Inflation - What to expect going forward

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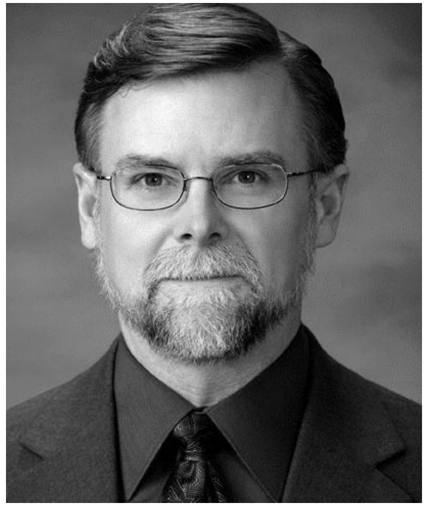
Julex Capital Advisory Board Member, Website www.robbrownonline.com



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"He uses statistics as a drunken man uses lamp-posts... for support rather than illumination"

Andrew Lang

Agenda

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- History of inflation
  - Long-run
  - Short-run
- What the experts are forecasting, predicting
- What Mr. Market says
- Likely factors determining future inflation
- Rob's 2 cents
- Are TIPS bonds the solution

History of inflation

Long-run

Short-run

Learn from history

Understand today . . . by understanding yesterday

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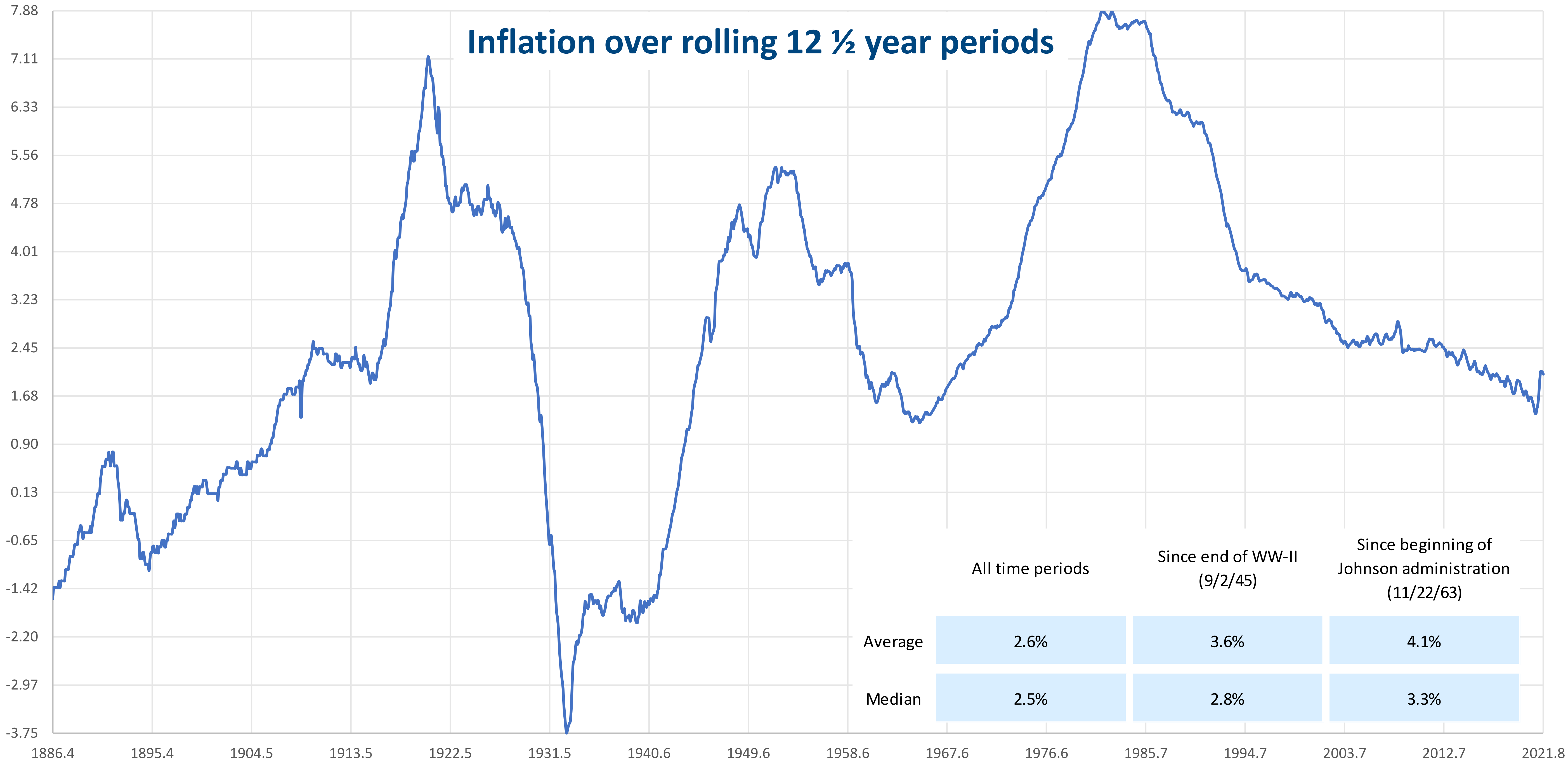

	All time periods	Since end of WW-II (9/2/45)	Since beginning of Johnson administration (11/22/63)
Average	2.6%	3.6%	4.1%
Median	2.5%	2.8%	3.3%

Episodic eras of rising and falling inflation

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Inflation over rolling 12 ½ year periods

	Average	Median
All time periods	2.6%	2.5%
Since end of WW-II (9/2/45)	3.6%	2.8%
Since beginning of Johnson administration (11/22/63)	4.1%	3.3%

Observations

- Episodic eras
- Recent era was the longest on record
- Yes, debasement is the normal, natural order of things
- But, don’t go off the deep end thinking that we’ll magically have double-digit inflation next
- The long-run median (typical level) was only 2.5%

Recently here in the US

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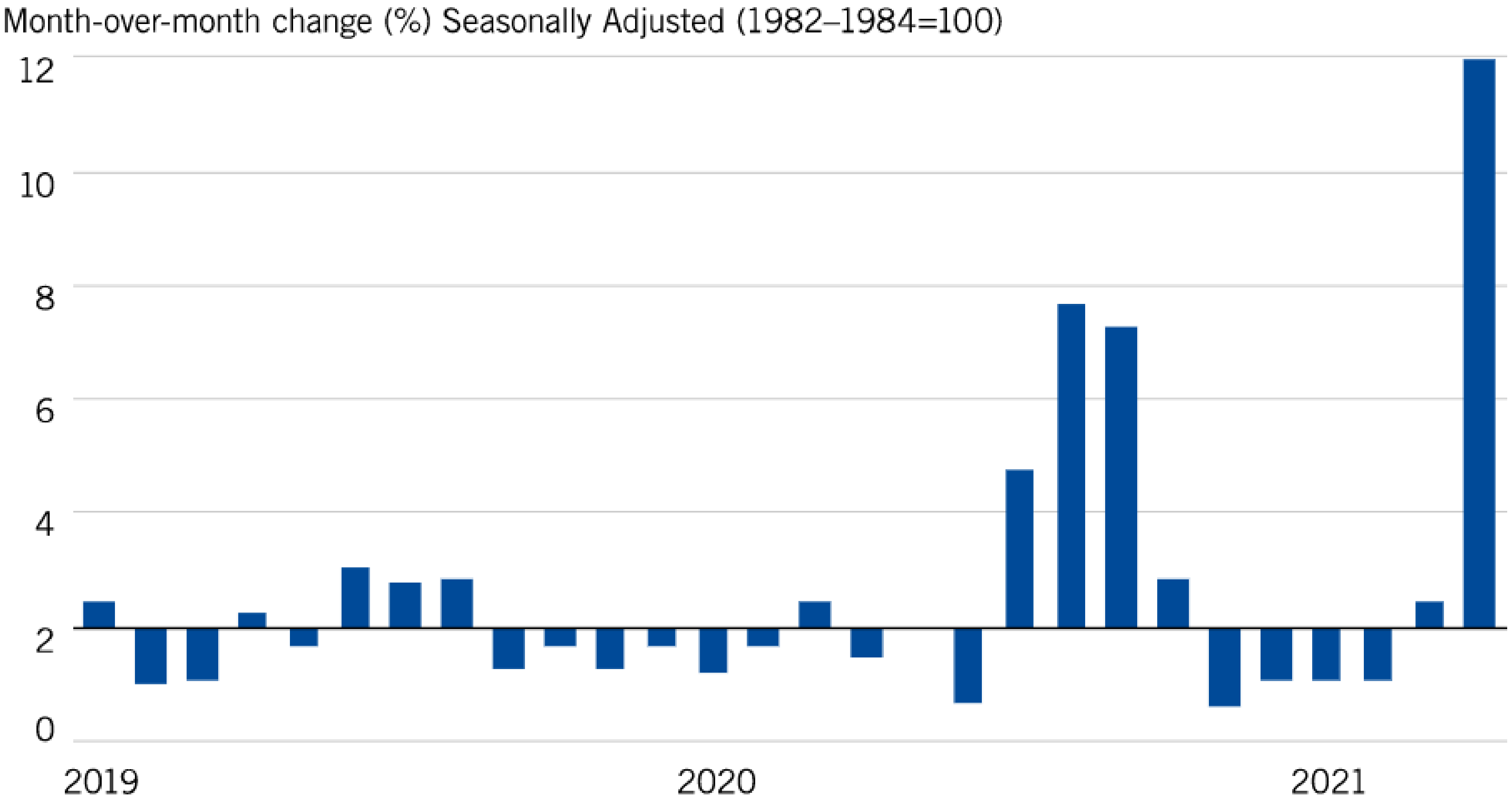
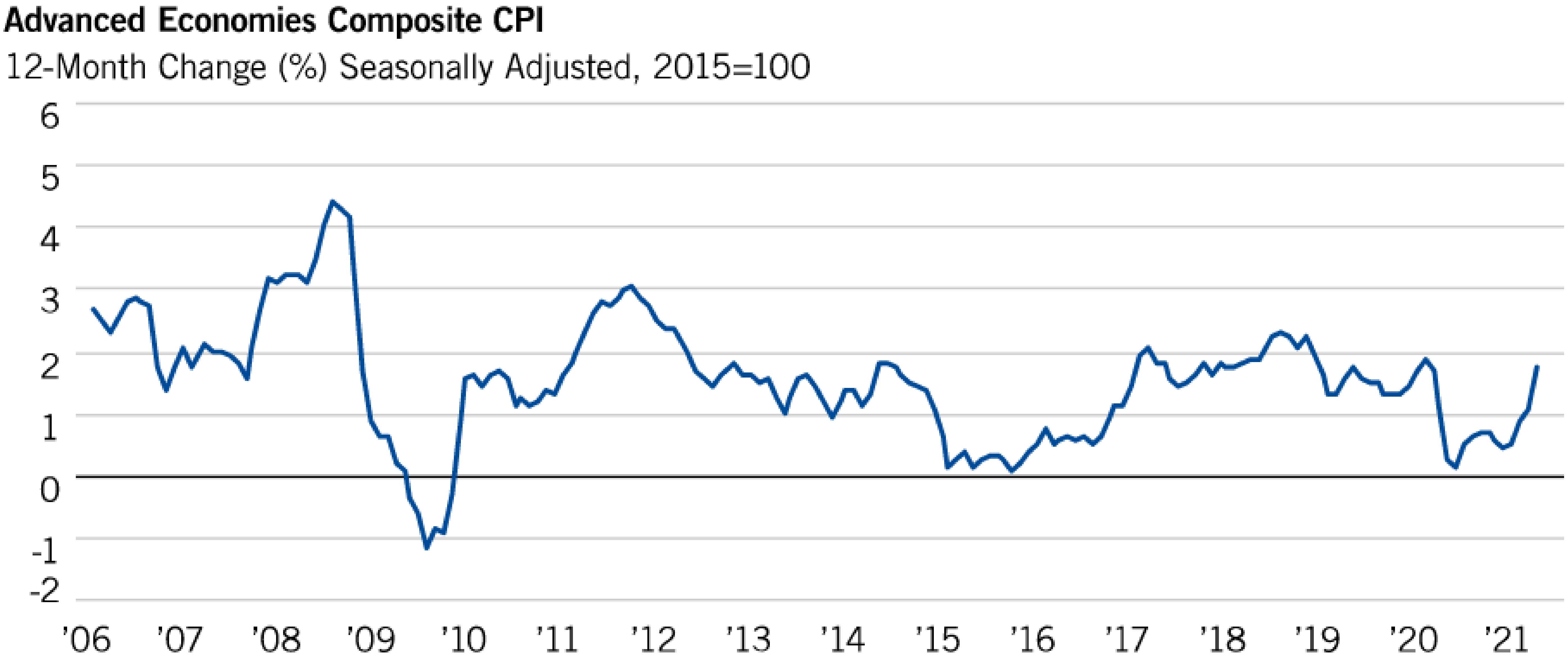
Exhibit 1: US Used Cars and Trucks

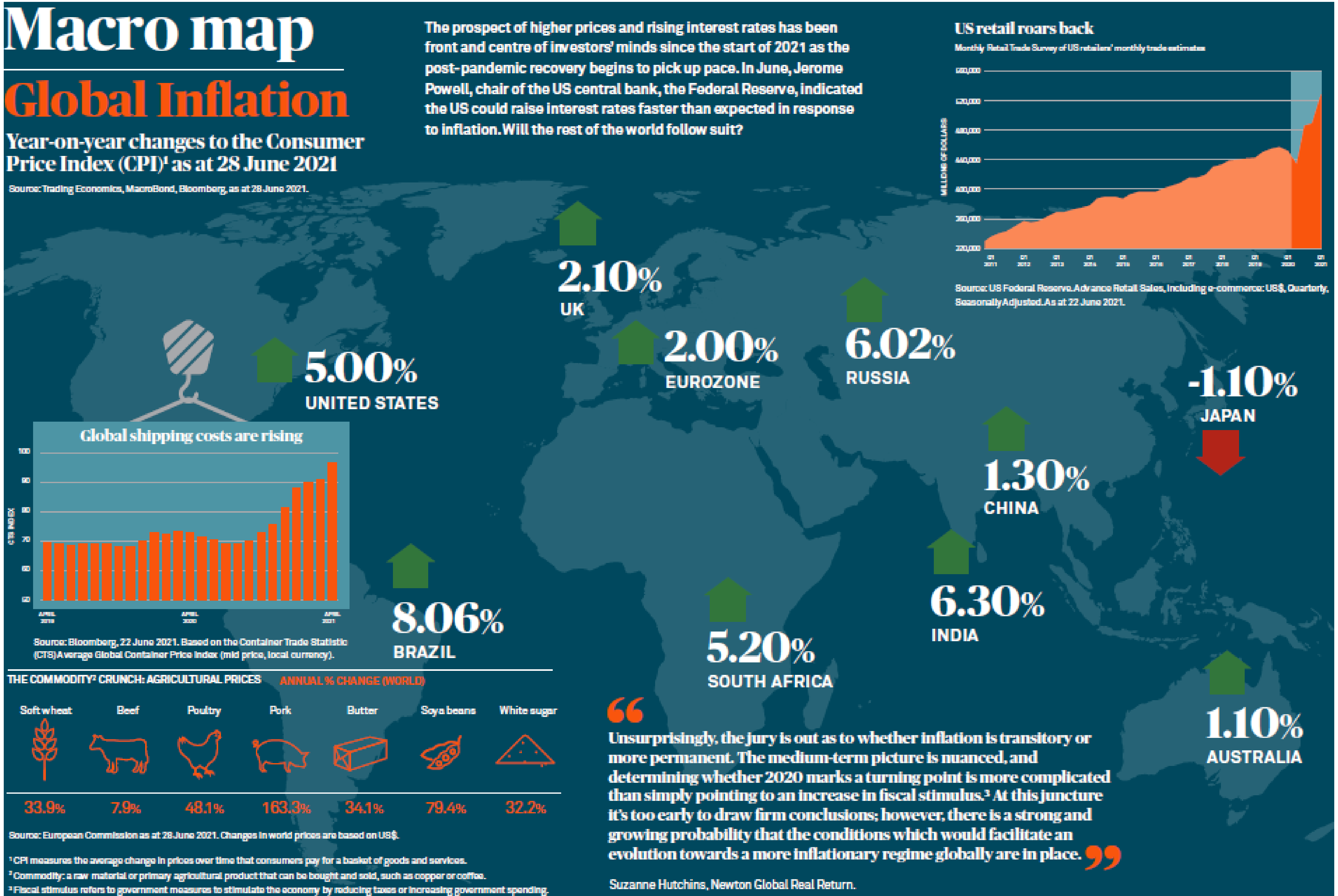


Source: Bureau of Labor Statistics. As of 30 Apr 21.

Recently across the developed world



Recent observations from around the globe



What is the Fed saying about inflation

- Why is the Fed saying this
- What is the Fed's:
  - Mandate . . . their objective
  - Single most powerful tool . . . in their toolbox
- Therefore . . . how should you interpret anything the Fed says
- Don't get me wrong . . . these are seriously good folk
- But, always understand their objective
- AND . . . differentiate between their *"analysis"* and their *"discussion"*

What the experts are forecasting, predicting

There are serious experts . . . they have substance

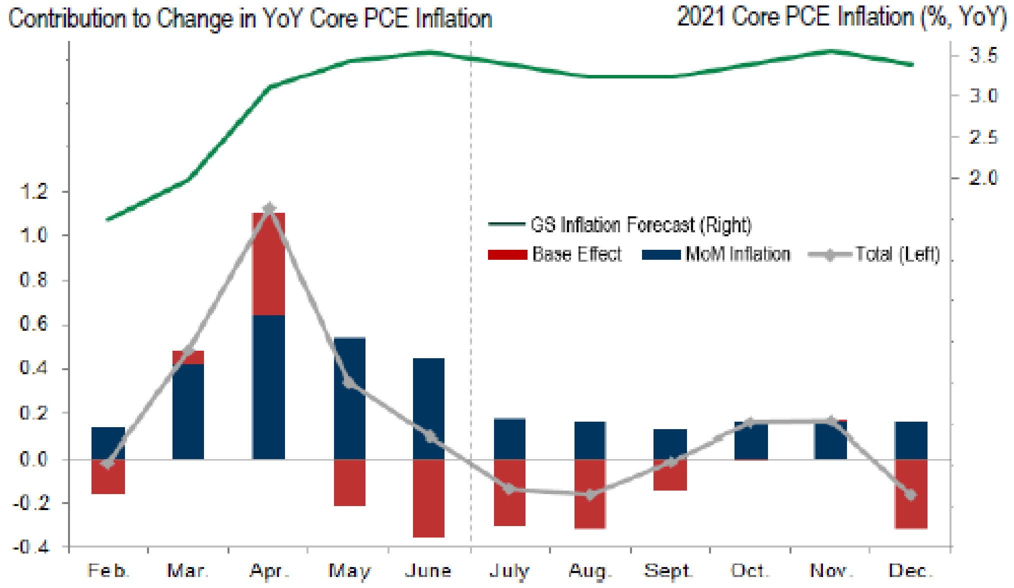
But . . . predicting the future is really hard

Beware of predictions of the future

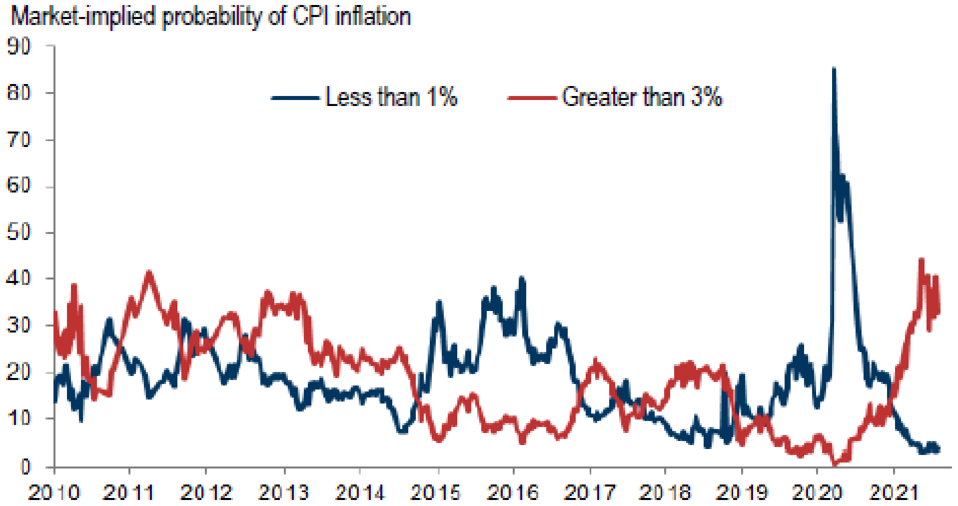
Executive Summary

- **Policy Reflation**: Headline inflation is expected to rise across countries this year, but the acceleration is likely to be most pronounced in the US. We think spikes in inflation in large part has been driven by transient factors, including pandemic-driven healthcare factors, one-off direct payments, and supply constraints.
- **Stable Footing:** Ample economic slack, subdued inflation from healthcare and shelter components, and the anticipation of a slow spend down of policy stimulus reflect offsets to sustained inflation pressures over the medium-term.
- **Setting Expectations:** Our base case scenario assumes that the US core inflation is likely peak in the coming months before normalizing to 3.4% (2021), 2.0% (2022), 2.15% (2023), and 2.2% (2024).
- **Setting Guidance:** Recent hawkish policy views from the FOMC may increase the bar for future inflation surprises. As such, our forecast for Fed liftoff has also been revised earlier, though we still anticipate easy policy to remain in place through 2022 YE with tapering beginning in 2022.
- **Risks to the Upside:** 1) Adoption of average inflation targeting (AIT) leading to a more patient reaction function, 2) cash-laden consumers, 3) strength in commodity prices, and 4) a structural shift in policy goals.
- **Policy Objectives:** A focus on environmental and income inequality initiatives may elicit more patient policymakers who are incentivized to let the economy run hot.

Transient Factors



Reflation Expectations



Policy reflation - transient factors

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Future expectations - just 2.2%

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Outstanding governmental policy questions

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- ❑ **Policy Objectives:** A focus on environmental and income inequality initiatives may elicit more patient policymakers who are incentivized to let the economy run hot.

Government spending (fiscal support)

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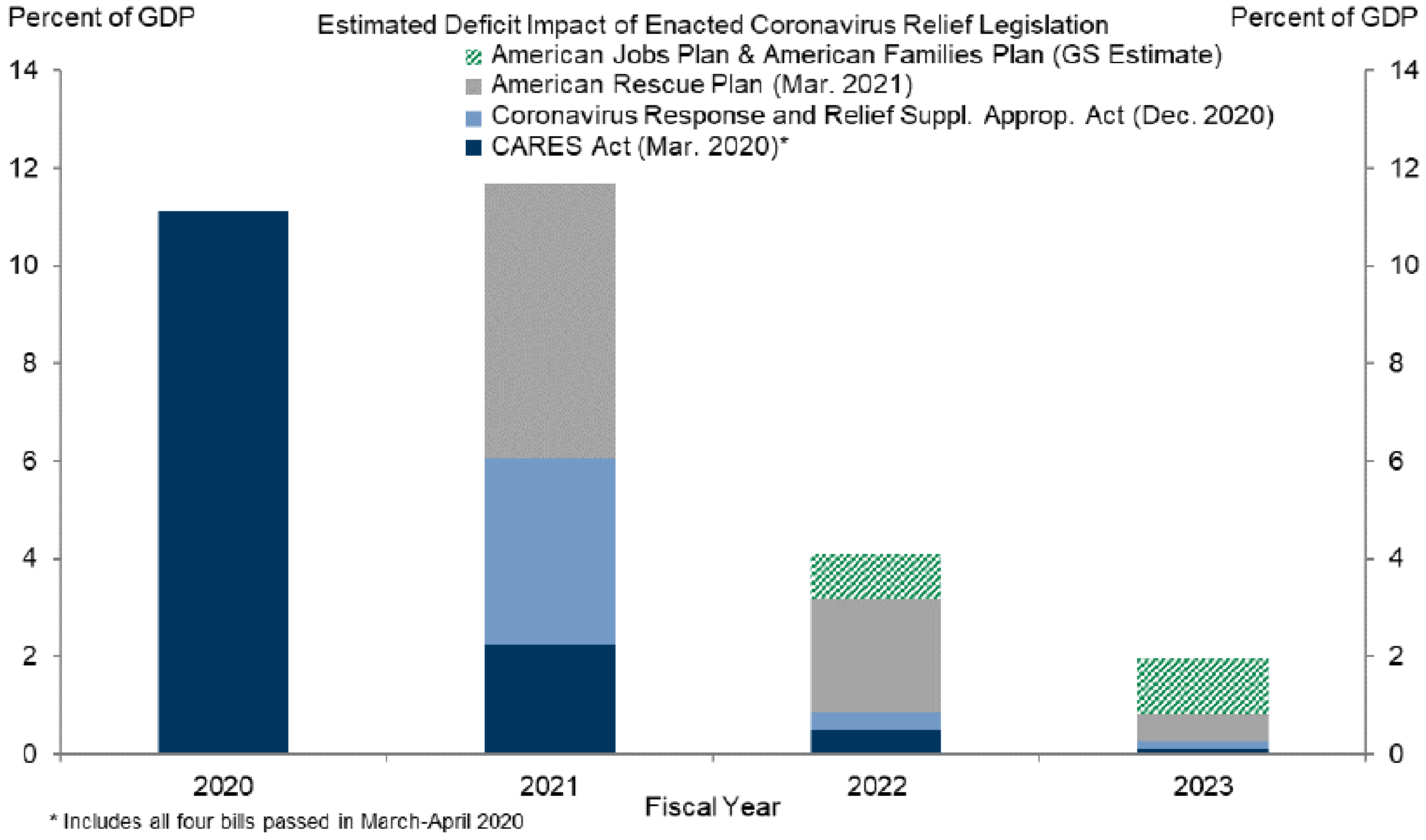
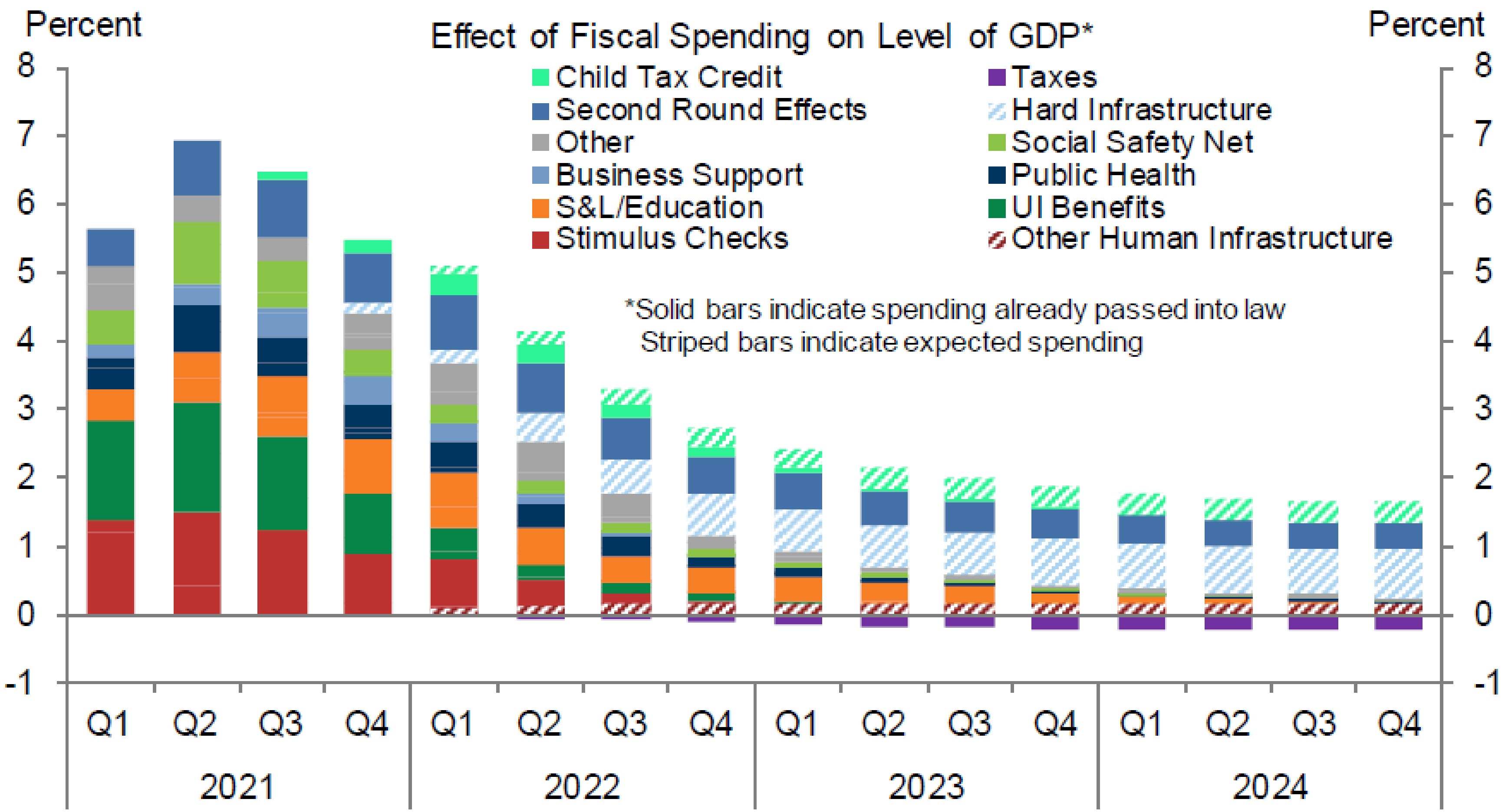
Fiscal Support Will Fade (Even with Another Package)



Future economic growth

The Growth Outlook

Fiscal policy enacted to date will deliver a very large boost to GDP in 2021

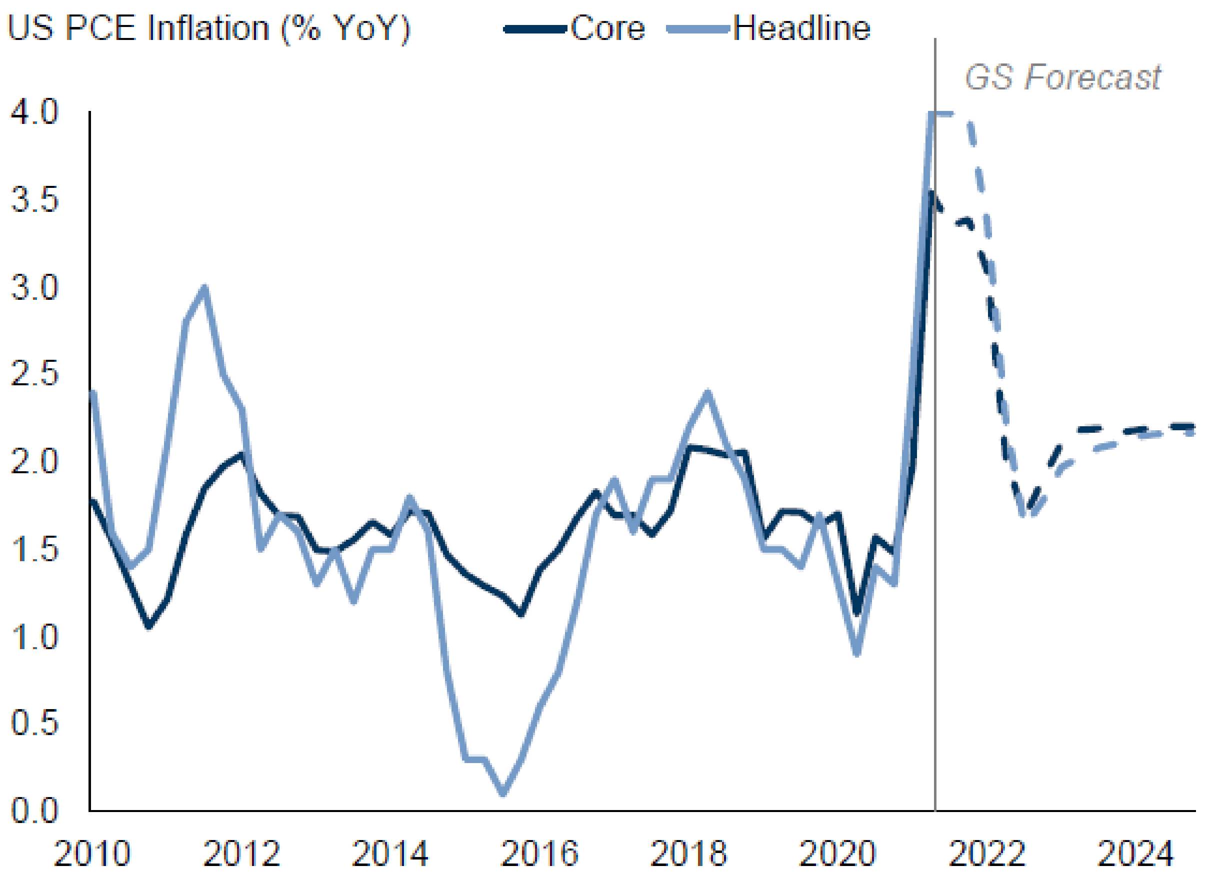


Goldman's specific inflation forecast

Inflation Outlook

Goldman Sachs Asset Management

US economic recovery may normalize inflation longer-term as near-term pressures appear transient



- **Near-term inflation pressures driven by:**
  - Low base effects
  - Transient factors: 1) supply chain disruptions, 2) one-off fiscal stimulus elements such as direct payments, and 3) policy flexibility on healthcare spending
- **Longer-term inflation remains tamed:**
  - Flat Phillips curve
  - Abundance of labor market slack and output gap
  - State and local policy obligations will come with slower spend down over multi-year periods
  - Policy impulse on largest inflation sub-components, healthcare and shelter, should fade
- **We forecast core PCE inflation to peak in the coming months before normalizing to 3.4% (2021), 2.0% (2022), 2.15% (2023), and 2.2% (2024).**

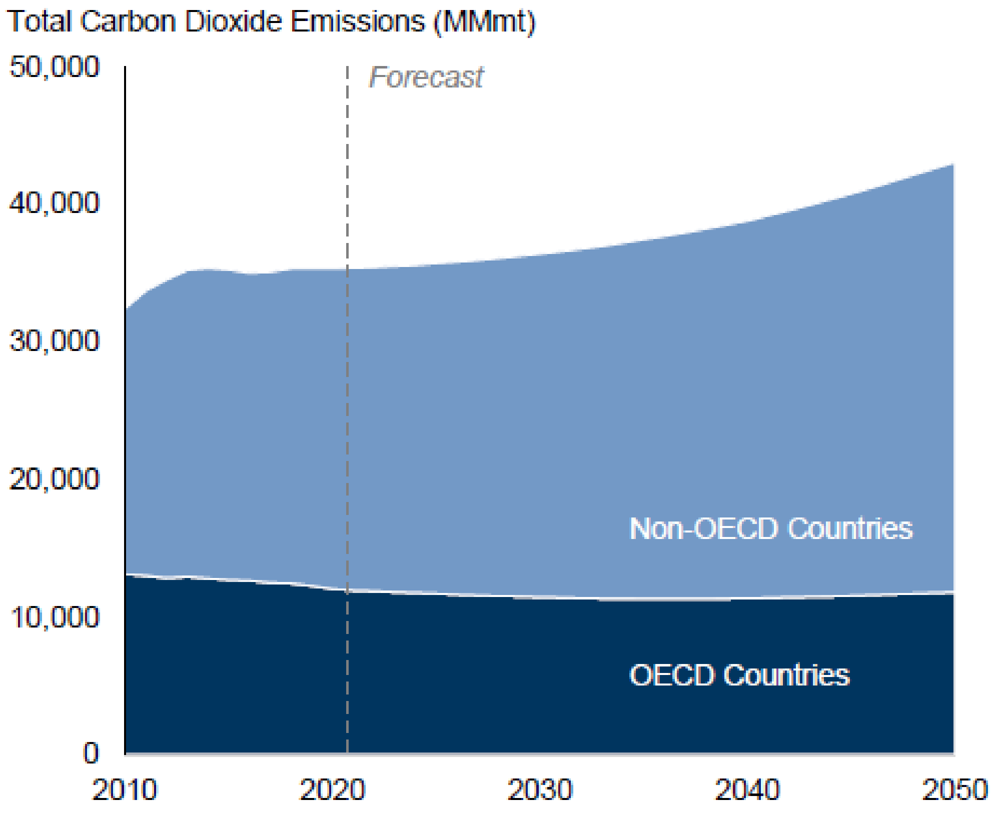
How Goldman might be wrong

Tail Risks to Outlook

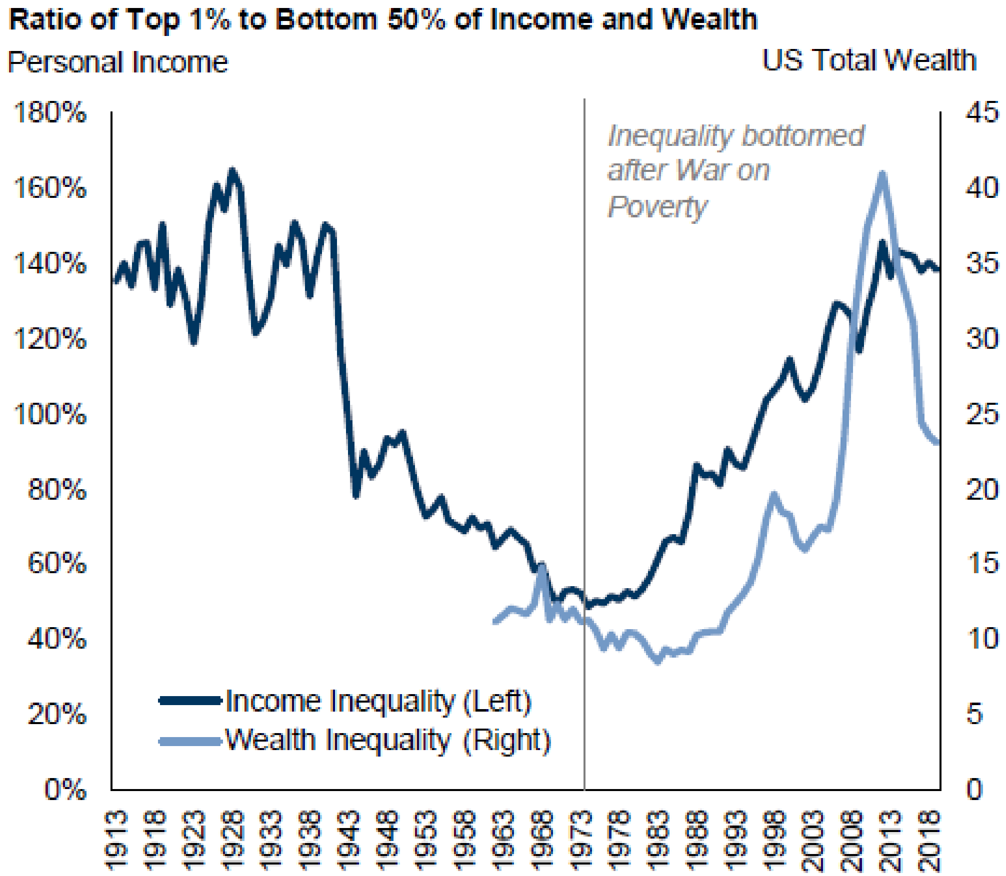
Goldman Sachs Asset Management

Risks to larger inflation overshoot may come from climate and social policy objectives

Reducing CO_2 Emissions



Reducing Income Inequality



Goldman's high-level conclusions

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Key Takeaways

Goldman Sachs Asset Management

- We believe near-term boost in core inflation should peak in the near-term as a result of transient factors such as one-off fiscal stimulus and low base effects.
- Over the medium-term, inflation pressures may moderate. The existing output gap and labor market slack should keep a lid on the potential risk of inflation overshooting.
- What if we are wrong? Upside risks to inflation reflect policymaker's commitment to climate and social objectives, which may potentially lead to a more patient than preemptive Fed reaction function.

What Mr. Market says

Market consensus is usually far more accurate than listening to any individual prediction (no matter how expert)

Mr. Market has increased its expectations for future inflation

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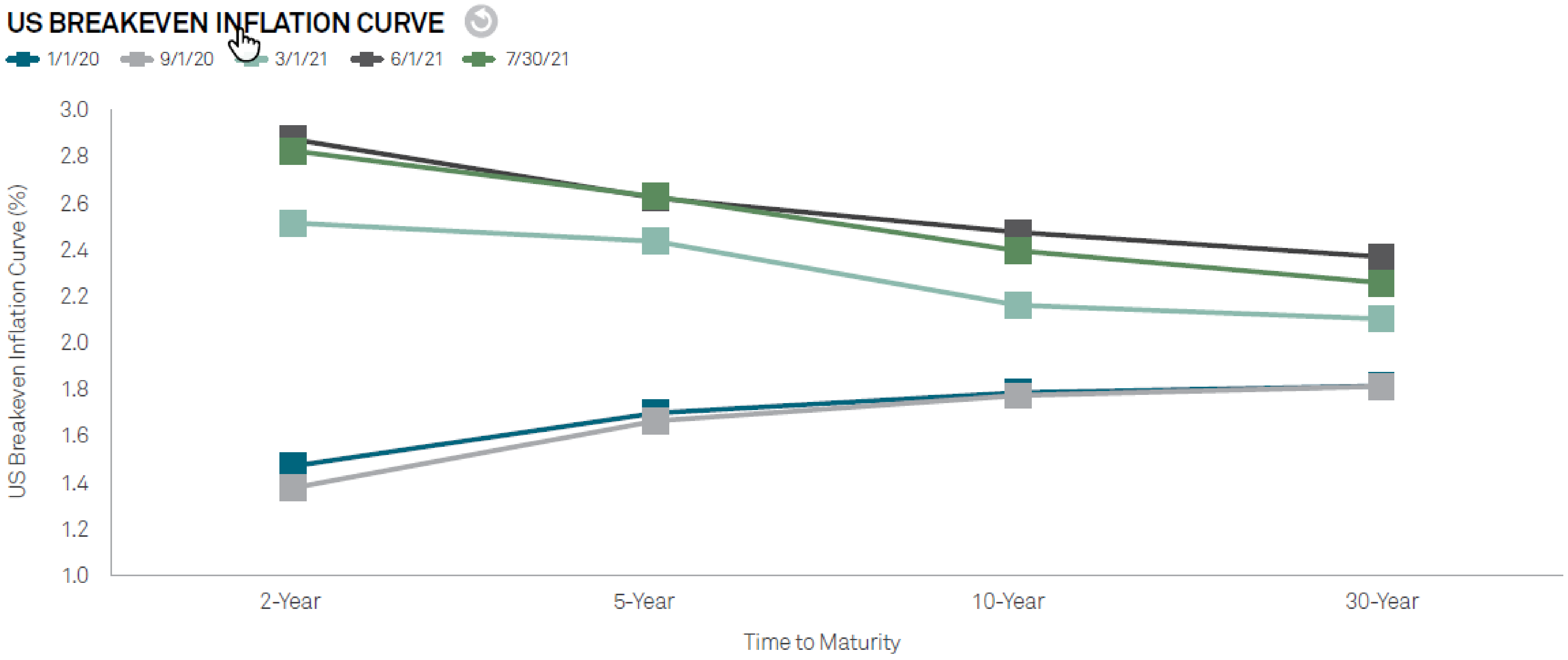

TAKEAWAY

Inflation expectations have softened but are still substantially higher than they were a year ago. The market still sees higher inflation as more of a near-term risk.

Data as of July 30, 2021.
Breakeven inflation is a measure of the market's inflation estimate.
Source: Bloomberg.

How you can see each day what Mr. Market is expecting

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Bloomberg

Treasury Yields

NAME	COUPON	PRICE	YIELD	1
GB3:GOV **3 Month**	0.00	0.06	0.06%	
GB6:GOV **6 Month**	0.00	0.04	0.04%	
GB12:GOV **12 Month**	0.00	0.07	0.07%	
GT2:GOV **2 Year**	0.13	99.84	0.21%	
GT5:GOV **5 Year**	0.63	99.34	0.76%	
GT10:GOV **10 Year**	1.25	99.86	1.27%	
GT30:GOV **30 Year**	2.00	101.66	1.93%	

Treasury Inflation Protected Securities (TIPS)

NAME	COUPON	PRICE	YIELD
GTII5:GOV **5 Year**	0.13	109.63	-1.84%
GTII10:GOV **10 Year**	0.13	112.97	-1.11%
GTII20:GOV **20 Year**	2.13	152.55	-0.57%
GTII30:GOV **30 Year**	0.13	113.51	-0.31%

Take current US Treasury yields - not the "coupon"

Treasury Yields

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GB12:GOV **12 Month**	0.00	0.07	0.07%
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GT5:GOV **5 Year**	0.63	99.34	0.76%
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Next, subtract out the current yield on the same maturity TIPS bond

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Example - the next ten years

- 1.27% is the current yield on a 10-year Treasury
- -1.11% is the current yield on a 10-year TIPS bond

- Therefore, Mr. Market expects inflation will be

- 2.38% over the next ten years
- 2.38% = (1.27%) - (-1.11%)

Likely factors determining future inflation

We can identify the players on the field

And their individual relative strengths and weaknesses

Possible factors

- Fiscal stimulus
- Monetary stimulus
- Repair of the broken supply chains
- Consumers spending the mountain of savings they built up
- Business spending the mountain of savings they built up
- Fear of future inflation changing behavior (both consumer and business)

- Longer term
  - Social programs intended to address poor distribution of wealth/income
  - Expenditures to move the planet away from fossil fuels
  - Wars resulting from geopolitical tensions driven by demographics, weather, China/US cold war, growing income inequality

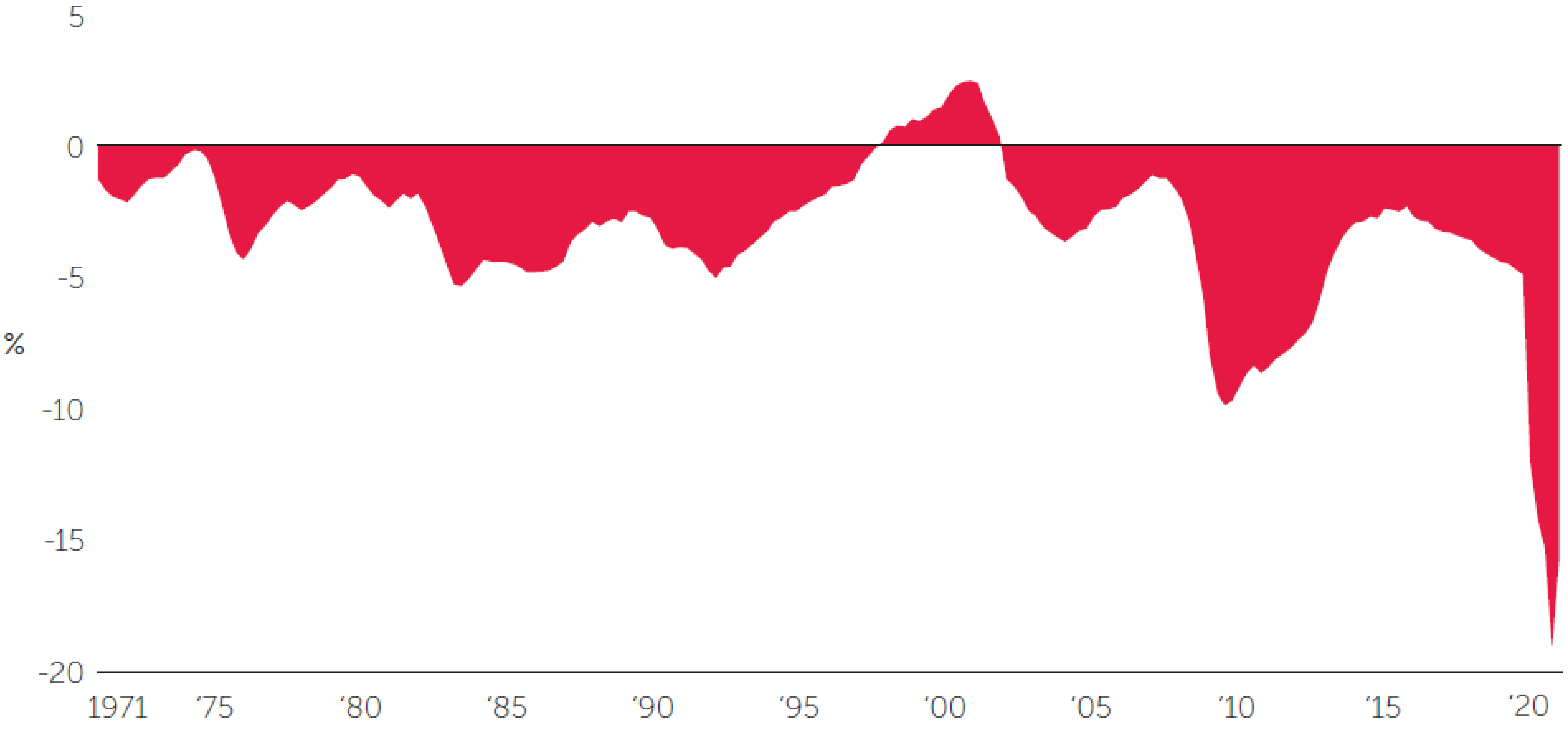
Rob’s 2 cents

My personal opinion

Which is probably worth a little less than a cold cup of joe

Yes, we spent a lot, borrowed a lot, and printed a lot

Exhibit 1: US Budget Balance (% of Nominal GDP)



Source: Bloomberg, June 30, 2021.

Maybe the only risk is *"monetary regime change"*

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RISK VERSUS UNCERTAINTY

Should a change in the monetary regime bring about a return of inflation, it will mark a potential long-term change in the fundamental fabric of our investing world. At the same time, we will continue to grapple with the usual short to medium-term risks that manifest themselves as deflationary shocks, such as Fed-induced recessions, banking crises or pandemics. How do we invest in this world?

To pull off this trick, we need to think about the nature of time and the exclusivity (or not) of states of the world. We need to think really carefully about the path that our portfolios will take in a probabilistic world, and our inability to predict the outcomes. Critically, we need to differentiate between the analysis we should use for questions of risk and the analysis we should use for questions

> "A monetary or inflationary regime change will mean that the industry's frame of reference is very likely to be out of kilter with this new world."

Maybe recent money printing is NOT inflationary

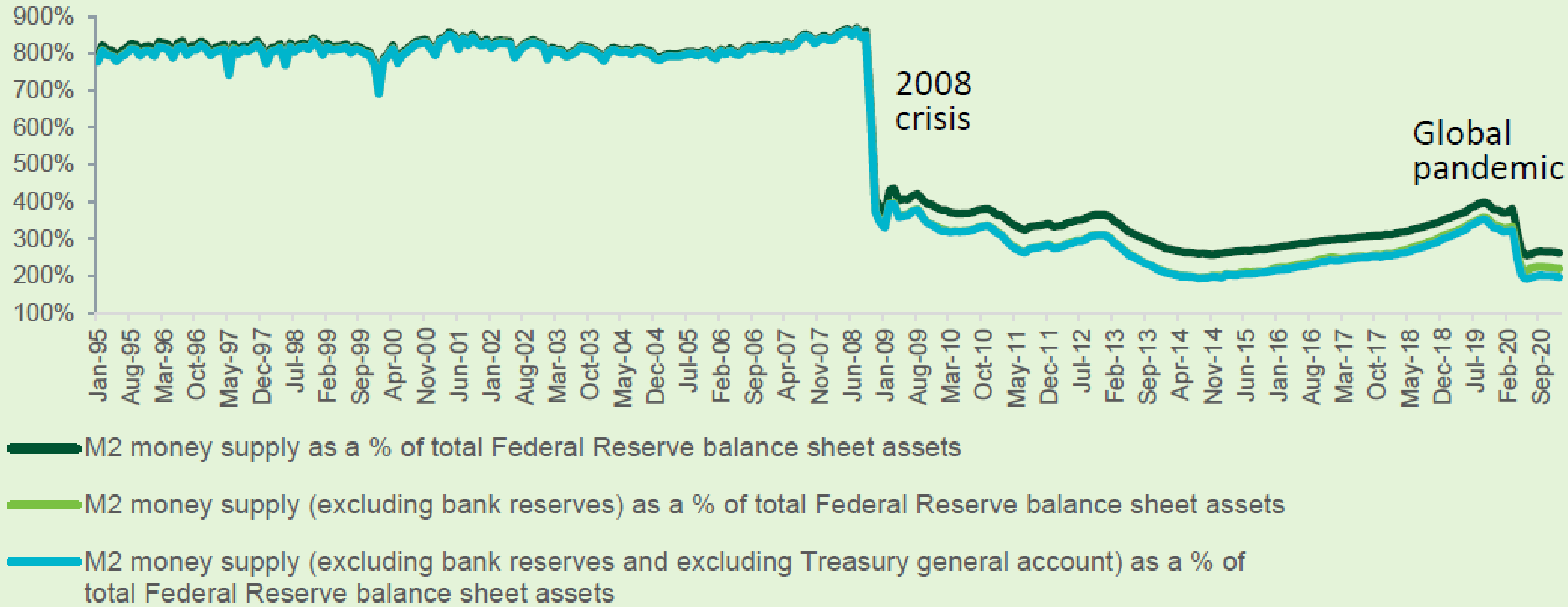
The M2 illusion explained

When we adjust 'M2' to exclude money held at the Fed, why do we see no parabolic rise?

It's partly because a large proportion of the rise in money supply has been a result of QE, which involves 'printing' fresh bank reserves that circulate within the banking system (at banks' accounts at the Fed) but *not* the real economy.

QE's inflationary potential is more indirect – by incentivizing commercial banks to lend more (which effectively 'prints' new money into the economy[3]). However, QE has not proportionately stimulated private credit growth – largely as the US consumer (worth ~70% of the economy) has been firmly deleveraging since 2008 (Figure 3).

Figure 3: M2 relative to the Fed balance sheet shows QE having a proportionally muted effect on private credit growth[4]

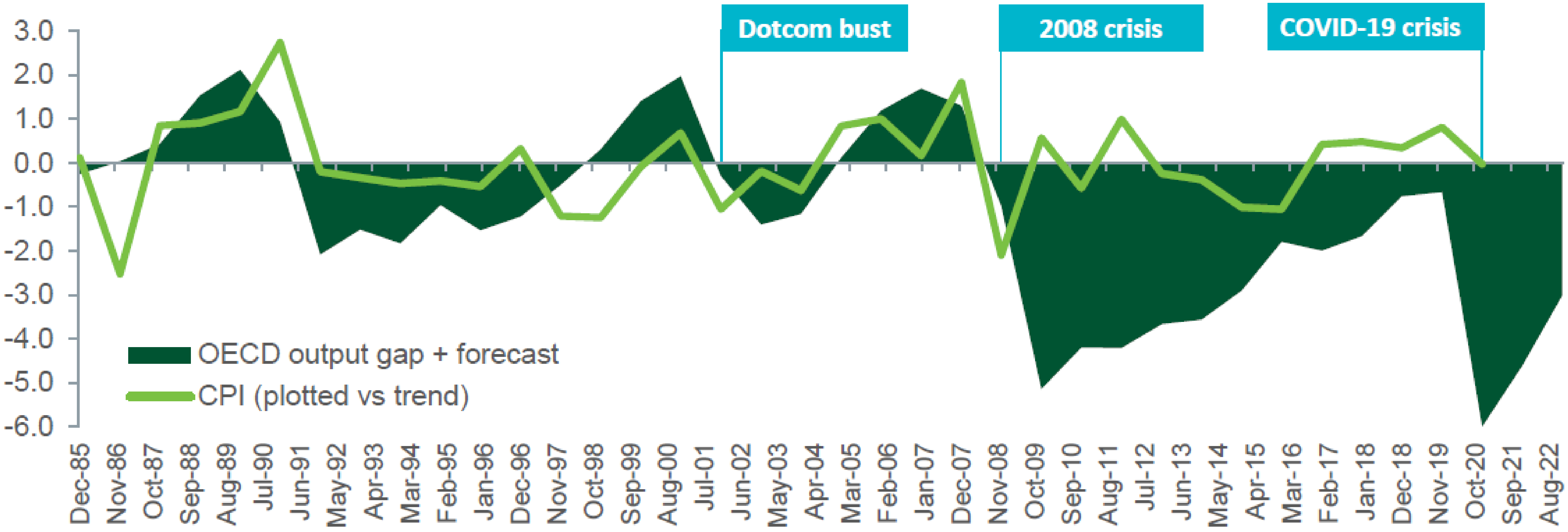


Maybe there are NO supply constraints that would push prices up

THE 'OUTPUT GAP' INDICATES INFLATION COULD YET BE YEARS WAY

Most investors now look at the ***output gap*** rather than money supply as the primary indicator of inflation, and it has correlated ~50% with core CPI since the mid-1980s[5] (Figure 4).

Figure 4: The output gap has a better correlation with inflation than money supply[6]



Possible factors

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- Repair of the broken supply chains

Rob's only concerns

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- Longer term
  - Social programs intended to address poor distribution of wealth/income
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  - Wars resulting from geopolitical tensions driven by demographics, weather, China/US cold war, growing income inequality

Are TIPS bonds the solution

NO

Just look at their current yield . . . it is significantly negative

Current yields on TIPS bonds

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Treasury Inflation Protected Securities (TIPS)

NAME	COUPON	PRICE	YIELD
GTII5:GOV **5 Year**	0.13	109.45	-1.81%
GTII10:GOV **10 Year**	0.13	112.59	-1.08%
GTII20:GOV **20 Year**	2.13	151.84	-0.54%
GTII30:GOV **30 Year**	0.13	112.59	-0.28%

Client-facing collateral

Investment Library collateral

Sometimes People Just Don't Fact-Check

Some have falsely claimed that market cycles are getting shorter

Tactical Asset Allocation (TAA) relies on trending or momentum for its success. Some have falsely claimed that market cycles are getting shorter, and therefore TAA no longer has the inherent advantage that it once did. Let's fact-check this claim in order to determine its truth or falsehood.

Read More

Which Portfolio is Lower Risk?

We care most about risk when the sky is falling

When the market is going up, we don't care about risk. But when it's collapsing, we do. Since 1920, there have been nine stock bear markets. Let's compare how four hypothetical portfolios performed during these nine traumatic events.

Read More

But Has TAA Worked Better Than Bonds?

Investment Library collateral

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PERSPECTIVES ON TACTICAL ASSET ALLOCATION (AKA SECTOR ROTATION)

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What happens when interest rates rise?

How does TAA perform during rising/falling interest rate environments?

To answer this question, we must:

- Identify a time period to examine,
- Specify how we define rising and falling interest rate environments,
- Identify a simple transparent TAA portfolio that anyone could replicate, and
- Provide comparative passive index benchmarks.

PERSPECTIVES ON TACTICAL ASSET ALLOCATION (AKA SECTOR ROTATION)

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Time - Can be your best friend

Matching a need - with an investment portfolio

I've determined how much I plan to spend (and gift) during years 10 through 15 (in the future). To support this plan, my portfolio will be invested for 12 ½ years (on average), the midpoint of this interval.

Many would suggest that an appropriate and common-sense asset mix would be 50% stocks and 50% bonds given this investment time horizon. No, not necessarily today, given current market valuations, but certainly as a normal average asset mix when one's investing for 12 ½ years.

PERSPECTIVES ON TACTICAL ASSET ALLOCATION (AKA SECTOR ROTATION)

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Why doesn't BlackRock offer TAA?

If TAA is so good, then why doesn't everyone offer it?

First off, BlackRock, Nationwide, Invesco, and Fidelity all offer TAA products. Nevertheless, the investment industry widely appreciates that TAA is not commercially viable, i.e., it won't sell well. How do we understand this seeming contradiction? As we explore this question, keep in mind the distinction between a product selling well in a commercial setting . . . and that same product being the best possible investment solution for an individual investor. The two have little if any overlap. Let's begin.

PERSPECTIVES ON TACTICAL ASSET ALLOCATION (AKA SECTOR ROTATION)

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A Pretty Good Outcome

Let's try a thought experiment - What if . . .

What if we build a passive portfolio from the 32 asset categories shown in the graphic below using the following weighs: 30.3% US stocks, 29.3% international stocks, 5.0% US Treasury bonds, 31.5% US investment grade corporate bonds, 1.4% international bonds, 1.3% gold, and 1.2% other commodities. Over the last 102 years (ending 1/31/2021) this portfolio would have delivered 11.53% per annum. That's pretty good.

PERSPECTIVES ON TACTICAL ASSET ALLOCATION (AKA SECTOR ROTATION)

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But has TAA worked better than bonds?

Is TAA versus bonds the right comparison?

Probably not. But to answer this question, we must first identify the all-important investment timeframe. I'm assuming here that the investor is targeting needs arriving between 5 and 20 years in the future. Therefore, their investment holding period or time horizon is 5 to 20 years.

For such an investor, a pure 100% bond portfolio won't work. It won't be able to generate the needed returns. Similarly, a pure 100% stock portfolio won't work. It'll be too volatile, exposing the investor to an undue likelihood of having to liquidate at an unfortunate point in time (when their account value is down).

The Journal of Portfolio Management

VOLUME 44, NUMBER 1 www.iijpm.com FALL 2017

A Century of Evidence on Trend-Following Investir

PERSPECTIVES ON TACTICAL ASSET ALLOCATION (AKA SECTOR ROTATION)

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PERSPECTIVES ON TACTICAL ASSET ALLOCATION (AKA SECTOR ROTATION)

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The way back is closed, only the path forward remains open

There are different types of change

It's a trite phrase to say *"change is the natural order of things,"* sounds too much like an excuse.

Worse yet, it serves to mask the different types of change - and how the best approach for dealing with one type of change is the worst for another.

Different types of change are distinguished by two attributes:

- Speed or pace
- Smoothness or direction

AQR

A Century of Evidence on Trend-Following Investing

Brian Hurst
Principal

Yao Hua Ooi
Principal

Lasse H. Pedersen, Ph.D.
Principal

Fall 2014

Executive Summary

We study the performance of tren investing across global markets s extending the existing evidence by mo years. We find that trend following ha

PERSPECTIVES ON TACTICAL ASSET ALLOCATION (AKA SECTOR ROTATION)

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But first, let's work to better understand this issue. The following graph shows two different market paths. Each starts and ends at the same spot, and therefore both generate the same total return after many years.

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Important Disclosures

All data and statistics were provided by Global Financial Data, Inc., Kenneth French Data Library Dartmouth College, and www.robbrownonline.com

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One of the limitations of hypothetical performance results is that they are generally prepared with the benefit of hindsight. In addition, hypothetical trading does not involve financial risk, and no hypothetical trading record can completely account for the impact of financial risk in actual trading. For example, the ability to withstand losses or adhere to a particular trading program in spite of trading losses are material points which can also adversely affect actual trading results. There are numerous other factors related to the markets in general or to the implementation of any specific trading program which cannot be fully accounted for in the presentation of hypothetical performance results and all of which can adversely affect actual trading results.

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