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See the Forest through the Money Tree

NYSAC Legislative Conference

February 2023

Vincent Reinhart
Chief Economist & Macro Strategist
Two Tenets

I. All politics is local, and all macroeconomics is sectoral.

II. “Trust the science” is a charged phrase when applied to monetary policy science.

The consequences from 2020 and beyond

Two generational shocks—the pandemic and a major land war in Europe—were stress tests of the Federal Reserve’s (Fed’s) new monetary framework, which we believe failed.

The Fed did not appreciate the sectoral incidence of the shocks, the size of the global policy response, and the danger of making inflation a salient concern of households and firms.

As long as the Fed emphasizes the external drivers and not the internal design flaw, we believe inflation will persist well above goal even as the US economy slips into recession.

Risks abound, including a potentially self-inflicted one regarding the federal debt ceiling.
What happened to us?

What went wrong at the Federal Reserve?

What does it mean for the outlook?

What else can go wrong?
What Happened to Us?

Two generational shocks: The prior global pandemic was in 1918\(^1\) and major land war in Europe was in 1945.\(^2\)

Sources: \(^1\)As explained in John Barry, The Great Influenza, 2004; \(^2\)https://time.com/5632549/world-war-ii-memory/, accessed 10/12/22. See Additional Information in Disclosure Statements. [28471]
The disruptions in most countries have lessened over time, as more people achieved natural immunity, and society got:

- Better at social distancing, contact tracing and ventilating public spaces
- Tired of strict lockdowns
- Vaccinated away

However, as the virus mutates, the health risk lingers.

The largest economy in the world by population and second largest by output, China, has only recently abandoned its zero-tolerance policy in a typically opaque fashion.

Source: JHU, Our World in Data, accessed at Github 2/10/23, and firm analysis. See Additional Information in Disclosure Statements. [28471]
We believe the shutting down of social interaction brought economic activity to a sudden stop, scarring balance sheets and psyches but energizing the government.

The health risk is generally greater when providing many services, both for the seller and buyer, than in providing goods. The relative risk is greater for the supplier (who does it all day) than the demander (with one transaction).

As opposed to goods, service output traditionally
- Cannot be put into or drawn out of inventory, nor
- Bought from or sold abroad (although the world is getting better working at a distance); and
- Makes up the bulk of what is produced by the government sector, where decisions about provision are not exclusively economic.

As a supply shock, the pandemic hit the service sector harder and shifted demand relatively to the goods sector.

See Additional Information in Disclosure Statements. [28471]
Meanwhile, the World Became More Ominous Because of Russian Adventurism

- The Russian invasion of Ukraine poses shocks both to global aggregate supply and aggregate demand.
  - The supply shock, as it takes key commodities off the market and further impairs already damaged global supply chains, is probably large and long tailed.
  - We feel the demand shock is about lost confidence, income and wealth.
  - Central banks are impotent against the former shock, as their actions do not create extra output to fill in lost supply. As for the latter, they can support aggregate demand by making financial conditions easier than they would have been otherwise.

- Nations have chosen sides, and a wall of sanctions and mutual distrust separates the two, impairing the functioning of important markets, the flow of commodities and goods, and the funding of transactions.

- As for sectors, we believe commodities and transport are relatively more important inputs for the goods sector. That is, the pre-existing condition of cost and price pressures in the goods market has worsened.

See Additional Information in Disclosure Statements. [28471]
The pandemic was an enormous shock to US economic activity, uneven across sector and scale, and brought forth a massive fiscal and monetary response to restore lost output.

The Harder States Fell, the Quicker they Rebounded
Still, There were Long-Lasting Scars

### Real GDP by state
Change in percent

<table>
<thead>
<tr>
<th>Q2 2020 to Q1 2021</th>
<th>Q4 2019 to Q2 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>-20</td>
<td>-20</td>
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<td>-18</td>
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</table>

### Stated ranked in terms of real GDP
By percent change from Q4 2019 during the:

<table>
<thead>
<tr>
<th>Rank</th>
<th>Downturn to Q2 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hawaii</td>
</tr>
<tr>
<td>2</td>
<td>Nevada</td>
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<tr>
<td>3</td>
<td>Michigan</td>
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<tr>
<td>4</td>
<td>Connecticut</td>
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<tr>
<td>5</td>
<td>Louisiana</td>
</tr>
<tr>
<td>6</td>
<td>Pennsylvania</td>
</tr>
<tr>
<td>7</td>
<td>New Jersey</td>
</tr>
<tr>
<td>8</td>
<td>Tennessee</td>
</tr>
<tr>
<td>9</td>
<td>Indiana</td>
</tr>
<tr>
<td>10</td>
<td>Vermont</td>
</tr>
</tbody>
</table>

### Net Expansion to Q3 2022
Rank best to worst

<table>
<thead>
<tr>
<th>Rank</th>
<th>Net Expansion to Q3 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Idaho</td>
</tr>
<tr>
<td>2</td>
<td>Tennessee</td>
</tr>
<tr>
<td>3</td>
<td>Florida</td>
</tr>
<tr>
<td>4</td>
<td>Utah</td>
</tr>
<tr>
<td>5</td>
<td>New Hampshire</td>
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<tr>
<td>6</td>
<td>Arizona</td>
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<tr>
<td>7</td>
<td>Washington</td>
</tr>
<tr>
<td>8</td>
<td>North Carolina</td>
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<tr>
<td>9</td>
<td>Maine</td>
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<tr>
<td>10</td>
<td>Arkansas</td>
</tr>
</tbody>
</table>

Source: Bureau of Economic Analysis, Regional Data, accessed 2/8/23, and firm analysis. See Additional Information in Disclosure Statements. [28471]
Employment Swung with Real GDP, but with Considerable Regional Differences

Real GDP and employment
Change in percent

Real GDP and employment by state
2019 to 2020, change in percent

Real GDP and employment by state
2020 to 2021, change in percent

Source: Bureau of Economic Analysis, Regional Data, accessed 2/8/23, and firm analysis. See Additional Information in Disclosure Statements. [28471]
Size Matters. Larger States had Proportionally Smaller Changes

Source: Bureau of Economic Analysis, Regional Data, accessed 2/8/23, and firm analysis. See Additional Information in Disclosure Statements. [28471]
According to Volcker and Greenspan, price stability was the “state in which expected changes in the general price level do not effectively alter business or household decisions.”

- Paul A. Volcker's "Keeping at It:" Messages for Country and World.¹

The policy rule was get it there and keep it there.

¹ Paul A. Volker's "Keeping at It:" Messages for Country and World, Peterson Institute for International Economics, February 8, 2019. See Additional Information in Disclosure Statements. [28471]
What Went Wrong at the Fed?

The Fed sought to maintain aggregate demand without appreciation of global fiscal stimulus, joint monetary accommodation and the sectoral nature of the shocks.
The Fed’s Policy Framework

The new framework essentially codified the Yellen-Powell experiment with running the economy hot:

• By being permissive of inflation overshooting
• Interpreting achievement of the 2-percent inflation goal as a backward average of prior inflation
• Assessing resource slack in an encompassing manner

The characterization was one-sided toward accommodation, ambiguous as to specifics, and fit to the situation.

• The situation was the unique sectoral behavior of the US economy in the first part of the 21st century

See Additional Information in Disclosure Statements. [28471]
The framework presupposed the continued beneficial performance of goods prices, which changed little for twenty years and had pulled overall inflation to the Fed’s goal despite more rapid service-price inflation.

Source: Bureau of Economic Analysis, via FRED, and firm analysis, 2/1/23. PCE=Personal Consumption Expenditures. See Additional Information in Disclosure Statements. [29471]
The Fed Initially Ignored the Ongoing Fiscal Replacement to Income & the Sectoral Incidence

Real Gross Domestic Product and Disposable Personal Income
Four-quarter change, percent

Personal consumption expenditure
Billions of dollars, annual rate

Source: Bureau of Economic Analysis, accessed via FRED, 2/2/23. See Additional Information in Disclosure Statements. [28489]
By State, Personal Income was Protected During the Downturn, but Grew More in Line with Output Over the Longer Run

GDP and personal income
Millions of dollars

GDP and personal income by state
Change Q4 2019 to Q2 2020, percent

GDP and personal income by state
Change Q4 2019 to Q3 2022, percent

Source: Bureau of Economic Analysis, Regional Data, accessed 2/8/23, and firm analysis. See Additional Information in Disclosure Statements. [28471]
The support to goods demand, which could be met by pressing on supply, dislodged the two-decades-long trend in relative prices.

Source: Bureau of Economic Analysis, via FRED, and firm analysis, 2/1/23. PCE=Personal Consumption Expenditures. See Additional Information in Disclosure Statements. [29471]
When goods-prices broke out of the prior twenty-year channel:

- The Fed was initially tolerant of the overage, expecting it to be transitory
- Satisfied it was still close to its price stability goal
- Unworried by resources being taut

That is, the new framework left officials unprepared for new-to-them but old-to-the-institution circumstances.
What Does it Mean for the Outlook?

Demand outstrips supply and inflation is large in scale, broad in scope, and feeding into expectations.
The Momentum to Activity is Eroding the Margins of Capacity

Employment Situation

**Payroll employment**
Thousands of workers

**Unemployment and labor force participation**
Share of civilian population, percent

**Average hourly earnings**
Twelve-month change, percent

**Job openings relative to unemployment**
Ratio

Inflation is Large in Scale, Broad in Scope and Feeding into Expectations

Inflation has broken out of the Volcker-Greenspan zone of price stability, making it salient to households.

**Consumer prices, total and excluding food and energy**

Twelve-month change, percent

**Sticky- and flexible-price consumer prices**

Twelve-month change, percent

**Inflation expectations of households and investors**

Percent

**Consumer prices in advanced economies**

Twelve-month change, percent

Sources: Upper left, Bureau of Labor Statistics; Lower left, Federal Reserve Bank of Atlanta; Upper right, University of Michigan (one-year household expectations) and Federal Reserve Board (investor expectations), five-year/five-year forward inflation compensation implied from various Treasury yields; and Lower right, Eurostat (Euro area) and the Organization for Economic Cooperation and Development (OECD), all accessed via FRED 1/10/23. Sticky Price = calculated from a subset of goods and services included in the Consumer Price Index (CPI) that change price relatively infrequently. Flexible Price = calculated from a subset of goods and services included in the CPI that change price relatively frequently. See Additional Information in Disclosure Statements. [28489]
The Fed is Removing Policy Support to Aggregate Demand,
It was both Conventional and Unconventional

Quantities and prices of Federal Reserve policy
Millions of dollars (LHS)

Source: Federal Reserve, release H4.1 and H15 and Summary of Economic Projections, (12/14/22) for projections, accessed via FRED, 12/29/22. FOMC—Federal Open Market Committee. The chart details the Fed’s conventional policy stance, proxied by the fed funds rate (inverted) along the horizontal axis, and its unconventional policy stance, proxied by the size of its asset holdings along the vertical axis. Easiest policy is in the upper right quadrant. See Additional Information in Disclosure Statements. [28489]
The Federal Reserve Believes More Firming is in Store. Believe Them.

Real fed funds rate
Nominal rate less twelve-month change in PCE prices, percent

Source: Bureau of Economic Analysis and Federal Reserve, accessed via FRED, 2/7/23. PCE=Personal Consumption Expenditures. See Additional Information in Disclosure Statements. [28471]
The Fed’s Challenge is to Convince Investors that Policy Will Be Restrictive, Despite Favorable Inflation News.

Recent disinflation was welcome but owed to the repair of supply chains and rebalancing of markets that pushed goods and commodity prices lower. This constitutes less than one-quarter of the consumer price basket.

Near-term trends in another one-quarter of the price basket were favorable because shelter costs were softening.

However, more than one-half of the basket, non-shelter services, still had momentum that would not be arrested unless wage growth slowed. And wage growth would only slow if the labor market got less taut.

With demand still expanding faster than the trend of potential output, we believe monetary policy must become more restrictive and stay that way for the balance of 2023.

With this forecast, we believe a pause is not in the plan, and no policy maker expects rates to be cut this year.

See Additional Information in Disclosure Statements. [28471]
<table>
<thead>
<tr>
<th>Issue</th>
<th>Description</th>
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<tbody>
<tr>
<td>Two generational shocks, the pandemic and a major land war in Europe, were stress tests of the Federal Reserve’s (Fed’s) new monetary framework, which we believe failed.</td>
<td></td>
</tr>
<tr>
<td>Aggregate supply will take time to mend and be permanently altered. Inflation has moved into a zone where dynamics are nonlinear as inflation has become a salient concern of households and firms.</td>
<td></td>
</tr>
<tr>
<td>As long as the Fed emphasizes the external drivers and not the internal design flaw, we feel inflation will persist well above goal even as the US economy slips into recession with an exaggerated swing in monetary policy.</td>
<td></td>
</tr>
<tr>
<td>While global monetary policy is not coordinated, it mostly emulates the Fed in response to shared shocks and as other central banks seek to limit exchange-rate pressures. We believe the recession will be global.</td>
<td></td>
</tr>
<tr>
<td>We believe all this will make it harder for Fed officials to come to agreement over time.</td>
<td></td>
</tr>
</tbody>
</table>

See Additional Information in Disclosure Statements. [28471]
What Else can Go Wrong?

A lot, and some may be self-inflicted and worsen pre-existing strains.
The debt-ceiling standoff may be a real deal this time. In a divided Congress, politicians have few opportunities to advance their legislated agendas. Some essential bills must pass including funding the government and providing the Treasury borrowing authority. Threatening to impede such legislation is a lever to advance other policy initiatives.
The Federal Transfers that Closed Operating Deficits are Going Away

Operating surplus of and transfers to states and localities
Relative to total receipts, percent

Federal and state fiscal impact
Contribution of four-quarter real GDP growth, percent

Source: Bureau of Economic Analysis, accessed via FRED, 2/2/23. See Additional Information in Disclosure Statements. [28471]
The Defined-Benefit Pension Funds of States & Localities are Deeply Underwater

A Federal Solution Looks Remote

**Real GDP and employment**

Change in percent

**Underfunding status relative to state revenues**

Across the 50 states in 2020

**Funding status relative to state revenues, 2020**

By performance

<table>
<thead>
<tr>
<th>Rank</th>
<th>State</th>
<th>Underfunding/Revenue (%)</th>
<th>Rank</th>
<th>State</th>
<th>Underfunding/Revenue (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Illinois</td>
<td>-237</td>
<td>6</td>
<td>Kentucky</td>
<td>-128</td>
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<tr>
<td>2</td>
<td>New Jersey</td>
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<td>Connecticut</td>
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<td>Mississippi</td>
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<tr>
<td>4</td>
<td>California</td>
<td>-137</td>
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<td>New Mexico</td>
<td>-121</td>
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<tr>
<td>5</td>
<td>Hawaii</td>
<td>-135</td>
<td>10</td>
<td>Alaska</td>
<td>-114</td>
</tr>
</tbody>
</table>

**PAST PERFORMANCE IS NOT NECESSARILY INDICATIVE OF FUTURE RESULTS.**

Source: Bureau of Economic Analysis, Regional Data, accessed 2/8/23, and firm analysis. See Additional Information in Disclosure Statements. [28471]
Mellon Investments Corporation Disclosure

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