

US Economic Viewpoint

US outlook: Supply-side resilience

Faster – and more frontloaded - growth

We revise our US outlook in the direction of faster growth in 2024 (2.1% 4Q/4Q) and slower growth in 2025 (1.8%). We expect a lower peak unemployment rate of 4.1%, but slower disinflation (to 2.6% and 2.3% for core PCE inflation in 2024 and 2025, respectively). Previously we expected growth to slow below trend before re-accelerating. We now think growth will be more front-loaded.

Supply-side driven resilience continues

Our revisions continue to emphasize improvement in the economy driven by supply-side factors, particularly the rebound in the labor force. This has allowed the economy to grow faster than expected without putting significant upward pressure on wages or inflation. The “catch-up” effect in employment should persist in 2024, albeit to a lesser degree than in prior years.

The Fed can still ease in this outlook, just slowly

Our revisions do not alter our outlook for monetary policy. We expect the Fed to start a gradual cutting cycle in June owing to progress in reducing inflation. By the end of 2025, we expect the target fed funds rate to be reduced to 3.5-3.75% (75p in cuts this year and 100bp of cuts next year). Tapering of runoff should begin in May, with quantitative tightening (QT) ceasing around the end of the year.

Market pricing is no longer at odds with our outlook

Markets have reduced the number of expected cuts in recent weeks due to two factors. (1) Activity and inflation that has generally topped expectations. (2) Fed communication that has argued the risk of easing too soon outweighs the risk of easing too late. Currently, markets expect 75bp in rate cuts this year, beginning in June, in line with our forecast.

Risks to the outlook are balanced

With these revisions, we think risks to our outlook are now balanced. The upside risks are (1) an elongated “catch-up” effect in employment that keeps consumption elevated, (2) continued momentum in productivity, and (3) the crowding-in of private investment from the Inflation Reduction Act and CHIPS Act. While the downside risks are (1) sticky inflation that keeps the Fed from easing (or prompts risks of rate hikes), (2) geopolitical tensions that cause adverse shocks to commodity prices, or (3) a faster-than-expected wind-down in re-employment trends.

29 February 2024

Economics
United States

US Economics
BofAS

Michael Gapen
US Economist
BofAS
+1 646 855 3270
michael.gapen@bofa.com

Aditya Bhave
US Economist
BofAS
+1 646 855 9929
aditya.bhave@bofa.com

Stephen Juneau
US Economist
BofAS
+1 202 442 7429
stephen.juneau@bofa.com

Shruti Mishra
US and Global Economist
BofAS
+1 646 855 1040
smishra44@bofa.com

Jeseo Park
US Economist
BofAS
+1 646 855 8688
jeseo.park@bofa.com

[See Team Page for List of Analysts](#)

US outlook update: summary details

We have made revisions in the direction of faster growth, lower unemployment, and slightly firmer inflation (see Exhibit 12 for full details). Rather than growth slipping below potential this year and rebounding next year, we front-load growth into 2024. Growth remains comfortably above zero, reflecting our view of lower recession risk than before.

Our outlook also maintains our view put forth in our year-ahead outlook that what slowing there is in the US economy is likely to come mainly from non-consumer components, including residential investment, nonresidential investment, and fiscal policy (see [Year Ahead 2024: Growing apart, cutting together](#)). We just assume they moderate more slowly than we previously assumed.

Our revised forecast includes the following:

- **Growth frontloaded in to 2024.** We now expect real GDP growth of 2.5% saar growth in 1Q 2024 and 2.0% saar growth in the remaining three quarters of the year, for a 4Q/4Q change of 2.1%. The latter is 0.9pp higher than we had previously. Growth slows to 1.8% in 2025.
- **More employment.** With stronger final sales, we have nudged up our outlook for employment, with private payrolls rising 150k per month in 2024, versus 107k per month previously. In 2025, we expect monthly growth in employment of 100k, down from 125k previously.
- **Lower – and later – peak unemployment.** Alongside our expectation for a stable participation rate of 62.6-62.7% across the forecast horizon and assumptions about population growth, this employment outlook results in a slightly lower path for the unemployment rate. We now have the peak unemployment rate at 4.1% in 4Q 2025. Previously our peak unemployment rate was 4.2% reached in 4Q 24 through 2Q 25.
- **Slightly firmer inflation.** Finally, based on recent incoming data on inflation which points to somewhat more stickiness in services inflation than we had expected, we have lowered our path for inflation. We now look for 4Q/4Q core PCE inflation to fall to 2.6% and 2.3% in 2024 and 2025, respectively.
- **No change in monetary policy.** We still expect the Fed to start a gradual cutting cycle in June, cutting the funds rate by 75bp this year and 100bp next year, for a target range of 3.5-3.75% at end-2025. Tapering of runoff should begin in May, with quantitative tightening (QT) ceasing at year-end.

The engine that could

Since we revised our outlook for the US economy away from a mild recession to expansion last year (see [Imagine no recession, it's easy if you try](#) and [Sticking the landing](#)), growth in economic activity has continued to surprise to the upside. Like the American folktale from the early 1900s, *The Little Engine that Could*, the current expansion in the US has overcome many obstacles – including a period of high inflation, rapid Fed tightening, and weak sentiment – and has kept going.

We take on board the signal from GDP, where the economy grew at an annualized rate of 3.2% in 4Q 2023 after rising 4.9% in 3Q, and revise our outlook in the direction of faster growth in 2024 (2.1% 4Q/4Q versus 1.2% previously) and slower growth in 2025 (1.8%

versus 2.0%, respectively), lower peak unemployment (4.1%), and slightly slower disinflation (2.6% and 2.3% for core PCE inflation in Q4/Q4 in 2024 and 2025, respectively). Previously we expected growth to slow more sharply in 2024 before recovering in 2025. We now think growth will be more front-loaded.

Our revisions emphasize improvement in the economy driven by supply side factors, particularly the rebound in the labor force. As a result, our revisions do not alter our outlook for Federal Reserve policy. We continue to expect the Fed to ease in June and for the target funds rate to fall to 3.5-3.75% by the end of 2025 (75bp in cuts this year and 100bp of cuts next year). If anything, our revisions could point to a higher terminal rate than we currently project (around 3.0-3.25%). Tapering of runoff should begin in May, with quantitative tightening (QT) ceasing around the end of the year, or later.

We see risks to the outlook as largely balanced. Upside risks come from an elongated “catch-up” effect in employment, continued momentum in productivity, and the crowding-in of private investment from the Inflation Reduction Act and CHIPS Act. Downside risk could emerge via sticky inflation that keeps the Fed from easing (or prompts risks of rate hikes), geopolitical tensions that cause adverse shocks to commodity prices, or a faster-than-expected wind-down in re-employment trends.

Exhibit 1: Summary of forecast changes

Compared to our previous forecasts, we expect stronger growth this year and slower growth next

	2024E	2025E
GDP (4Q/4Q)		
New	2.1	1.8
Old	1.2	2.0
Unemployment rate (4Q)		
New	3.9	4.1
Old	4.2	4.1
Headline PCE inflation (4Q/4Q)		
New	2.5	2
Old	2.3	2.0
Core PCE inflation (4Q/4Q)		
New	2.6	2.3
Old	2.5	2.2
Fed funds rate (midpoint, end of period)		
New	4.625	3.625
Old	4.625	3.625

Source: BofA Global research

BofA GLOBAL RESEARCH

Growth and disinflation can co-exist

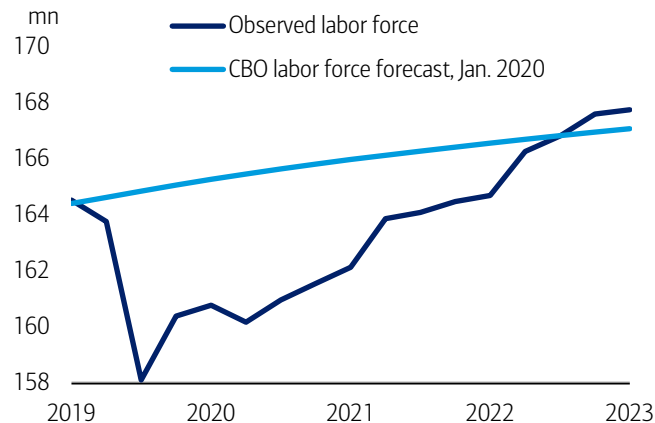
Incoming data continues to signal that the US economy can enjoy both growth and disinflation simultaneously. Following rapid growth in 3Q 2023, the economy cooled only modestly in the fourth quarter. A portion of the 3.3% annualized growth was due to volatile components like trade, but final sales to domestic purchasers – GDP less trade and inventories – was a solid 2.9%, in line with its reading in the third quarter (3.0%). It is hard to argue the economy lost much momentum at year-end.

Supply-side improvement and the “catch-up” effect

The major factor behind our upward revision to 2024 growth is the rebound in the labor force, supported by stronger participation rates and a rapid increase in net migration. The civilian labor force, at 167.8mn in 4Q 2023, is 677,000 above what the CBO projected for the end-2023 labor force in their January 2020 outlook (Exhibit 2). Net international migration has been a key driver of growth in the labor force. In 2022 and 2023, net international migration rose by 1.0mn and 1.1mn, respectively, up from a paltry 376,000 in 2021 (Exhibit 3).

Exhibit 2: The labor force now exceeds the pre-pandemic forecast of the Congressional Budget Office

The labor force exceeds the CBO's pre-pandemic forecast by 677,000



Source: CBO, Census Bureau, Haver Analytics, BofA Global Research

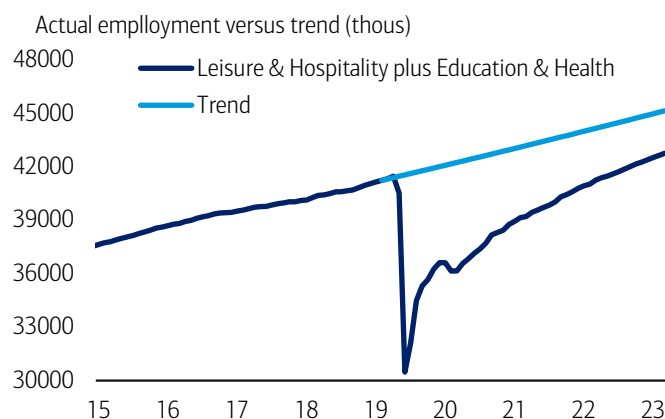
BofA GLOBAL RESEARCH

The surge in worker availability has allowed the economy to meet demand for employment, which continues to be fueled by reopening forces and the rotation of spending toward services. Employment in leisure & hospitality, and education & health is still below pre-pandemic trends, suggesting further room for employment to “catch up” (Exhibit 4). We expect monthly employment growth to average about 150,000 per month this year and 100,000 per month next year. If so, it should support faster growth in 2024 than we previously anticipated.

The catch-up effect in hiring is likely to be much softer in 2024 than it was in 2023, just as total employment growth in 2023 slowed in comparison to 2022 (Exhibit 5). In the private sector, the catch-up effect in hiring is localized to leisure and hospitality and education and health, while employment growth in the rest of the private sector has slowed. Notwithstanding the narrowing breadth of employment gains, we think strong hiring in these lagging sectors can last through 2024, supporting activity in the process.

Exhibit 4: The catch-up effect of employment

Employment in Leisure & hospitality, and education & health still has room drive growth in overall employment.

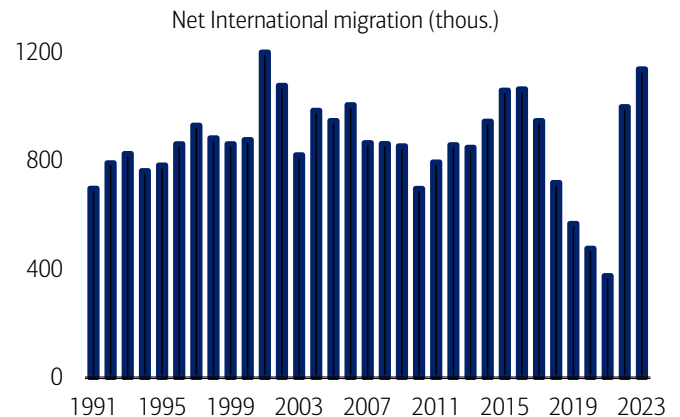


Source: Bureau of Labor Statistics, BofA Global Research, Haver Analytics

BofA GLOBAL RESEARCH

Exhibit 3: Net international migration has rebounded sharply, boosting the labor force in the process

Net international migration has returned to pre-2016 rates

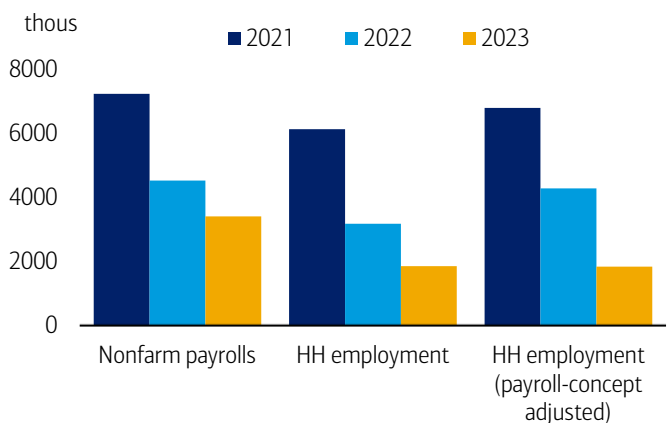


Source: Census Bureau, Haver Analytics, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 5: Annual job growth (end-of-period)

Re-opening effects have eased but remain substantial



Source: Bureau of Labor Statistics, Haver Analytics

BofA GLOBAL RESEARCH

Cooling inflation, though the process may be uneven

Amid resilience in economic growth – and despite the surprise to the upside in January inflation data – we think the evidence still points to decelerating inflation. The year-on-year change in headline CPI decelerated in January to 3.1%, while core held steady at

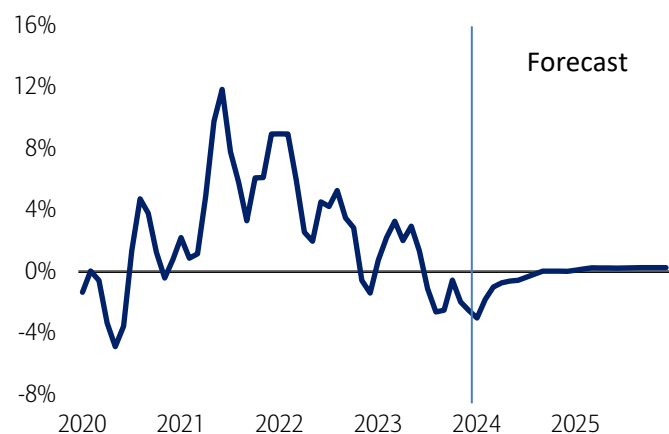
3.9%. In the January PCE inflation report, we expect headline inflation to fall two-tenths to 2.4%, while core PCE decelerates by one-tenth to 2.8%. The difference in performance between the two inflation indices largely boils down to weights. Shelter inflation carries a much heavier weight in CPI than in PCE.

Disinflation has been driven by falling goods prices, which may not last...

Disinflation in recent quarters has been driven by falling goods prices. Core goods prices in CPI have fallen in seven of the last eight months as global supply chains normalized and inventory restocking took place. Apparel, household furnishings, and used car prices have been important contributors to this process. We do not expect this to last indefinitely. The pace of goods price declines should slow this year. However, this is not necessarily a reflection of our revised outlook. Instead, absent a recession, we think the largest price declines are likely to be behind us (Exhibit 6).

Exhibit 6: Core goods PCE inflation (3-month annualized rate)

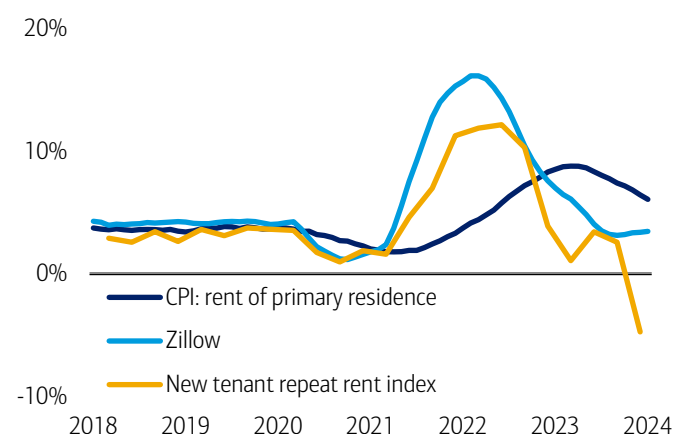
Core goods deflation is unlikely to persist at its current run-rate.



Source: Bureau of Economic Analysis, BofA Global Research, Haver Analytics,
BofA GLOBAL RESEARCH

Exhibit 7: CPI rent inflation vs asking rent inflation (% y/y)

Asking rent inflation measures continue to point to a moderation in CPI and PCE rent inflation



Source: Bureau of Labor Statistics, Zillow, Haver Analytics

BofA GLOBAL RESEARCH

...while faster growth and tight labor markets mean slow disinflation in services

In contrast, services inflation continues to decelerate more slowly due to the rotation of demand toward services, and the lag between asking rent and measured housing inflation (Exhibit 7). In addition, services prices in the US rarely decline; they typically just grow at a slower pace when inflationary pressures ease.

Sticky services inflation has been part of our baseline outlook for some time. Therefore, our revisions to growth and the labor market only result in slightly slower disinflation in services prices than was the case previously. We now expect headline and core PCE inflation to fall to 2.6% 4Q/4Q in 2024 and 2.3% in 2025. Both figures are one-tenth higher than in our prior outlook.

Why doesn't faster growth mean more inflation?

The short answer to this question is because the rebound in the labor force and, in turn, total hours worked, has led to a faster rate of trend growth in the short run. Our estimates point to an acceleration in trend growth from 1.7% pre-COVID to around 2.2% presently.

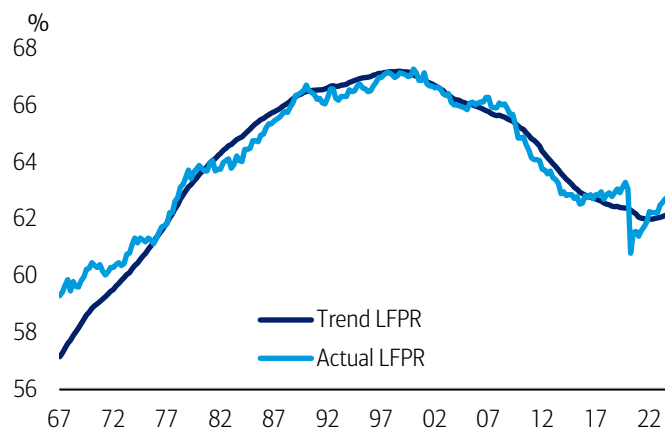
In the National Income and Product Accounts, improvements in trend growth can come from growth in total hours or labor productivity. We find that the former explains the current improvement in potential growth (see: [US Viewpoint: Structurally higher US interest rates? Think again. 17 January 2024](#)). The participation rate climbing above its demographic trend and rebound in immigration has led to substantial improvement in hours worked (Exhibit 8).



At present, we do not find much evidence that labor productivity has picked up on a trend basis (Exhibit 9). Instead, we see the recent acceleration as driven by the normalization of the economy following the pandemic. Early on, when demand rotated to goods and layoffs were large, output per hour rose sharply above its underlying trend. As the economy rotated back to services and hiring accelerated, productivity fell below trend. More recently, as consumption shares have largely normalized, productivity has accelerated back towards its underlying trend.

Exhibit 8: Trend LFPR versus actual (%)

Actual LFPR has overshot its longer-run demographic trend

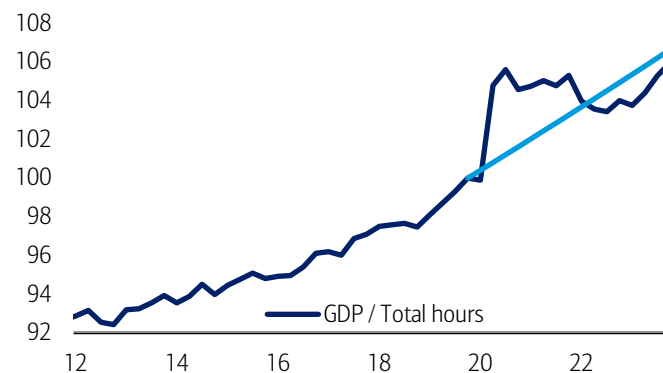


Source: BEA, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 9: Real output per hour (GDP/total hours, Index 2019 4Q = 100)

Productivity has temporarily improved as the rotation to services runs its course



Source: Bureau of Economic Analysis, Haver Analytics, BofA Global Research

BofA GLOBAL RESEARCH

We remain open to the possibility of stronger rates of productivity growth down the road. Capital deepening from reshoring, fiscal incentives to boost domestic manufacturing production, and artificial intelligence could contribute to increased productivity. But for now, the story behind productivity appears more cyclical than structural.

While productivity may not have accelerated yet, the surge in total hours worked means that US economy can grow faster without overheating. We assume trend growth of 2.2% in 2024, followed by a slowing in 2025 to 1.8% as re-opening effects fade further and growth in total hours slows.

The “crowding-in” of investment to slow

Our prior outlook, which had growth falling below potential in 2024, was heavily reliant on a decline in the growth rate of private investment in 1H 2024. We also saw the contribution from fiscal policy as turning neutral, if not negative. In other words, we thought the non-consumer portions of the economy – residential investment, non-residential investment, and government spending – would contribute less to growth in 2024 than in 2023. We saw – and still see – the consumer on more solid footing.

The recent data flow suggests more near-term momentum than we had anticipated. We now project growth rates of fixed investment and government spending to moderate more slowly. As a result, some of our stronger growth profile in 2024 can be attributed to more “crowding in” of private investment from the Inflation Reduction Act (IRA) and the CHIPS Act.

Fiscal policy’s contribution shows up in private investment

We take this opportunity to remind readers that many components of the IRA and CHIPS Act will show up in private investment as opposed to government spending and investment. The IRA, for example, was estimated to cost \$396bn over ten years. Most of this amount – over 90% according to estimates from the CBO, Joint Committee on Taxation, and the Committee for a Responsible Federal Budget – comes in the form of

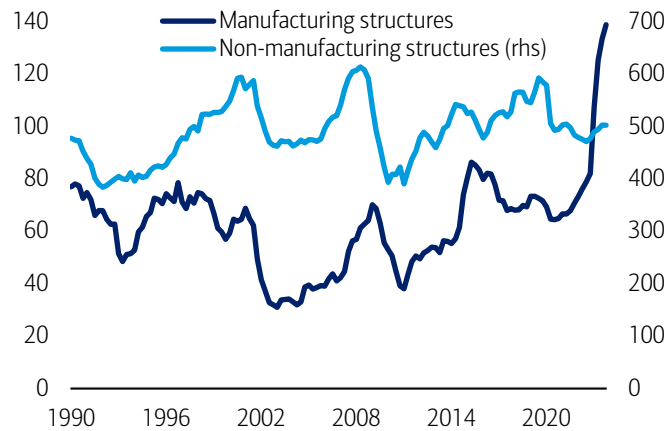
tax credits, loans, and grants. The bills clearly helped catalyze private sector spending last year.

Publicly available websites like the “IRA tracker” from Columbia University and the Semiconductor Industry Association (SIA) point to significant take-up rates. The IRA tracker database counts over 100 programs across 16 departments and agencies linked to the IRA, while the SIA estimates that over \$250bn in private sector expenditures can be linked to the CHIPS Act.

In the National Income and Products Accounts, the effect of these bills have shown up in manufacturing structures spending and nonresidential construction spending. For example, we find that real manufacturing structures spending rose from an \$82bn annualized rate in 4Q 2022 to \$140bn by 4Q 2023, for a four-quarter change of 71% (Exhibit 10). The nominal value put in place for manufacturing spending on computer/electronic and electrical items rose from \$50bn in 4Q 2022 to \$116bn presently, for a four-quarter change of 133% (Exhibit 11).

Exhibit 10: Nonresidential structures investment (\$2017bn SAAR)

Fiscal policy helps explain the surge in manufacturing structures investment

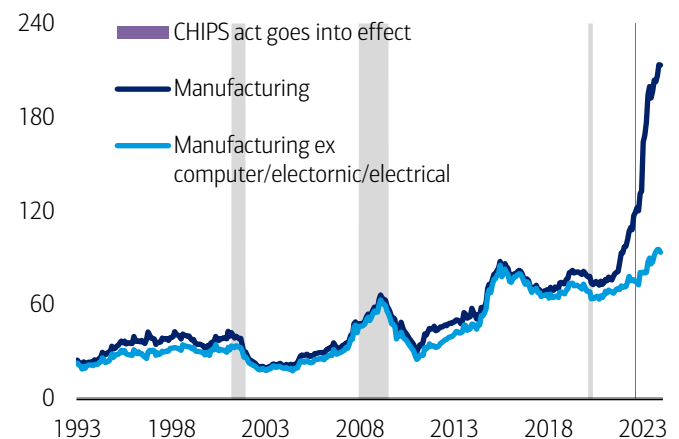


Source: Bureau of Economic Analysis, Haver Analytics

BofA GLOBAL RESEARCH

Exhibit 11: Nonresidential construction spending (\$bn saar)

Fiscal policy spurred narrowly driven investment in structures even before money has been sent out



Source: Census Bureau, Haver Analytics

BofA GLOBAL RESEARCH

There are a few things worth considering when thinking about the effect of these expenditures on GDP:

- First, these numbers are sizeable, but estimates from the IRA tracker and SIA represent spending that is likely to take place over many years.
- Second, while these are incredibly large growth rates, they are flattered by low bases. Additionally, their contribution to GDP growth is minimal, on the order of about 0.1pp to growth. In real terms the US economy is over \$22tn in size, while it exceeds \$27tn in nominal terms.
- Third, it seems self-evident that these growth rates cannot be sustained. For example, the growth rate of manufacturing structures spending already appears to have peaked in the middle of 2023.
- Fourth, and perhaps most importantly, just because we are assuming that *growth rates* of private nonresidential structures and construction spending slow does not mean we take a negative view on activity. In contrast, we are assuming that the *level* of spending is maintained, if not somewhat higher this year.

There is also carryover to state and local spending

Although much of the effect of the IRA and CHIPS Act will likely show up in private investment, the infrastructure investment, and jobs act is more likely to show up in state and local government spending. Much of the positive contribution to GDP from fiscal policy has come from the state and local level, as opposed to the Federal level where the contribution has been more modest and in line with historical averages.

In contrast, the contribution from state and local spending has ranged between 0.3-0.6pp over the last six quarters. About half of this has come from consumption of services. This can be traced to rapid hiring in public education and state and local government more generally. Employment and hours worked figures are used by the Bureau of Economic Analysis to estimate real government spending in any given quarter.

The other half has come from investment at the state and local level, which is likely related to the need for states to match funding for infrastructure-related spending.

The Fed can still ease in this outlook

Based on these forecast changes, we maintain our outlook for Federal Reserve policy. still expect 25bp cuts in June, September, and December, or 75bp of cuts for the year. This would bring the target range for the federal funds rate to 4.50-4.75% in December 2024. With an additional 100bp in cuts expected next, our target range of 3.25-3.50% for end-December 2025 remains in place.

Relative to our outlook for core PCE inflation, these would represent real policy rates of about 200bps this year and 100bp next year. In our revised baseline, Fed cuts make its policy stance less restrictive, but not outright easy.

Why have we not changed our Fed call?

Our outlook for stronger growth is predicated on further support from supply-side factors. We view potential growth as being temporarily elevated. Therefore, stronger growth does not lead to overheating. As a result, we do not see labor markets materially tightening relative to our prior forecast. Moreover, we only make modest upward revisions to our inflation outlook.

Balance sheet: We maintain the tapering of runoff in May 2024

We also maintain our expectation that the Fed will taper its balance sheet runoff beginning in May and end balance sheet runoff around year-end. We look for the Fed to cut its Treasury redemption cap in half from \$60bn per month to \$30bn, with the intent of improving the market's ability to reallocate reserves without disrupting funding conditions in front-end markets. We expect no change in the maximum caps for runoff of agency mortgage-backed securities.

Balance sheet runoff to date has largely reduced balances in the ON RRP facility, while reserves have remained unchanged. Over the past month, balances in the ON RRP have remained steady as the balance sheet declined, pointing to risks of a later taper start and a longer overall runoff process. We expect to hear more from the Fed at its March meeting about its plans for the balance sheet.

We are no longer at odds with market pricing

In our recent US outlooks, we have called for a slower pace of disinflation and fewer policy rate cuts than financial markets were expecting. We attributed the gap between our funds rate forecast and market pricing to a combination of market expectations of a faster slowdown in inflation and/or recession risk.

Recent activity and inflation data, which has generally come in above expectations, and Fed communication that has highlighted the risk easing of too soon as outweighing the risk of easing too late, has caused markets to reassess the number of expected cuts. Currently, markets expect 75bp in rate cuts this year, beginning in June, in line with our forecast.

The train keeps rolling along

The US economy continues to outperform expectations and its peers. We take this momentum on board. Growth should remain comfortably above zero and recession risks continue to diminish. Better economic activity will allow the Fed to be patient in adjusting its policy stance. That said, we expect inflation to continue to moderate towards the Fed's target allowing the Fed to embark on a gradual and modest cutting cycle beginning in June. The market has also come around to this view.



Exhibit 12: US economic outlook

Below is a summary table of our latest forecast

	1Q 23	2Q 23	3Q 23	4Q 23	1Q 24	2Q 24	3Q 24	4Q 24	1Q 25	2Q 25	3Q 25	4Q 25	2022	2023	2024	2025
Real Economic Activity, % SAAR																
Real GDP	2.2	2.1	4.9	3.2	2.5	2.0	2.0	2.0	2.0	2.0	1.5	1.5	1.9	2.5	2.7	1.9
% Change, Year Ago	1.7	2.4	2.9	3.1	3.2	3.1	2.4	2.1	2.0	2.0	1.9	1.7				
Final Sales	4.6	2.1	3.6	3.5	2.5	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.3	2.9	2.6	1.8
Domestic Demand	3.8	2.0	3.5	3.1	2.5	2.0	2.0	2.0	2.0	2.0	1.5	1.5	1.7	2.2	2.5	1.8
Consumer Spending	3.8	0.8	3.1	3.0	1.5	2.0	2.0	2.0	2.0	2.0	1.5	1.5	2.5	2.2	2.1	1.8
Residential Investment	-5.3	-2.2	6.7	2.9	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	-9.0	-10.6	2.7	2.4
Nonresidential Investment	5.7	7.4	1.5	2.4	3.5	2.5	2.0	2.0	2.0	2.0	1.5	1.5	5.2	4.4	2.8	1.9
Structures	30.3	16.1	11.2	7.6	5.0	3.0	2.0	2.0	1.5	1.5	1.5	1.5	-2.1	13.0	5.9	1.6
Equipment	-4.1	7.7	-4.4	-1.7	3.0	2.0	2.0	2.0	1.5	1.5	1.0	1.0	5.2	-0.3	1.0	1.5
Intellectual Property	3.8	2.7	1.8	3.3	3.0	3.0	2.5	2.5	2.5	2.0	2.0	2.0	9.1	4.4	2.7	2.3
Government	4.8	3.3	5.8	4.2	3.5	3.0	2.0	2.0	1.0	1.0	1.0	1.0	-0.9	4.0	3.5	1.4
Exports	6.8	-9.3	5.4	6.4	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	7.0	2.7	3.0	2.3
Imports	1.3	-7.6	4.2	2.7	1.5	2.0	2.0	2.0	2.0	2.0	1.5	1.5	8.6	-1.6	1.8	2.0
Net Exports (Bil 12\$)	-935	-928	-931	-915	-911	-912	-911	-912	-917	-921	-924	-927	-1051	-927	-911	-922
Contribution to growth (ppts)	0.6	0.0	0.0	0.3	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	-0.5	0.5	0.1	0.0
Inventory Accumulation (Bil 12\$)	27.2	14.9	77.8	66.3	71.5	64.5	61.5	68.5	77.5	86.5	101.5	116.5	128.1	46.6	66.3	95.3
Contribution to growth (ppts)	-2.2	0.0	1.3	-0.3	0.1	-0.1	-0.1	0.1	0.2	0.2	0.2	0.2	0.6	-0.4	0.1	0.1
Nominal GDP (Bil \$, SAAR)	26814	27063	27610	27945	28316	28646	28970	29272	29600	29926	30212	30498	25744	27358	28801	30059
% SAAR	6.2	3.8	8.4	4.9	5.4	4.8	4.6	4.2	4.6	4.5	3.9	3.8	9.1	6.3	5.3	4.4
Key Indicators																
Fed Funds Rate (midpoint, % EOP)	4.875	5.125	5.375	5.375	5.375	5.125	4.875	4.625	4.375	4.125	3.875	3.625	4.375	5.375	4.625	3.625
Nonfarm Payrolls (Avg mom ch, 000s)	305	274	213	227	175	150	125	125	100	100	100	100	377	255	144	100
Civilian Unemployment Rate (%)	3.5	3.6	3.7	3.8	3.8	3.8	3.9	3.9	4.0	4.0	4.0	4.1	3.6	3.6	3.9	4.0
Civilian Participation Rate (%)	62.5	62.6	62.7	62.6	62.6	62.7	62.7	62.7	62.6	62.6	62.6	62.6	62.2	62.6	62.6	62.6
Inflation																
GDP Price Index (% SAAR)	3.9	1.7	3.3	1.6	2.8	2.7	2.5	2.2	2.5	2.4	2.3	2.3	7.1	3.6	2.5	2.4
% Change, Year Ago	5.3	3.5	3.2	2.6	2.4	2.6	2.4	2.6	2.5	2.4	2.4	2.4				
PCE Chain Prices (% SAAR)	4.2	2.5	2.6	1.8	2.8	2.7	2.1	1.8	2.3	2.2	2.0	2.0	6.5	3.7	2.4	2.1
% Change, Year Ago	5.0	3.9	3.3	2.8	2.4	2.5	2.3	2.3	2.2	2.1	2.1	2.1				
Core PCE Chain Prices (% SAAR)	5.0	3.7	2.0	2.1	3.1	2.6	2.4	2.2	2.3	2.3	2.3	2.2	5.2	4.1	2.6	2.3
% Change, Year Ago	4.8	4.6	3.8	3.2	2.7	2.5	2.6	2.6	2.4	2.3	2.3	2.3				
CPI, Consumer Prices (% SAAR)	3.8	2.7	3.4	2.7	3.8	3.5	2.4	1.9	2.6	2.5	2.6	2.4	8.0	4.1	3.2	2.5
% Change, Year Ago	5.8	4.0	3.6	3.2	3.2	3.4	3.1	2.9	2.6	2.4	2.4	2.5				
CPI ex Food & Energy (% SAAR)	5.0	4.7	3.0	3.4	4.0	3.3	3.0	2.8	2.7	2.6	2.6	2.5	6.2	4.8	3.5	2.8
% Change, Year Ago	5.6	5.2	4.4	4.0	3.7	3.4	3.4	3.3	3.0	2.8	2.7	2.6				

Source: BofA Global Research, Haver Analytics

BofA GLOBAL RESEARCH



Disclosures

Important Disclosures

BofA Global Research personnel (including the analyst(s) responsible for this report) receive compensation based upon, among other factors, the overall profitability of Bank of America Corporation, including profits derived from investment banking. The analyst(s) responsible for this report may also receive compensation based upon, among other factors, the overall profitability of the Bank's sales and trading businesses relating to the class of securities or financial instruments for which such analyst is responsible.

Other Important Disclosures

Prices are indicative and for information purposes only. Except as otherwise stated in the report, for any recommendation in relation to an equity security, the price referenced is the publicly traded price of the security as of close of business on the day prior to the date of the report or, if the report is published during intraday trading, the price referenced is indicative of the traded price as of the date and time of the report and in relation to a debt security (including equity preferred and CDS), prices are indicative as of the date and time of the report and are from various sources including BofA Securities trading desks.

The date and time of completion of the production of any recommendation in this report shall be the date and time of dissemination of this report as recorded in the report timestamp.

Recipients who are not institutional investors or market professionals should seek the advice of their independent financial advisor before considering information in this report in connection with any investment decision, or for a necessary explanation of its contents.

Officers of BofAS or one or more of its affiliates (other than research analysts) may have a financial interest in securities of the issuer(s) or in related investments.

Individuals identified as economists do not function as research analysts under U.S. law and reports prepared by them are not research reports under applicable U.S. rules and regulations.

Macroeconomic analysis is considered investment research for purposes of distribution in the U.K. under the rules of the Financial Conduct Authority.

Refer to [BofA Global Research policies relating to conflicts of interest](#).

"BofA Securities" includes BofA Securities, Inc. ("BofAS") and its affiliates. Investors should contact their BofA Securities representative or Merrill Global Wealth Management financial advisor if they have questions concerning this report or concerning the appropriateness of any investment idea described herein for such investor. "BofA Securities" is a global brand for BofA Global Research.

Information relating to Non-US affiliates of BofA Securities and Distribution of Affiliate Research Reports:

BofAS and/or Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S") may in the future distribute, information of the following non-US affiliates in the US (short name: legal name, regulator): Merrill Lynch (South Africa): Merrill Lynch South Africa (Pty) Ltd., regulated by The Financial Service Board; MLI (UK): Merrill Lynch International, regulated by the Financial Conduct Authority (FCA) and the Prudential Regulation Authority (PRA); BofASE (France): BofA Securities Europe SA is authorized by the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers (AMF). BofA Securities Europe SA ("BofASE") with registered address at 51, rue La Boétie, 75008 Paris is registered under no 842 602 690 RCS Paris. In accordance with the provisions of French Code Monétaire et Financier (Monetary and Financial Code), BofASE is an établissement de crédit et d'investissement (credit and investment institution) that is authorised and supervised by the European Central Bank and the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers. BofASE's share capital can be found at www.bofam.com/BofASEdisclaimer; BofA Europe (Milan): Bank of America Europe Designated Activity Company, Milan Branch, regulated by the Bank of Italy, the European Central Bank (ECB) and the Central Bank of Ireland (CBI); BofA Europe (Frankfurt): Bank of America Europe Designated Activity Company, Frankfurt Branch regulated by BaFin, the ECB and the CBI; BofA Europe (Madrid): Bank of America Europe Designated Activity Company, Sucursal en España, regulated by the Bank of Spain, the ECB and the CBI; Merrill Lynch (Australia): Merrill Lynch Equities (Australia) Limited, regulated by the Australian Securities and Investments Commission; Merrill Lynch (Hong Kong): Merrill Lynch (Asia Pacific) Limited, regulated by the Hong Kong Securities and Futures Commission (HKSF); Merrill Lynch (Singapore): Merrill Lynch (Singapore) Pte Ltd, regulated by the Monetary Authority of Singapore (MAS); Merrill Lynch (Canada): Merrill Lynch Canada Inc, regulated by the Canadian Investment Regulatory Organization; Merrill Lynch (Mexico): Merrill Lynch Mexico, SA de CV, Casa de Bolsa, regulated by the Comisión Nacional Bancaria y de Valores; Merrill Lynch (Argentina): Merrill Lynch Argentina SA, regulated by Comisión Nacional de Valores; BofAS Japan: BofA Securities Japan Co., Ltd., regulated by the Financial Services Agency; Merrill Lynch (Seoul): Merrill Lynch International, LLC Seoul Branch, regulated by the Financial Supervisory Service; Merrill Lynch (Taiwan): Merrill Lynch Securities (Taiwan) Ltd., regulated by the Securities and Futures Bureau; BofAS India: BofA Securities India Limited, regulated by the Securities and Exchange Board of India (SEBI); Merrill Lynch (Israel): Merrill Lynch Israel Limited, regulated by Israel Securities Authority; Merrill Lynch (DIFC): Merrill Lynch International (DIFC Branch), regulated by the Dubai Financial Services Authority (DFSA); Merrill Lynch (Brazil): Merrill Lynch S.A. Corretora de Títulos e Valores Mobiliários, regulated by Comissão de Valores Mobiliários; Merrill Lynch KSA Company: Merrill Lynch Kingdom of Saudi Arabia Company, regulated by the Capital Market Authority.

This information: has been approved for publication and is distributed in the United Kingdom (UK) to professional clients and eligible counterparties (as each is defined in the rules of the FCA and the PRA) by MLI (UK), which is authorized by the PRA and regulated by the FCA and the PRA - details about the extent of our regulation by the FCA and PRA are available from us on request; has been approved for publication and is distributed in the European Economic Area (EEA) by BofASE (France), which is authorized by the ACPR and regulated by the ACPR and the AMF; has been considered and distributed in Japan by BofAS Japan, a registered securities dealer under the Financial Instruments and Exchange Act in Japan, or its permitted affiliates; is issued and distributed in Hong Kong by Merrill Lynch (Hong Kong) which is regulated by HKSF; is issued and distributed in Taiwan by Merrill Lynch (Taiwan); is issued and distributed in India by BofAS India; and is issued and distributed in Singapore to institutional investors and/or accredited investors (each as defined under the Financial Advisers Regulations) by Merrill Lynch (Singapore) (Company Registration No 198602883D). Merrill Lynch (Singapore) is regulated by MAS. Merrill Lynch Equities (Australia) Limited (ABN 65 006 276 795), AFS License 235132 (MLEA) distributes this information in Australia only to 'Wholesale' clients as defined by s.761G of the Corporations Act 2001. With the exception of Bank of America N.A., Australia Branch, neither MLEA nor any of its affiliates involved in preparing this information is an Authorised Deposit-Taking Institution under the Banking Act 1959 nor regulated by the Australian Prudential Regulation Authority. No approval is required for publication or distribution of this information in Brazil and its local distribution is by Merrill Lynch (Brazil) in accordance with applicable regulations. Merrill Lynch (DIFC) is authorized and regulated by the DFSA. Information prepared and issued by Merrill Lynch (DIFC) is done so in accordance with the requirements of the DFSA conduct of business rules. BofA Europe (Frankfurt) distributes this information in Germany and is regulated by BaFin, the ECB and the CBI. BofA Securities entities, including BofA Europe and BofASE (France), may outsource/delegate the marketing and/or provision of certain research services or aspects of research services to other branches or members of the BofA Securities group. You may be contacted by a different BofA Securities entity acting for and on behalf of your service provider where permitted by applicable law. This does not change your service provider. Please refer to the [Electronic Communications Disclaimers](#) for further information.

This information has been prepared and issued by BofAS and/or one or more of its non-US affiliates. The author(s) of this information may not be licensed to carry on regulated activities in your jurisdiction and, if not licensed, do not hold themselves out as being able to do so. BofAS and/or MLPF&S is the distributor of this information in the US and accepts full responsibility for information distributed to BofAS and/or MLPF&S clients in the US by its non-US affiliates. Any US person receiving this information and wishing to effect any transaction in any security discussed herein should do so through BofAS and/or MLPF&S and not such foreign affiliates. Hong Kong recipients of this information should contact Merrill Lynch (Asia Pacific) Limited in respect of any matters relating to dealing in securities or provision of specific advice on securities or any other matters arising from, or in connection with, this information. Singapore recipients of this information should contact Merrill Lynch (Singapore) Pte Ltd in respect of any matters arising from, or in connection with, this information. For clients that are not accredited investors, expert investors or institutional investors Merrill Lynch (Singapore) Pte Ltd accepts full responsibility for the contents of this information distributed to such clients in Singapore.

General Investment Related Disclosures:

Taiwan Readers: Neither the information nor any opinion expressed herein constitutes an offer or a solicitation of an offer to transact in any securities or other financial instrument. No part of this report may be used or reproduced or quoted in any manner whatsoever in Taiwan by the press or any other person without the express written consent of BofA Securities.

This document provides general information only, and has been prepared for, and is intended for general distribution to, BofA Securities clients. Neither the information nor any opinion expressed constitutes an offer or an invitation to make an offer, to buy or sell any securities or other financial instrument or any derivative related to such securities or instruments (e.g., options, futures, warrants, and contracts for differences). This document is not intended to provide personal investment advice and it does not take into account the specific investment objectives,

financial situation and the particular needs of, and is not directed to, any specific person(s). This document and its content do not constitute, and should not be considered to constitute, investment advice for purposes of ERISA, the US tax code, the Investment Advisers Act or otherwise. Investors should seek financial advice regarding the appropriateness of investing in financial instruments and implementing investment strategies discussed or recommended in this document and should understand that statements regarding future prospects may not be realized. Any decision to purchase or subscribe for securities in any offering must be based solely on existing public information on such security or the information in the prospectus or other offering document issued in connection with such offering, and not on this document.

Securities and other financial instruments referred to herein, or recommended, offered or sold by BofA Securities, are not insured by the Federal Deposit Insurance Corporation and are not deposits or other obligations of any insured depository institution (including, Bank of America, N.A.). Investments in general and, derivatives, in particular, involve numerous risks, including, among others, market risk, counterparty default risk and liquidity risk. No security, financial instrument or derivative is suitable for all investors. Digital assets are extremely speculative, volatile and are largely unregulated. In some cases, securities and other financial instruments may be difficult to value or sell and reliable information about the value or risks related to the security or financial instrument may be difficult to obtain. Investors should note that income from such securities and other financial instruments, if any, may fluctuate and that price or value of such securities and instruments may rise or fall and, in some cases, investors may lose their entire principal investment. Past performance is not necessarily a guide to future performance. Levels and basis for taxation may change.

BofA Securities is aware that the implementation of the ideas expressed in this report may depend upon an investor's ability to "short" securities or other financial instruments and that such action may be limited by regulations prohibiting or restricting "shortselling" in many jurisdictions. Investors are urged to seek advice regarding the applicability of such regulations prior to executing any short idea contained in this report.

Foreign currency rates of exchange may adversely affect the value, price or income of any security or financial instrument mentioned in this report. Investors in such securities and instruments effectively assume currency risk.

BofAS or one of its affiliates is a regular issuer of traded financial instruments linked to securities that may have been recommended in this report. BofAS or one of its affiliates may, at any time, hold a trading position (long or short) in the securities and financial instruments discussed in this report.

BofA Securities, through business units other than BofA Global Research, may have issued and may in the future issue trading ideas or recommendations that are inconsistent with, and reach different conclusions from, the information presented herein. Such ideas or recommendations may reflect different time frames, assumptions, views and analytical methods of the persons who prepared them, and BofA Securities is under no obligation to ensure that such other trading ideas or recommendations are brought to the attention of any recipient of this information.

In the event that the recipient received this information pursuant to a contract between the recipient and BofAS for the provision of research services for a separate fee, and in connection therewith BofAS may be deemed to be acting as an investment adviser, such status relates, if at all, solely to the person with whom BofAS has contracted directly and does not extend beyond the delivery of this report (unless otherwise agreed specifically in writing by BofAS). If such recipient uses the services of BofAS in connection with the sale or purchase of a security referred to herein, BofAS may act as principal for its own account or as agent for another person. BofAS is and continues to act solely as a broker-dealer in connection with the execution of any transactions, including transactions in any securities referred to herein.

Copyright and General Information:

Copyright 2024 Bank of America Corporation. All rights reserved. iQdatabase® is a registered service mark of Bank of America Corporation. This information is prepared for the use of BofA Securities clients and may not be redistributed, retransmitted or disclosed, in whole or in part, or in any form or manner, without the express written consent of BofA Securities. BofA Global Research information is distributed simultaneously to internal and client websites and other portals by BofA Securities and is not publicly-available material. Any unauthorized use or disclosure is prohibited. Receipt and review of this information constitutes your agreement not to redistribute, retransmit, or disclose to others the contents, opinions, conclusion, or information contained herein (including any investment recommendations, estimates or price targets) without first obtaining express permission from an authorized officer of BofA Securities.

Materials prepared by BofA Global Research personnel are based on public information. Facts and views presented in this material have not been reviewed by, and may not reflect information known to, professionals in other business areas of BofA Securities, including investment banking personnel. BofA Securities has established information barriers between BofA Global Research and certain business groups. As a result, BofA Securities does not disclose certain client relationships with, or compensation received from, such issuers. To the extent this material discusses any legal proceeding or issues, it has not been prepared as nor is it intended to express any legal conclusion, opinion or advice. Investors should consult their own legal advisers as to issues of law relating to the subject matter of this material. BofA Global Research personnel's knowledge of legal proceedings in which any BofA Securities entity and/or its directors, officers and employees may be plaintiffs, defendants, co-defendants or co-plaintiffs with or involving issuers mentioned in this material is based on public information. Facts and views presented in this material that relate to any such proceedings have not been reviewed by, discussed with, and may not reflect information known to, professionals in other business areas of BofA Securities in connection with the legal proceedings or matters relevant to such proceedings.

This information has been prepared independently of any issuer of securities mentioned herein and not in connection with any proposed offering of securities or as agent of any issuer of any securities. None of BofAS any of its affiliates or their research analysts has any authority whatsoever to make any representation or warranty on behalf of the issuer(s). BofA Global Research policy prohibits research personnel from disclosing a recommendation, investment rating, or investment thesis for review by an issuer prior to the publication of a research report containing such rating, recommendation or investment thesis.

Any information relating to the tax status of financial instruments discussed herein is not intended to provide tax advice or to be used by anyone to provide tax advice. Investors are urged to seek tax advice based on their particular circumstances from an independent tax professional.

The information herein (other than disclosure information relating to BofA Securities and its affiliates) was obtained from various sources and we do not guarantee its accuracy. This information may contain links to third-party websites. BofA Securities is not responsible for the content of any third-party website or any linked content contained in a third-party website. Content contained on such third-party websites is not part of this information and is not incorporated by reference. The inclusion of a link does not imply any endorsement by or any affiliation with BofA Securities. Access to any third-party website is at your own risk, and you should always review the terms and privacy policies at third-party websites before submitting any personal information to them. BofA Securities is not responsible for such terms and privacy policies and expressly disclaims any liability for them.

All opinions, projections and estimates constitute the judgment of the author as of the date of publication and are subject to change without notice. Prices also are subject to change without notice. BofA Securities is under no obligation to update this information and BofA Securities ability to publish information on the subject issuer(s) in the future is subject to applicable quiet periods. You should therefore assume that BofA Securities will not update any fact, circumstance or opinion contained herein.

Certain outstanding reports or investment opinions relating to securities, financial instruments and/or issuers may no longer be current. Always refer to the most recent research report relating to an issuer prior to making an investment decision.

In some cases, an issuer may be classified as Restricted or may be Under Review or Extended Review. In each case, investors should consider any investment opinion relating to such issuer (or its security and/or financial instruments) to be suspended or withdrawn and should not rely on the analyses and investment opinion(s) pertaining to such issuer (or its securities and/or financial instruments) nor should the analyses or opinion(s) be considered a solicitation of any kind. Sales persons and financial advisors affiliated with BofAS or any of its affiliates may not solicit purchases of securities or financial instruments that are Restricted or Under Review and may only solicit securities under Extended Review in accordance with firm policies.

Neither BofA Securities nor any officer or employee of BofA Securities accepts any liability whatsoever for any direct, indirect or consequential damages or losses arising from any use of this information.

Research Analysts

US Economics

Michael Gapen

US Economist
BofA
+1 646 855 3270
michael.gapen@bofa.com

Aditya Bhawe

US Economist
BofA
+1 646 855 9929
aditya.bhave@bofa.com

Stephen Juneau

US Economist
BofA
+1 202 442 7429
stephen.juneau@bofa.com

Shruti Mishra

US and Global Economist
BofA
+1 646 855 1040
smishra44@bofa.com

Jeseo Park

US Economist
BofA
+1 646 855 8688
jeseo.park@bofa.com