



August 20, 2022

CIO Strategy Bulletin

A Predicted Slowdown Is Unfolding With Less Than Predictable Results

David Bailin, Chief Investment Officer and Head of Citi Global Wealth Investments **Steven Wieting**, Chief Investment Strategist and Chief Economist

SUMMARY

- With the Fed raising short-term US interest rates above long-term Treasury bond yields, we have added to holdings of short-duration US Treasuries and IG corporates. Some of these securities, with low credit risk and price volatility, yield more than 30-year Italian or Greek debt. While the Fed is still pushing up short-term rates, we see bonds offering both a potential diversification benefit and income opportunity as a sharp slowing in the world economy is likely in the coming year.
- Though markets have rallied on hopes that central banks won't crush the economy, it's too late to avoid a sharp economic slowdown. We expect the slowest global growth rate in 40 years in 2023, apart from 2009 and 2020. Global trade should weaken, impacting many regions. (Our base case view has shifted to a 50% recession probability, 40% slow growth, and 10% for a strengthening expansion over the course of next year.)
- Excluding 2020, recessions of the recent past were marked by hubris and denial. Consider the "new economy" excuses of 2000 and the housing bubble deniers of 2008. This added to the "shock" impact when economies plunged into recession in those periods.
- Today, confidence is already depressed and recession forecasts are ubiquitous. This suggests
 weakness won't come suddenly, like a thunderbolt from the sky.
- Interest rate sensitive economic activity is being restrained by both supply and demand factors
 and never rose to the historic boom proportions of the past. This suggests a shallower path for
 any potential recession. Nonetheless, the latest equity market rally driven in part by low-quality
 cyclicals doesn't seem sustainable in the face of a likely 10% decline in US corporate earnings
 we expect next year.
- While we don't expect a plunge in oil akin to the COVID shock, the history of severe cycles in
 petroleum argues against keeping an overweight. Our Global Investment Committee further
 trimmed commodities-related holdings to add lower-risk bonds for the year ahead as we expect
 inflation to subside. (Please see <u>Quadrant</u> for more.)

A forecast update

The first half of the year saw simultaneous double-digit declines in both stock and bond markets for the first time – a stark difference from what global markets experienced in the second half of 2021. Investors don't seem to know what to make of a confusing environment that has contracting real output, surging consumer prices, rising employment and record high corporate profits.

The difference for markets is central banks are now trying to restrain (even sink) economies rather than support them. History shows us that the full impact is felt in time, not instantaneously. Ships don't cross oceans as fast as investors can buy and sell.

The Fed is poised to deliver its largest single-year rate hikes in history in 2022 while beginning to reduce lending to the bond market. This will ration credit for marginal borrowers and curtail risk-taking in the economy. While economic distortions from the COVID shock and war in Ukraine are not "monetary problems," central banks including the Fed, ECB and BoE vow to continue tightening to address the inflationary "afterglow" of the 2021 boom. Our updated economic forecasts embed this tightening campaign in the outlook for 2023 (see figures 1-2).

Key points:

- We've raised our 2022 global GDP and S&P 500 EPS estimates marginally
- We've cut our 2023 global real GDP estimate from +2.7% to +1.7%
- We've cut our 2023 US real GDP estimate from +2.0% to +0.7%
- We expect S&P 500 EPS to fall nearly 10% next year from a record high in 2022
- We think a recession or "stall" in the world economy will not be severe

Figure 1: Citi Global Wealth Investments Revised Real GDP Forecasts

Figure 2: Citi Global Wealth Investments S&P 500 EPS Forecasts

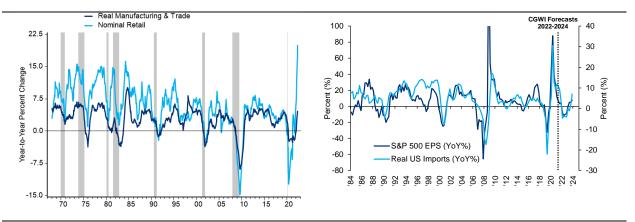
Citi Global Wealth Investments Real GDP Forecasts (Updated as of Aug 2022))22)	Citi Global Wealth Investments S&P 500 Earnings Estimates (Updated as of Aug 2022)			
	2020	2021	2022	2023	2024		Earnings/Share (\$)	Earnings/Share (Y/Y%)	Price/Earnings
China	2.4	7.5	3.5	4.5	4.0	2019	164.60	1.0	
US	(3.4)	5.7	1.6	0.7	2.0	2020	142.34	(13.5)	
EU	(6.5)	5.3	3.0	(0.5)	1.0	2021	209.06	46.9	20.1
UK	(9.3)	7.4	3.4	(1.0)	1.0	2022 2023		6.4 (9.7)	18.9 20.9
Global	(3.2)	5.7	3.3	1.7	2.3	2024		4.5	20.0

Source: Citi Global Wealth Investments (CGWI) as of August 16, 2022. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Past performance is not indicative of future returns. For illustrative purposes only. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment.

With the unwinding of stimulus, US goods inventories are now accumulating at a record pace by some measures (see figure 3). This will cause global trade to contract and some domestic industries to curtail production and employment in the coming year (see figure 4). This year's further gains in corporate profits reflect the lingering positives of 2021, not the culmination of them, which will hit in 2023.

Figure 3: US Nominal Retail Inventories and Total Real Business Inventories Y/Y%

Figure 4: S&P 500 EPS vs Real US Imports Y/Y%

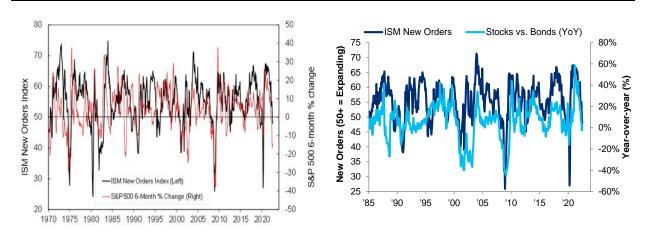


Source: Haver through August 2022. Note: Shaded areas are recessions. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Past performance is no guarantee of future results. Real results may vary.

Of course, markets are aware of the darkening growth outlook from central bank tightening steps. Taken in isolation, the drop in the S&P 500 in the last six months seems to anticipate more of a slowing in business activity than has occurred already (see figure 5). That's the way markets work – they anticipate the future. For the same reason, we don't believe riskier equities should be rallying back if central banks actually deliver on their promises to continue to tighten in the period ahead. Just as equity markets predict further slowing in cyclical businesses, following through on this has routinely generated periods in which the US bond market has outperformed equities (see figure 6).

Figure 5: S&P 500 vs ISM Manufacturing New Orders

Figure 6: ISM Manufacturing New Orders vs US Stock/Bond Relative Performance



Source: Haver as of August 16, 2022. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Past performance is no guarantee of future results. Real results may vary. Note for Figure 22: ISM Manufacturing Index is based on surveys of more than 300 manufacturing firms by the Institute of Supply Management. MSCI USA used as proxy for stocks and Bloomberg Barclays US Aggregate used as proxy for bonds.

Short-Term US IG Bonds: Yields Rise Toward Most Attractive Risk-Adjusted in World

With a 300-basis-point leap in 2-year US Treasury yields over the past year, and the Fed inverting the yield curve, the Global Investment Committee added 2 percentage points to our Global Fixed Income allocation last week (see figures 7-8). The addition was split evenly between short-term US Treasuries and short-term US Investment Grade Corporate Bonds. (See the August Quadrant.)

The US 2-year yield – now at 3.2% -- is nearly as high as 30-year duration Italian or Greek debt. Short-duration investment grade US corporate yields are above the yield of those volatile sovereigns.

Irrespective of "recession" semantics, the Fed has made very low-risk and less volatile bonds a compelling relative value. To make the allocation change, the GIC reduced exposure to assets we consider "inflation hedges," as we believe there is high probability the coming period will see inflation decelerate.

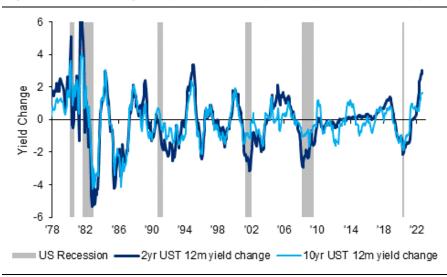
Figure 7: Global Investment Committee tactical asset allocation positions

LARGEST	OVERWEIGHTS		Previous		LARGEST (OVERWEIGHTS	New	
+2.0%	+2.0% Global Natural Resources				+2.0%	Global pharmaceuticals		
+2.0%	Global pharmaceut	ticals			+2.0%	China equities		
+2.0%	China equities				+2.0%	Gold		
+2.0%	Gold				+1.0%	Cybersecurity		
+1.0%	Cybersecurity				-2.0%	Total equities and REITS		Ψ.
0.0%	Total equities an	d REITS				US Treasuries		Λ.
+6.4%	Long-term and Inte	rmediate US 1	reasuries,	US TIPS	+4.5%	Short-, Intermediate-term IG I	bonds	1
+3.5%	Intermediate-term I	IG bonds			+2.0%	Investment Grade Preferred S	Stock	
+2.0%	Investment Grade I	Preferred Stoc	k					
		10.7% of tota	l allocatio	n in US/	non-US divi	dend growth or yield, 4% o	verweight	
LARGEST	UNDERWEIGHTS		Previous		LARGEST U	INDERWEIGHTS	New	
-9.7%	European, Japan g	overnment bor	nds		-9.7%	European, Japan government	bonds	
-2.1%	European, Japan L	ities		-2.1%	European, Japan Large Cap Equities			
-5.0%	Global SMID				-5.0%	Global SMID		
-2.9%	Cash, short-term U	JS Treasuries			-1.9%	Cash, short-term US Treasur	ies	
-2.0%	Total fixed incom	ne and cash			neutral	Total fixed income and car	sh	

Source: OCIS as of August 16, 2022. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.

- · We added to shorter-duration US Treasuries and investment grade corporates.
- We exited an overweight in global natural resources, as we expect growth and inflation to slow.

Figure 8: Annual change in 2-year US Treasury and 10-year US Treasury yield



Source: Haver as of August 16, 2022. Grey areas note recession.

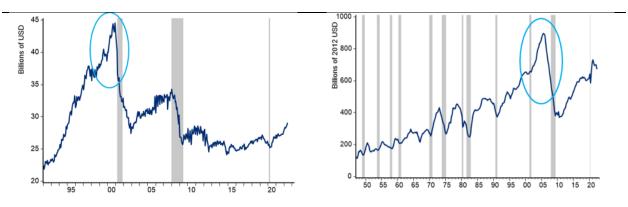
Inflation is a sign of economic illness, a supply-demand imbalance that needs to be resolved over either the short or long term. There is much to criticize in the Fed's policy approach, particularly last year's easing steps during an economic boom. At least, however, the inflation problem is being confronted without delay.

A slowdown, this time without hubris or denial

We also see a possible silver lining in the economy's performance. In our lengthy experience, recessions have been particularly painful when they occur amid hubris and denial. The 2001 recession was hit especially hard for a "new economy" suffering from reckless corporate spending (see figure 9). During the housing bubble period, many denied there was a macroeconomic problem as lending standards plunged and construction soared (see figure 10).

Figure 9: Manufacturers' shipments of US information technology equipment boomed in late 1990s

Figure 10: Real US residential investment (blns 2012\$) booming construction and lending in mid-2000s



Source: Haver as of August 16, 2022. Grey areas are recessions.

Today's economy harkens back to past supply shocks. Perhaps the first Persian Gulf War period of 1990/1991 is more similar to the current period than the energy catastrophe of 1974.

Today, interest rate increases are poised to suppress economic activity at fairly low levels of both supply and demand (see figure 11). If a broad-based economic contraction does occur, the depth of a near-term downturn would appear to be limited.

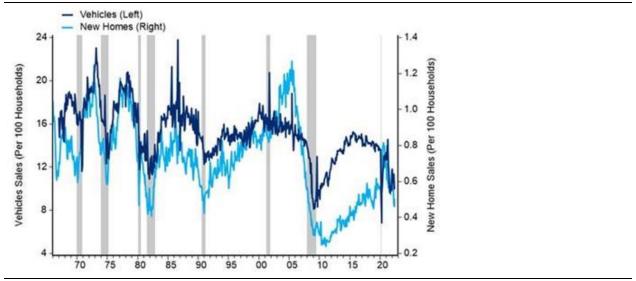


Figure 11: New home and vehicle sales per US household: Weak recovery getting weaker

Source: Haver as of August 16, 2022. Grey areas note recessions.

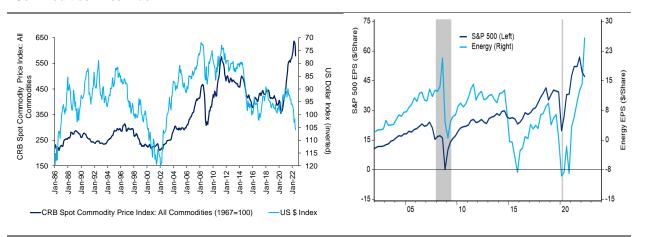
Why Cut Commodities?

We have no insights as to when hostilities in Ukraine will end or when, if ever, trade between Russia and western economies will normalize. The potential for commodity supply disruptions is not limited to Eastern Europe. That said, the coming period is likely to see reduced commodities inflation from the demand side. Many have overestimated commodity supply losses from the war in Ukraine, while other key commodity producers expand output. US crude oil output continues to grow more rapidly than demand, while commercial crude oil inventories are beginning to grow.

Owing to the war in Russia/Ukraine, the starting point for a commodities price correction was a high one (see figure 12). Particularly for crude oil, periods of acute strength tend to be mean reverting. This impacts industry profits acutely (see figure 13). Averaged together, the energy and materials sector has posted an 86% peak-to-trough EPS decline during the past four recessions (see figure 14).

Figure 12: US Dollar Index (Inverted) vs CRB Commodities Price Index

Figure 13: S&P 500 EPS vs Energy Sector EPS



Source: Haver as of August 16, 2022. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Past performance is no guarantee of future results. Real results may vary. Grey area notes recession.

Figure 14: Peak-to-Trough % Change in S&P 500 Sector EPS on Average in Last Four US Recessions

Healthcare	7.7
Consumer Staples	4.9
Utilities	-13.2
Telecom Services	-27.4
IT	-32.3
Industrials	-42.8
Consumer Discretionary	-50.7
Materials	-58.3
Financials	-71.4
Energy	-113.9

Source: Haver through August 2022. Note: The Real Estate Sector was included in Financials during most of the 1989-2022 sample period. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Past performance is no guarantee of future results. Real results may vary.

Profit declines for the energy sector are unlikely to come close to the severe losses of 2020. Nonetheless, the divergence between our underweight position in broad global equities and overweight in commodities equities was a greater risk than we would prefer to bear. Moreover, US short-term bond yields have been quickly rising toward the dividend yields of the most profitable commodity producers.

That said, our overall global equity exposure will still include a roughly full allocation to natural resources firms. Niche opportunities remain, for example, in liquified natural gas exporters, an energy strategy with vast growth ahead if Russian exporters remain isolated (see figure 15).

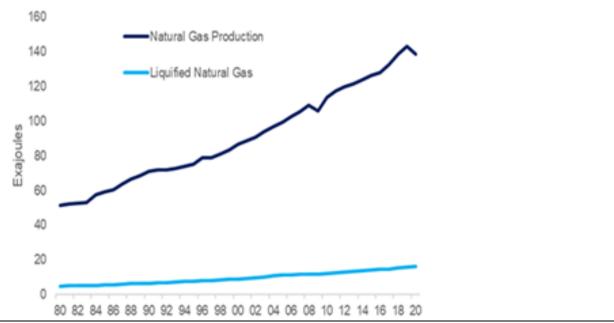


Figure 15: Total Global Natural Gas Output vs Liquified Natural Gas (Piped Gas vs Broadly Transportable)

Source: Haver through August 16, 2022

DISCLOSURES

This email contains promotional materials. If you do not wish to receive any further promotional emails from Citi Global Wealth Investments, please email donotspam@citi.com with "UNSUBSCRIBE" in the subject line. Email is not a secure environment; therefore, do not use email to communicate any information that is confidential such as your account number or social security number.

This Communication is prepared by Citi Global Wealth Investments ("CGWI") which is comprised of the Investments and Capital Markets capabilities of Citi Private Bank, Citi Personal Wealth Management and International Personal Bank U.S.

Citi Private Bank and Citi Personal Wealth Management are businesses of Citigroup Inc. ("Citigroup"), which provide clients access to a broad array of products and services available through bank and non-bank affiliates of Citigroup. Not all products and services are provided by all affiliates or are available at all locations. In the U.S., investment products and services are provided by Citigroup Global Markets Inc. ("CGMI"), member FINRA and SIPC, and Citi Private Advisory, LLC ("Citi Advisory"), member FINRA and SIPC. CGMI accounts are carried by Pershing LLC, member FINRA, NYSE, SIPC. Citi Advisory acts as distributor of certain alternative investment products to clients of Citi Private Bank. Insurance is offered by Citi Personal Wealth Management through Citigroup Life Agency LLC ("CLA"). In California, CLA does business as Citigroup Life Insurance Agency, LLC (license number 0G56746). CGMI, Citi Advisory, CLA and Citibank, N.A. are affiliated companies under the common control of Citigroup. Outside the U.S., investment products and services are provided by other Citigroup affiliates. Investment Management services (including portfolio management) are available through CGMI, Citi Advisory, Citibank, N.A. and other affiliated advisory businesses. These Citigroup affiliates, including Citi Advisory, will be compensated for the respective investment management, advisory, administrative, distribution and placement services they may provide.

International Personal Bank U.S. ("IPB U.S."), is a business of Citigroup which provides its clients access to a broad array of products and services available through Citigroup, its bank and non-bank affiliates worldwide (collectively, "Citi"). Through IPB U.S. prospects and clients have access to the Citigold® Private Client International, Citigold® International, International Personal, Citi Global Executive Preferred, and Citi Global Executive Account Packages. Investment products and services are made available through Citi Personal Investments International ("CPII"), a business of Citigroup which offers securities through CGMI, member FINRA and SIPC, an investment advisor and broker—dealer registered with the Securities and Exchange Commission. CGMI investment accounts are carried by Pershing LLC, member FINRA, NYSE, and SIPC. Insurance is offered by CPII through CLA. In

California, CLA does business as Citigroup Life Insurance Agency, LLC (license number 0G56746). Citibank N.A., CGMI, and CLA are affiliated companies under common control of Citigroup Inc.

Read additional Important Information

Past performance is not indicative of future results. Real results may vary.

Citi and its employees are not in the business of providing, and do not provide, tax or legal advice to any taxpayer outside Citi. Any statement in this Communication regarding tax matters is not intended or written to be used, and cannot be used or relied upon, by any taxpayer for the purpose of avoiding tax penalties. Any such taxpayer should seek advice based on the taxpayer's particular circumstances from an independent tax advisor.

MBS are also sensitive to interest rate changes which can negatively impact the market value of the security. During times of heightened volatility, MBS can experience greater levels of illiquidity and larger price movements.

Important information, including information relating to risk considerations can be found in the link above.

Views, opinions and estimates expressed herein may differ from the opinions expressed by other Citi businesses or affiliates, and are not intended to be a forecast of future events, a guarantee of future results, or investment advice, and are subject to change without notice based on market and other conditions. Citi is under no duty to update this presentation and accepts no liability for any loss (whether direct, indirect or consequential) that may arise from any use of the information contained in or derived from this presentation.

© 2022 Citigroup Inc., All Rights Reserved. Citi, Citi and Arc Design and other marks used herein are service marks of Citigroup Inc. or its affiliates, used and registered throughout the world.

INVESTMENT PRODUCTS: NOT FDIC INSURED · NOT CDIC INSURED · NOT GOVERNMENT INSURED · NO BANK GUARANTEE · MAY LOSE VALUE