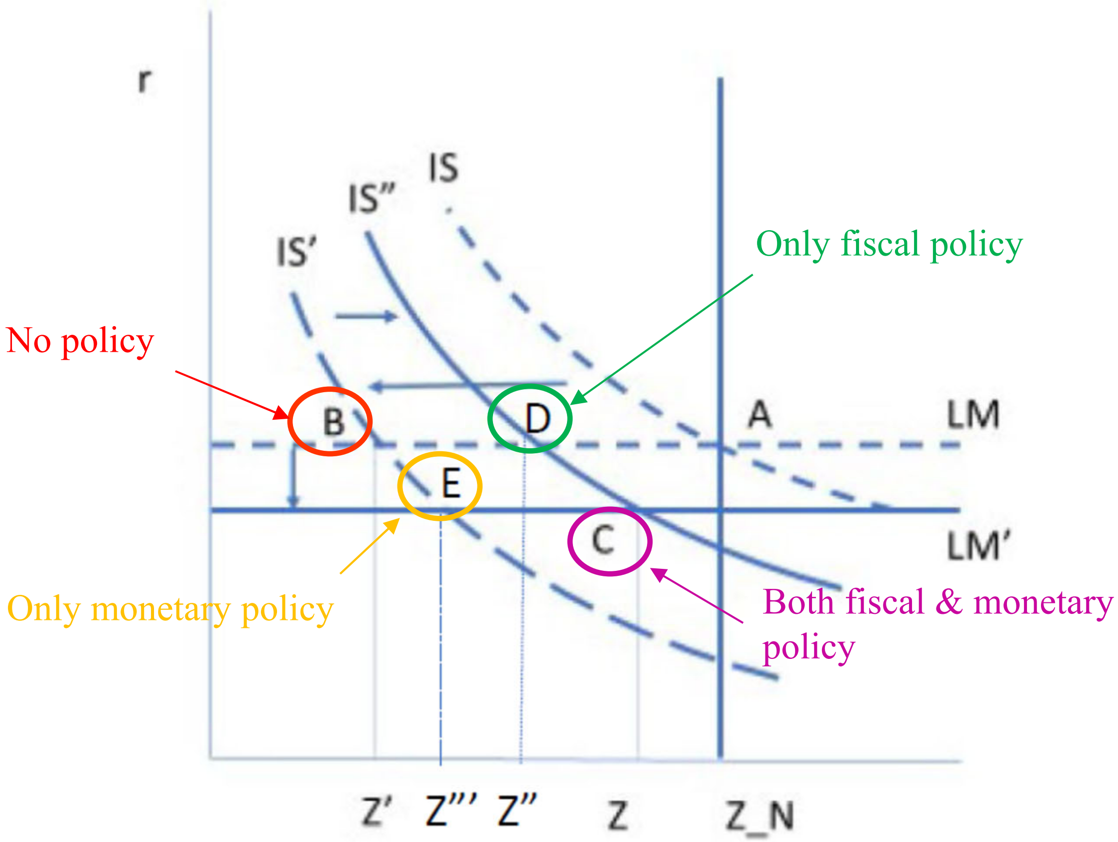


Source: Federal Reserve Bank of Cleveland calculations based on data from Federal Reserve Board and Haver Analytics.

https://www.clevelandfed.org/en/our-research/indicators-and-data/credit-easing.aspx

Post-Lockdown, Pre-Vaccine

Figure 6. The decrease in output in the non-affected sector, given the macroeconomic policy response



Recovery Thus Far

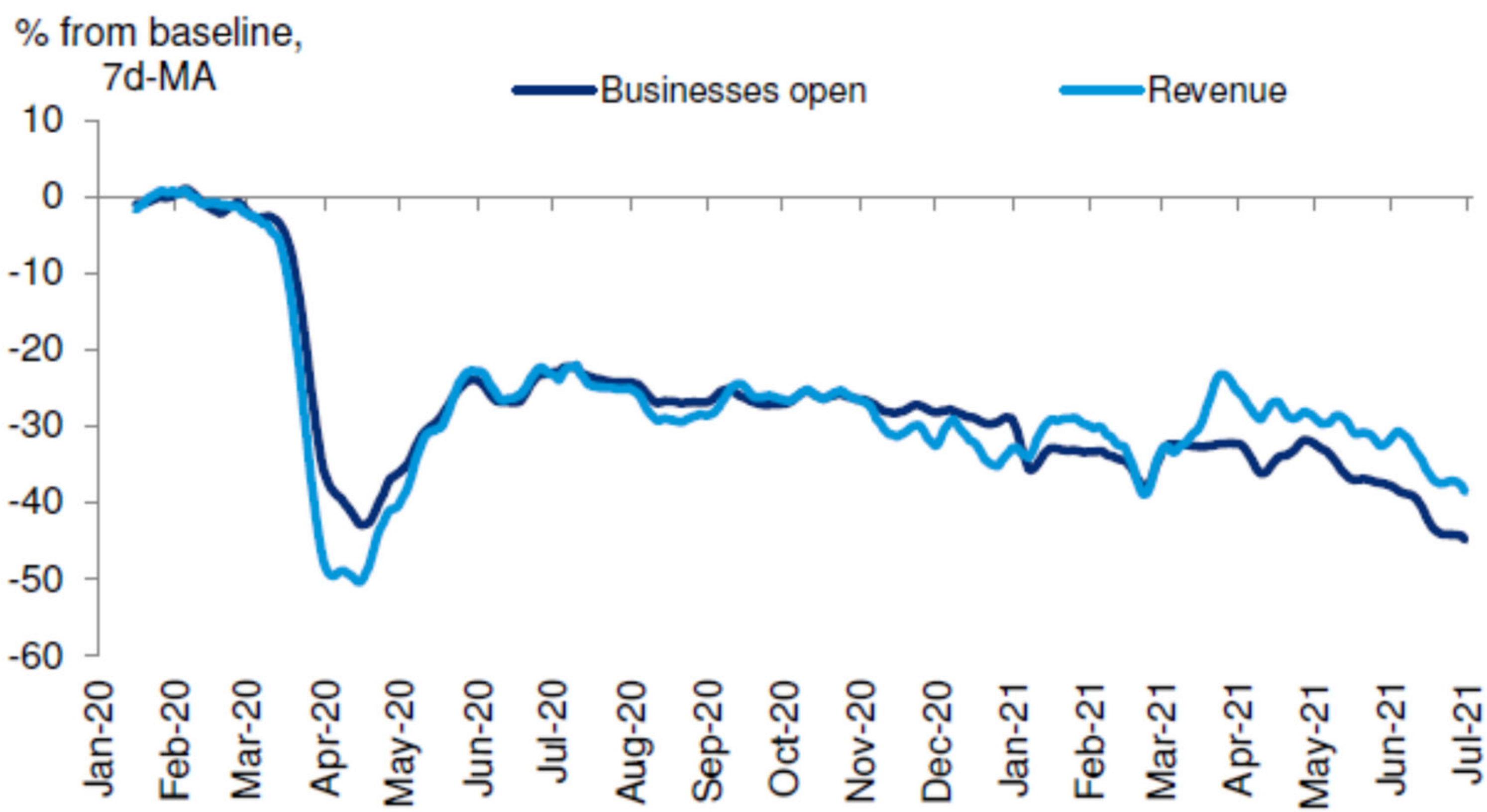
- Through 2020Q3, the recovery was mechanical, the result of firms reopening. …firms rehired some of their workers and started producing again.
- Blanchard thought that once the vaccine was available, the recovery would be solidified
- However, higher than anticipated vaccination-resistance, and the advent of the delta variant, means the situation is more like the pre-vaccine than the post-vaccine conditions.
- Many firms won’t be able to survive, were it not for Payment Protection Plan PPP), and many households were it not for transfers, enhanced unemployment insurance benefits.
- These programs have ended.

Recovery Thus Far

- Many firms that survived the lockdown by taking out loans have accumulated debt to the point where they may go bankrupt, leading to more unemployment. Many firms are realizing that they may not survive. Even if they do not go bankrupt, they are likely to be short of funds and sharply cut on investment. Many workers are realizing that they may not get their old job back…
- [This is sometimes called the “scarring effect”]

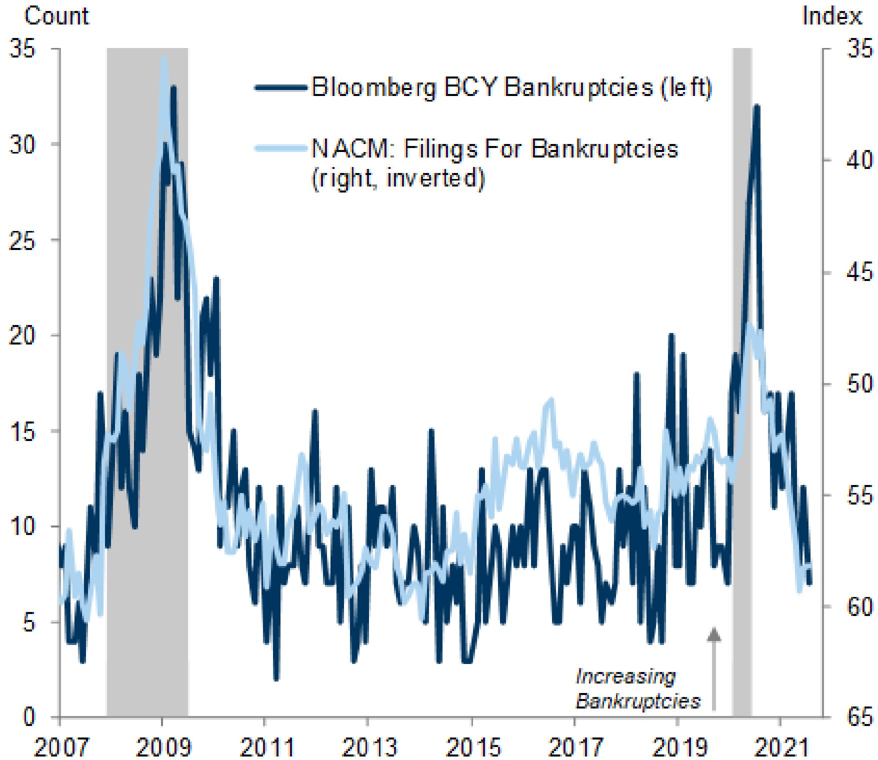
Not Out of the Woods Yet

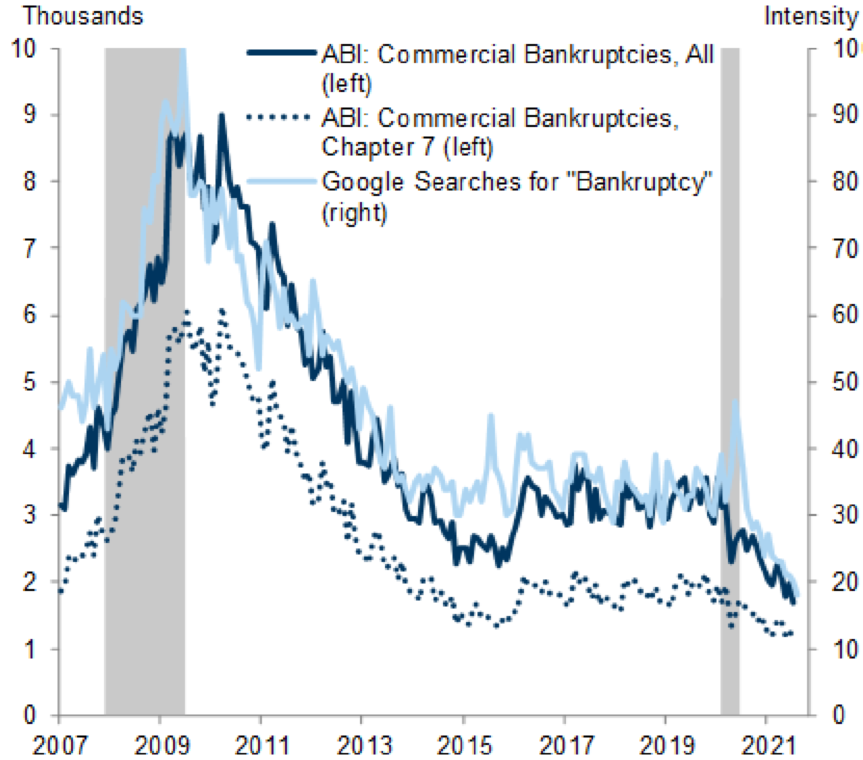
Figure 39: Small business activity has deteriorated



Source : Womply via Opportunity Insights, Haver Analytics, Deutsche Bank

Bankruptcies





Post-[Effective]Vaccine

- Reallocation of activity (e.g., telework)
- Increased government debt
- Increased central bank balance sheets