STATE STREET GLOBAL ADVISORS

August 16, 2024
Commentary

Weekly Economic Perspectives

Contents

01 **The Economy**
US inflation data is good enough for a 25 bp rate cut in September. Canadian housing market quiet in July. UK GDP in line with expectations. Another quarter of modest growth in the eurozone. Japan's GDP blows past expectations. Australia's unemployment rate rises despite job gains.

09 Week in Review

Spotlight on Next Week
Canadian inflation to ease. Weak eurozone manufacturing to persist. Japan's national CPI to rise 2.6%.

.

Contact

Simona Mocuta
Chief Economist
simona_mocuta@ssga.com
+1-617-664-1133

Krishna Bhimavarapu
Economist
VenkataVamseaKrishna_Bhimavarapu@ssga.com
+91-806-741-5000

Amy Le
Macro-Investment Strategist
amy_le@ssga.com
+44-203-395-6590

Information Classification: General

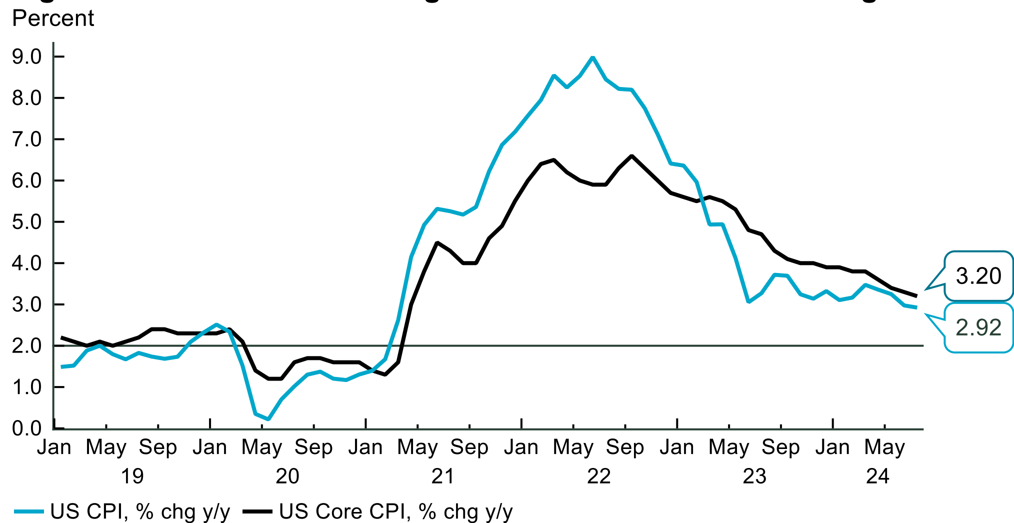
The Economy

Road clears for a Fed cut in September.

US

The July **inflation** data was slightly better than expected, but there was enough there in the details to preclude too jubilant an interpretation. Indeed, the market reaction was very muted. Both overall and core (ex-food and energy) prices increased 0.2% m/m, allowing the two respective measures of inflation to ease one tenth, to 2.9% y/y and 3.2% y/y, respectively. The headline print marked the first sub-3.0% reading since March 2021.

Figure 1: Further Modest Progress Towards US Inflation Target



Sources: Macrobond, SSGA Economics, BLS

A lot of categories came in softer than anticipated, which introduces the risk of some reversion higher next month. For example, food and energy were quite well behaved, with food prices up a moderate 0.2% m/m and energy flat. Used vehicle prices dropped 2.3% m/m, more than we anticipated given Manheim auction data, and medical services surprised heavily to the downside with a 0.3% m/m decline. The only significant real upside surprise in July came from shelter, specifically rents. Having eased noticeably in June, rent of primary residence unexpectedly jumped 0.488% m/m, the highest three-decimal reading since May 2023. This does not jive with signals from other rent inflation metrics and so, we'll do what we always think is wise when we get extreme readings in an indicator in consecutive months: take the average. This leaves the gentle downtrend of the past year well in place; if anything, we would not be surprised to see either a downward revision to the July data, or another big step down in August. Given the mix of upside and downside surprises in the July report, and our expectation of some reversion next month, as things stand, we look for a similar 0.2% m/m increase in overall prices in August, which would lower the inflation rate three tenths to 2.6% y/y.

The **Fed** has everything it needs to deliver a 25 basis point (bp) rate cut in September. But not 50 bp…at least not without a really bad August employment

report. Having long advocated for a summer start to rate cuts, we find ourselves in the odd position of pushing back against what now appear to be unwarranted calls for a 50 bp cut in September. It's not that the macro data do not warrant rates being 50 bp lower than where they are. Rather, having signaled a single 2024 rate cut in the June Summary of Economic Projections (SEP), the Fed would need something more dramatic than what has transpired so far to deliver a jumbo cut in September. Assuming that the data do not force the FOMC's hand beforehand, we think a 25 bp in September, alongside an updated dot plot showing 3-4 cuts this year is a much more balanced approach.

The value of a gradual approach was reinforced by the much stronger than expected July **retail sales** report. Admittedly, the details weren't nearly as robust as the 1.0% m/m jump in total sales would suggest, but this was nonetheless above all expectations and helped alleviate investor fears of an imminent sharp downturn in consumer demand. The truth is likely somewhere in the middle, with the underlying trend in demand likely closer to the 0.3% m/m increase in control sales (excluding food services, building materials, autos dealers and gas stations). Just like in June, there were some big moves across the components, in many cases, in the opposite direction. For example, having declined 3.4% m/m in June, sales of motor-vehicles and parts jumped 3.6% in July. Having declined 1.1% m/m in June, sales of electronics rebounded 1.7% in July. By contrast, after a 1.7% gain in June, "miscellaneous" sales plunged 2.5% in July; while online sales grew a mere 0.2% m/m in July following June's blockbuster 2.2% surge. Perhaps it is worth paying more attention to the y/y performance, which is far from great. Seasonally adjusted nominal retail sales are only 2.7% higher than in July 2024; given the increase in inflation in the intervening period, this leaves real sales flat to slightly negative y/y.

Housing activity continues to languish. **Housing starts** declined 6.8% m/m in July, but performance was actually worse than this number suggests because there was a massive plunge in single-family starts (down 14.1% m/m) that compared in magnitude to the experience of March-April 2020. Multi-family starts jumped 14.5%, offering some support. Both segments remain well below-year earlier levels, however, with single family starts down 14.8% y/y and multi-family starts down 18.4% y/y. Meanwhile, **building permits** more than retraced June's increase to settle at the lowest level since June 2020.

Homebuilder confidence continues to worsen. The **NAHB (National Association of Homebuilders) index** ticked down two more points to 39 in August, exactly half its level in August 2020 and the lowest level this year. Buyer traffic and present sales showed further erosion, while sales expectations improved incrementally. The dynamic makes sense: we've argued previously that rate cuts may create a bit of an air pocket in housing demand as it incentivizes buyers to wait for lower mortgage rates even as demand deferral may also put some downward pressure on prices.

Industrial production disappointed in July. Not only did output shrink by 0.6% (double the anticipated rate) but there was a meaningful downward revision to the June data centered on manufacturing. As a result, the y/y comparison turned negative again (-0.2% y/y). Sequentially, there was a big pullback in utilities in July that followed three strong back to back increases; mining was flat, and manufacturing output shrank 0.3% m/m.

Consumer sentiment improved modestly in August, according to preliminary readings on the University of Michigan consumer sentiment index. The 1.4-point improvement retraced about 80% of July' decline and was attributable exclusively to better expectations. Assessments of the current economic situation actually worsened. As to the rise in expectations, the most noticeable uptick was among democratic party supporters, with sentiment among independents up only marginally, and down among republican party supporters. Clearly, President Biden's decision to not seek re-election has had an impact on consumer sentiment. Elsewhere, inflation expectations were stable. Short-term (1 year) inflation expectations were unchanged at 2.9% and long-term (5-10 year) inflation expectations were unchanged at 3.0%, where they've stood since April.

Canada

Building permits fell by 13.9% in June, against the expectation of a gain of 6.0% and following a substantial decline in previous month (-12.7%). Losses were broad, with residential and non-residential permits down 11.5% and 18.1%, respectively.

The housing market remained subdued in July as borrowing costs remained elevated. **Existing home sales** fell by 0.7% m/m in July and was 9% below their pre-pandemic level. The decline was led by lower sales in B.C. (-1.3% m/m), Quebec (-1.1%) and Ontario (-0.6%). New listings were up 0.9% m/m in July. With lower sales and higher listings, the sales-to-new listings ratio dropped 0.8 ppts to 52.7, below average.

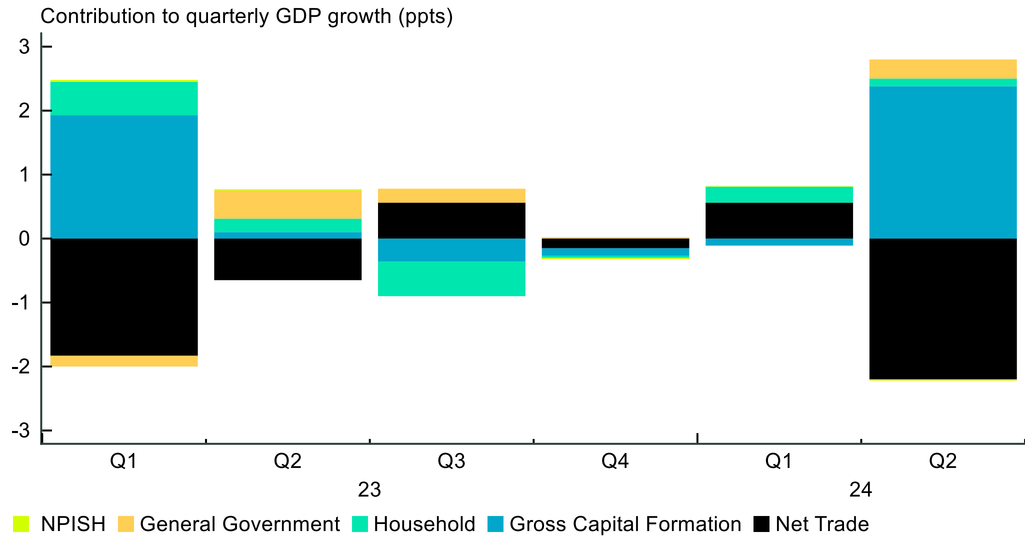
Housing starts rebound strongly in July, increasing by 16% m/m to 279.5k annualized units, well above market expectation of 245k units. The gain was largely due to the increase in multi-family sector, with urban starts up 21% m/m to 217.3k units. Regionally, the rebound was led by the increases in Ontario, Prairies, and B.C.

UK

The UK has had a stronger-than-expected rebound so far this year, supported by food disinflation, rising in real wages, and lower utility bills. In Q2, the UK's **GDP** grew by 0.6% q/q, in line with market expectation and just slightly lower than Q1's 0.7% q/q gain. On the expenditure side, gross capital formation, government consumption, and household spending were the major contributors to quarterly growth, partially offset by a decline in net trade. However, household consumption seems to have lost its momentum while business investments remained weak. Household spending's growth in Q2 was only 0.2% q/q, down from 0.4% q/q in previous quarter, while business investment fell by 0.1% q/q during the quarter and was 1.1% lower compared to the same period a year ago. Coupled with fiscal constraint and long-term productivity problems, this might lead to a slowdown in GDP growth during the second half of the year. Meanwhile, **retail sales** have returned to growth, but the extent was slightly less than expected, by 0.5% m/m in July, compared to market expectations of an increase of 0.6% m/m. The gain was also concentrated on one sector. Department stores posted a 4.0% m/m gain while other non-food stores and online sales grew by 2.5% m/m and 0.7% m/m respectively, reflecting the impact of summer discounts and sport events.

Information Classification: General

Figure 2: UK Economy Doing Well So Far This Year



Sources: Macrobond, SSGA Economics, ONS
Updated as of 8/16/2024

As good as the GDP news, **services inflation** was down sharply to a two-year low of 5.2% in July, from 5.7% in June, and was well below the BoE's forecast of 5.6%. Headline inflation also increased less than expected to 2.2% in July from 2.0% previous month, versus market expectations of 2.3% and the BoE estimate of 2.4%. In theory, this is welcome news, but we doubt that it will have significant impact on BoE's rate cuts. Firstly, the latest downside surprise in service inflation seems more like noise, given that restaurants and hotels were the largest downward contributor, following June's surge in hotel prices. Secondly, in its August meeting, the BoE has drawn a separation between services inflation and policy. For now, we continue to expect a rate cut in November, followed by another one in December.

The latest **labor market** report revealed a mixed picture, but unlikely to have any impact on future rate cuts. The unemployment rate declined two tenths to 4.2% in the three months to June, bucking expectations of a rise to 4.5%. However, given the problems with the Labour Force Survey, the BoE is likely to disregard the latest change in the unemployment rate. Meanwhile, job vacancies declined incrementally to 884k in the three months to July. Wage growth decelerated markedly but mostly on account of base effects. The three-month y/y rate of average earnings growth (including bonus) fell sharply from 5.7% to 4.5%, largely due to the NHS one-off bonus payments paid in June 2023 while the rate excluding bonuses inched down from 5.8% to 5.4%, remaining elevated.

Eurozone

Slow and steady may not necessarily win the race, but at least it helps you advance. So it was with ***eurozone* real GDP** growth in the second quarter: the economy expanded by 0.3% q/q, matching the Q1 performance and leaving real GDP 0.6% higher y/y. No details were available with this release.

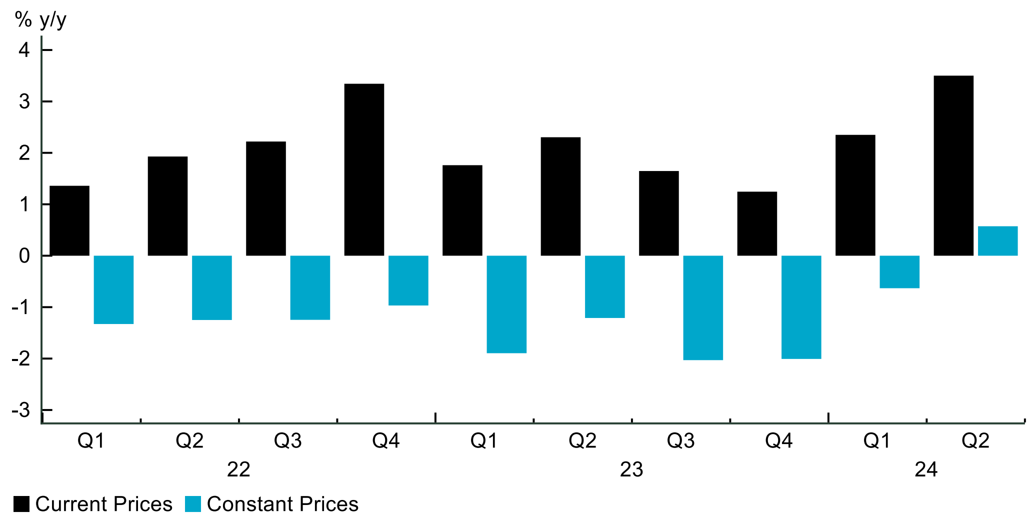
After a modest retreat in July, the **Zew index** of ***German*** investor confidence experienced its largest monthly decline in two years in August. The headline plunged 22.6 points to the lowest level since January. We don't want to read too much into a single month, but this certainly bears watching.

Japan

The **Bank of Japan** (BoJ) lifted their policy rate to 0.25% and began to run down JGB purchases in July. The bank also announced plans to reduce its monthly JGB purchases to 3 trillion yen by March 2026. That the move came with market volatility was to be expected. What took us by surprise was the extent of volatility; the yen appreciated nearly 10%, and Japanese equities saw equally rapid moves (although have been recovering since). Deputy Governor Shinichi Uchida later said that low market volatility is vital for the next hike. The Bank may want to assess the impact of the July hike and confirm intact economic fundamentals before acting again.

GDP data for Q2 showed that the domestic demand finally turned a corner; regular readers know our forecast of a marked consumption recovery. In the event, real GDP growth blew past expectations at 3.1% q/q saar (2.3% consensus). Household consumption grew 4.0%, twice as expected! This rebound from a benign Q1 was also due to the resumption of auto production. The bigger surprise was the improvement in employee compensation, which not only rose an impressive 0.8% q/q, but revisions ensured that it rose in the past three quarters! Resultingly, real compensation's annual growth rate has turned positive in Q2 (figure 3).

Figure 3: Higher Wages Are Now Turning Japanese Consumption
Compensation Of Employees In Japan



Sources: SSGA Economics, CAO, Macrobond
Updated as of 8/19/2024

Capex and residential investments too improved by 3.6% and 6.7% respectively. However, higher growth in imports (7.1%) than exports (5.9%) meant that real exports dragged growth by 0.1 ppts.

The GDP data validates our view that the BoJ is pursuing a very good monetary policy under Governor Kazuo Ueda. We maintain our terminal policy rate forecast of 1.0% by December 2025. However, with the US Fed more likely to commence a cutting cycle from September, our terminal forecast has downside risks, and the next hike may not come till December. The Bank will want to ensure that consumption remain strong before the next move. We still expect soft-landing in the US and Japan, but the yen will remain crucial; the BoJ may want to maintain the yen at a neutral level where imports do not outweigh exports.

All this means that the BoJ still has a tough job ahead, but we are more confident on the economy and the Bank's ability to gently raise interest rates. We expect the Governor to emphasize these points during his Diet testimony next week. Also, the nationwide CPI for July may have risen 2.8% y/y.

Australia

The labor market data's mixed characterization continued in July. **Employment** rose 58.2k in July, nearly three times as much as expected. This is the second month when employment grew over 50k, and led by full-time employment (60.5k in July). Given the Reserve Bank of Australia's (RBA) hawkish inclinations, they may take a stronger signal from the labor market data than from cooling inflation.

However, a higher participation rate of 67.1% ensured that the **unemployment rate** ticked up a tenth to 4.2%, the highest since January 2022. The 3-month moving average is now 0.5 pp above the 12-month low, meaning that the infamous Sahm rule has been triggered. The rule is more applicable in the US, but has implications in Australia as well, which has essentially been indicated by the Beveridge Curve (figure 4). We had earlier identified nine cycles in Australia's full-time employment (see here), and each time it declines from a peak, the Beveridge Curve suggested a rise in unemployment, which is consistent with July's data print.

Figure 4: The Beveridge Curve When Full-Time Employment Declines From Peaks

Source: SSGA Economics, ABS, ANZ-Indeed, Macrobond

Governor Michele Bullock testified in front of the Parliament and said that it is "premature to be thinking about rate cuts", given that inflation is "still too high". However, "circumstances may change"; we believe they will in two weeks, as the headline CPI will decline sequentially in July, bringing the annual rise within the RBA's target band. This will be mostly the work of higher electricity subsidies and the RBA may downplay the decline. Inflation is cooling, nonetheless.

Business conditions improved a touch but remained benign in July. The NAB business survey's headline conditions index improved two points to 6. More importantly, the improvement came due to a rebound in the employment index to 7, more than reversing the last month's decline. Furthermore, labor costs jumped a full percentage point to 2.5%, perhaps reflecting a higher minimum wage. For our part, the most important development was that **price pressures continued to cool**. Retail prices declined four-tenths to 0.9% and purchase costs declined two-tenths to 1.1%. These significant easing in price measures is the key signal we have been taking from the recent data flow.

This mix of easing price pressures and still healthy job market should be the ideal outcome for the RBA, as they aim to soft-land the economy despite high rates.

The NAB's Q2 Consumer Sentiment Survey (released earlier in July) showed that Australians are tackling high cost of living smartly, as they are potentially saving A$ 3,840 a year by cutting back on spending on major household items, holidaying and other on discretionary spendings such as eating out and entertainment. 60% of the 2,000 surveyed were able to use such savings for day to day living expenses, while 40% were able to save the money, while only 5% were able to pay down their mortgage or debt.

Separately, the more widely tracked **consumer sentiment** metric from the Melbourne Institute rebounded 2.8% m/m to 85.0 in August. The rebound was broad-based, but the index still remains near its cyclical low. The unemployment expectations index rose 3.8% m/m, indicating increased likelihood ahead. Expectations of the level of interest rates declined 14.9%, primarily as consumers were relieved that the RBA did not hike in August.

The Q2 **wage price index** showed that wage growth has peaked. Wages grew 0.8% q/q, a tenth below the consensus and down from a peak of 1.3% in Q3 2023. The last quarter's data was revised marginally higher, which left this quarter's annual growth rate at 4.1% y/y. The composition showed that individual and collective agreements made smaller additions to the headline. However, acute cost of living is reflective in broadening wages; the share of jobs associated with wage growth of over 4.0% has reached a new high of over 45%.

Week in Review (Aug 12 –Aug 16)

Country	Release (Date, format)	Consensus	Actual	Last	Comments
Monday, Aug 12					
CA	Building Permits (Jun, m/m)	6.0%	-13.9%	-12.7% (↓)	Dissappointing.
JN	PPI (Jul, y/y)	3.1%	3.0%	2.9%	Turning higher.
AU	Westpac Consumer Conf Index (Aug)	na	85.0	82.7	Details remain poor.
AU	Wage Price Index (Q2, y/y)	4.0%	4.1%	4.1%	Sequential decline lifted by revisions.
AU	NAB Business Confidence (Jul)	na	1	3 (↓)	Surveys continue showing slowing sentiments.
Tuesday, Aug 13					
US	NFIB Small Business Optimism (Jul)	91.5	93.7	91.5	Modest improvement.
US	PPI Final Demand (Jul, y/y)	2.3%	2.2%	2.7% (↑)	Welcome.
UK	Average Weekly Earnings (Jun, y/y, 3m)	4.6%	4.5%	5.7%	Largely due to base effects.
UK	ILO Unemployment Rate (Jun, 3m)	4.5%	4.2%	4.4%	Question on the reliability of the data.
GE	ZEW Survey Expectations (Aug)	34.0	19.2	41.8	Big step down.
Wednesday, Aug 14					
US	CPI (Jul, y/y)	3.0%	2.9%	3.0%	Good for 25 bp rate cut in September.
UK	CPI (Jul, y/y)	2.3%	2.2%	2.0%	Good.
EC	GDP (Q2, q/q, prelim)	0.3%	0.3%	0.3%	Modest but OK.
EC	Industrial Production (Jun, m/m)	0.5%	-0.1%	-0.9% (↓)	Soft.
FR	CPI (Jul, y/y, final)	2.3% (p)	2.3%	2.2%	As previously reported.
JN	GDP (Q2, q/q, prelim)	0.6%	0.8%	-0.6%	Great data; quells doubts on consumption.
AU	Employment (Jul, m/m, thous)	20.0	58.2	52.3 (↑)	Cyclical revival in employment?
AU	Unemployment Rate (Jul)	4.1%	4.2%	4.1%	May keep rising.
Thursday, Aug 15					
US	Empire Manufacturing (Aug)	-6.0	-4.7	-6.6	Modest.
US	Retail Sales Advance (Jul, m/m)	0.4%	1.0%	-0.2% (↓)	Upside surprise but control sales more modest
US	Philadelphia Fed Business Outlook (Aug)	5.2	-7.0	13.9	Sizable step down.
US	Initial Jobless Claims (Aug 10, thous)	235	227	234 (↑)	In recent range.
US	Continuing Claims (Aug 03, thous)	1,870	1,864	1,871 (↓)	In gentle uptrend.
US	Import Price Index (Jul, y/y)	1.5%	1.6%	1.5% (↓)	No big surprises.
US	Industrial Production (Jul, m/m)	-0.3%	-0.6%	0.3% (↓)	Manufacturing contracted.
US	NAHB Housing Market Index (Aug)	43.0	39.0	41.0 (↓)	Lowest level this year.
CA	Existing Home Sales (Jul, m/m)	na	-0.7%	3.7%	Housing market remained subdued.
UK	GDP (Q2, q/q, prelim)	0.6%	0.6%	0.7%	Good.
Friday, Aug 16					
US	Housing Starts (Jul, thous)	1,333	1,238	1,329 (↓)	Very weak.
US	Building Permits (Jul, thous)	1,425	1,396	1,454 (↑)	Weak.
US	U. of Mich. Sentiment (Aug, prelim)	66.9	67.8	66.4	Expectations better, current situation worse.
CA	Housing Starts (Jul, thous)	245.0	279.5	241.7	Strong rebound.
UK	Retail Sales Inc Auto Fuel (Jul, m/m)	0.6%	0.5%	-0.9% (↑)	OK.

Source: for data, Bloomberg®; for commentary, SSGA Economics.

About State Street Global Advisors

For four decades, State Street Global Advisors has served the world's governments, institutions, and financial advisors. With a rigorous, risk-aware approach built on research, analysis, and market-tested experience, we build from a breadth of index and active strategies to create cost-effective solutions. As pioneers in index and ETF investing, we are always inventing new ways to invest. As a result, we have become the world's fourth-largest asset manager* with US $4.42 trillion† under our care.

* Pensions & Investments Research Center, as of December 31, 2023.

† This figure is presented as of June 30, 2024 and includes ETF AUM of $1,393.92 billion USD of which approximately $69.35 billion USD is in gold assets with respect to SPDR products for which State Street Global Advisors Funds Distributors, LLC (SSGA FD) acts solely as the marketing agent. SSGA FD and State Street Global Advisors are affiliated. Please note all AUM is unaudited.

ssga.com

Marketing Communication

Important Risk Discussion

Investing involves risk including the risk of loss of principal.

All information is from SSGA unless otherwise noted and has been obtained from sources believed to be reliable, but its accuracy is not guaranteed. There is no representation or warranty as to the current accuracy, reliability, or completeness of, nor liability for, decisions based on such information, and it should not be relied on as such.

The information provided does not constitute investment advice and it should not be relied on as such. It should not be considered a solicitation to buy or an offer to sell a security. It does not take into account any investor's particular investment objectives, strategies, tax status or investment horizon. You should consult your tax and financial advisor.

The trademarks and service marks referenced herein are the property of their respective owners. Third party data providers make no warranties or representations of any kind relating to the accuracy, completeness or timeliness of the data and have no liability for damages of any kind relating to the use of such data.

The whole or any part of this work may not be reproduced, copied, or transmitted or any of its contents disclosed to third parties without SSGA's express written consent.

The views expressed in this material are the views of SSGA Economics Team through the period ended August 19, 2024 and are subject to change based on market and other conditions. This document contains certain statements that may be deemed forward-looking statements. Please note that any such statements are not guarantees of any future performance and actual results or developments may differ materially from those projected.

The information contained in this communication is not a research recommendation or 'investment research' and is classified as a 'Marketing Communication' in accordance with the Markets in Financial Instruments Directive (2014/65/EU) or applicable Swiss regulation. This means that this marketing communication.

(a) has not been prepared in accordance with legal requirements designed to promote the independence of investment research (b) is not subject to any prohibition on dealing ahead of the dissemination of investment research.

This communication is directed at professional clients (this includes eligible counterparties as defined by the "appropriate EU regulator" who are deemed both knowledgeable and experienced in matters relating to investments. The products and services to which this communication relates are only available to such persons and persons of any other description (including retail clients) should not rely on this communication.

Intellectual Property Information

BLOOMBERG®, a trademark and service mark of Bloomberg Finance L.P. Standard & Poor's S&P 500 Index® is a registered trademark of Standard & Poor's Financial Services LLC. FTSE 100® is a trademark jointly owned by the London Stock Exchange Plc and The Financial Times Limited, and is used by FTSE International Limited under license. "All-World", "All-Share" and "All-Small" are trademarks of FTSE International Limited.

Australia: State Street Global Advisors, Australia, Limited (ABN 42 003 914 225) is the holder of an Australian Financial Services License (AFSL Number 238276). Registered office: Level 14, 420 George Street, Sydney, NSW 2000, Australia. T: +612 9240-7600. F: +612 9240-7611.

Belgium: State Street Global Advisors Belgium, Chaussée de La Hulpe 185, 1170 Brussels, Belgium. T: +32 2 663 2036. State Street Global Advisors Belgium is a branch office of State Street Global Advisors Europe Limited, registered in Ireland with company number 49934, authorised and regulated by the Central Bank of Ireland, and whose registered office is at 78 Sir John Rogerson's Quay, Dublin 2

Canada: State Street Global Advisors, Ltd., 1981 McGill College Avenue, Suite 500, Montreal, Qc, H3A 3A8, T: +514 282 2400 and 30 Adelaide Street East Suite 1100, Toronto, Ontario M5C 3G6. T: +647 775 5900.

Dubai: State Street Global Advisors Limited, DIFC branch is regulated by the Dubai Financial Services Authority (DFSA) as a category 4 regulated firm and is only active in arranging deals in investments and advising on financial products. This document is intended for Professional Clients or Market Counterparties only as defined by the DFSA and no other person should act upon it.

State Street Global Advisors Limited, DIFC Branch, OT 01-39, 1st Floor, Central Park Towers, DIFC, P.O Box 507448, Dubai, United Arab Emirates. Regulated by the DFSA under reference number: F009297. Telephone: +971 4 871 9100

France: State Street Global Advisors Europe Limited, France Branch ("State Street Global Advisors France") is a branch of State Street Global Advisors Europe Limited, registered in Ireland with company number 49934, authorised and regulated by the Central Bank of Ireland, and whose registered office is at 78 Sir John Rogerson's Quay, Dublin 2. State Street Global Advisors France is registered in France with company number RCS Nanterre 899 183 289, and its office is located at Coeur Défense — Tour

A — La Défense 4, 33e étage, 100, Esplanade du Général de Gaulle, 92 931 Paris La Défense Cedex, France. T: +33 1 44 45 40 00. F: +33 1 44 45 41 92.

Germany: State Street Global Advisors Europe Limited, Branch in Germany, Brienner Strasse 59, D-80333 Munich, Germany ("State Street Global Advisors Germany"). T: +49 (0)89 55878 400. State Street Global Advisors Germany is a branch of State Street Global Advisors Europe Limited, registered in Ireland with company number 49934, authorised and regulated by the Central Bank of Ireland, and whose registered office is at 78 Sir John Rogerson's Quay, Dublin 2.

Hong Kong: State Street Global Advisors Asia Limited, 68/F, Two International Finance Centre, 8 Finance Street, Central, Hong Kong. T: +852 2103-0288. F: +852 2103-0200.

Ireland: State Street Global Advisors Europe Limited is regulated by the Central Bank of Ireland. Registered office address 78 Sir John Rogerson's Quay, Dublin 2. Registered Number: 49934. T: +353 (0)1 776 3000. F: +353 (0)1 776 3300.

Italy: State Street Global Advisors Europe Limited, Italy Branch ("State Street Global Advisors Italy") is a branch of State Street Global Advisors Europe Limited, registered in Ireland with company number 49934, authorised and regulated by the Central Bank of Ireland, and whose registered office is at 78 Sir John Rogerson's Quay, Dublin 2. State Street Global Advisors Italy is registered in Italy with company number 11871450968 — REA: 2628603 and VAT number 11871450968, and its office is located at Via Ferrante Aporti, 10 - 20125 Milan, Italy. T: +39 02 32066 100. F: +39 02 32066 155.

Japan: State Street Global Advisors (Japan) Co., Ltd., Toranomon Hills Mori Tower 25F 1-23-1 Toranomon, Minato-ku, Tokyo 105-6325 Japan.

T: +81-3-4530-7380. Financial Instruments Business Operator, Kanto Local Financial Bureau (Kinsho #345), Membership: Japan Investment Advisers Association, The Investment Trust Association, Japan, Japan Securities Dealers' Association.

Netherlands: State Street Global Advisors Netherlands, Apollo Building 7th floor, Herikerbergweg 29, 1101 CN Amsterdam, Netherlands. T: +31 20 7181 000. State Street Global Advisors Netherlands is a branch office of State Street Global Advisors Europe Limited, registered in Ireland with company number 49934, authorised and regulated by the Central Bank of Ireland, and whose registered office is at 78 Sir John Rogerson's Quay, Dublin 2.

Singapore: State Street Global Advisors Singapore Limited, 168, Robinson Road, #33-01 Capital Tower, Singapore 068912 (Company Reg. No: 200002719D, regulated by the Monetary Authority of Singapore). T: +65 6826-7555.

F: +65 6826-7501.

South Africa: State Street Global Advisors Limited is regulated by the Financial Sector Conduct Authority in South Africa under license number 42670.

Switzerland: State Street Global Advisors AG, Beethovenstr. 19, CH-8027 Zurich. Registered with the Register of Commerce Zurich CHE-105.078.458. T: +41 (0)44 245 70 00. F: +41 (0)44 245 70 16.

United Kingdom: State Street Global Advisors Limited. Authorised and regulated by the Financial Conduct Authority. Registered in England. Registered No. 2509928. VAT No. 5776591 81. Registered office: 20 Churchill Place, Canary Wharf, London, E14 5HJ. T: 020 3395 6000. F: 020 3395 6350.

United States: State Street Global Advisors, 1 Iron Street, Boston,

MA 02210-1641.

© 2024 State Street Corporation.
All Rights Reserved.
2537623.251.1.GBL.RTL
Exp. Date: 08/31/2025