Deutsche Bank Research



Economics

US Economic Notes

Date 27 July 2025

What you need to know for the week ahead

	2025F Q4/Q4	2026F Q4/Q4	2027F Q4/Q4
Real GDP	1.0	2.0	2.2
Unemployment rate, %	4.5	4.4	4.3
Core CPI	3.1	2.6	2.4
Fed Funds	4.125	3.625	3.625

Figure 2

Source: Deutsche Bank

Post Employment Conference Call

Friday Aug 01, 9:00 am EDT To register for the call, please contact your

DB sales rep or go to the following URL: https://www.dbresearch.com/REPO/RPS EN-PROD/PROD000000000594235.link

Commentary for Monday: This week's economic calendar kicks into high gear with the main events being Wednesday's FOMC meeting and Friday's July employment report. As we wrote last week (see "Fed Notes: July FOMC preview: See you on the other side (of tariff inflation) "), we expect the Fed to hold rates steady for the fifth straight meeting and largely maintain existing signals about the policy outlook. This decision is unlikely to be unanimous, however, as we expect two governors to dissent for the first time since 1993. In terms of nearterm policy, Powell is unlikely to remove a September rate cut from consideration nor intentionally raise the probability of that outcome. Instead, ahead of key data releases - including two more jobs and inflation reports - we expect he will continue to indicate the Fed's data-dependent stance which will entail making decisions on a meeting-by-meeting basis. His intent will be to allow the incoming data to determine the Fed's upcoming decisions.

Without updated economic forecasts, the meeting statement may receive a bit more attention at this week's meeting. We expect only minor tweaks and a continued emphasis on data-dependence amidst elevated uncertainty on the economic outlook. Starting with the opening paragraph, the statement should remove the reference to swings in net exports in the opening line. Aside from this

Brett Ryan

Senior US Economist +1-212-250-6294

Justin Weidner

Economist +1-212-469-1679

Matthew Luzzetti, Ph.D.

Chief US Economist +1-212-250-6161

Amy Yang

Economist +1-212-454-9893



Page 2

tweak, the majority of data releases since the June 17 meeting still "suggest that economic activity has continued to expand at a solid pace."

Regarding the second paragraph of the meeting statement, the Committee may want to tweak the sentence regarding uncertainty about the economic outlook. On the one hand, the passage of the tax bill in Congress has given the Committee more clarity to the fiscal outlook. In addition, recently announced trade deals have likely diminished some of the risks on that front. They could, therefore, indicate that uncertainty has diminished further but remains elevated. However, with threats of higher tariffs still present, most officials are likely to still see upside risks to their inflation forecasts. Instead of providing another progress report on uncertainty, the Committee could simply state "Uncertainty about the economic outlook remains somewhat elevated."

Regarding Chair Powell's press conference, recent developments related to whether President Trump will remove Chair Powell might get just as much attention from the press as the economic and policy outlook. On these topics, we would expect Powell to reiterate points he made in the past. For example, in May Powell noted: "[Trump's comments on removing Powell] Doesn't affect...doing our job at all.... [W]e're always going to do the same thing—which is use our tools to foster maximum employment and price stability for the benefit of the American people. We're always going to consider only the economic data, the outlook, the balance of risks." If asked, he could indicate that he does not intend to step aside before his term as chair is completed next May. See our recent notes related to this topic: "Is there a fire behind all the smoke?" and "Removing Powell won't move the needle on Treasury debt costs".

Powell will also be asked about how trade policy is impacting the outlook, a topic we should gain greater clarity on this week. On July 31st, the Federal Appeals court is slated to hear the International Trade Court's ruling that Trump's usage of an emergency declaration for tariffs is unlawful. August 1st is the deadline for reciprocal tariffs. Although the President has renewed threats of significantly higher tariffs, with many rates potentially returning towards those early April levels, he has also announced a few trade deals, including one with Japan which raised the baseline tariff rate to 15% but reduced tariffs on autos (see "Tariff tracker update: Letter by letter"). News reports tentatively indicate that a similar deal might be reached with Europe. At the same time, Treasury Secretary Bessent recently downplayed near-term deadlines with China, indicating that talks were going well and delays could be used. We expect this week to deliver some mix of additional trade deals, tariff delays, but also threats of higher tariffs on a case-bycase basis. Ultimately, we continue to expect that the average effective tariff rate settles near 15% over time, though Trump's recent indications that 15% may be the new floor could point to some modest upside risks to that assumption.

A final topic of discussion for this meeting is the Fed's ongoing policy framework review. The June press conference and minutes indicated that the Committee would finalize any modifications to the Statement on Longer-Run Goals and Monetary Policy Strategy by late summer, suggesting that this meeting will be used to complete that review. So far, Powell has indicated there is broad support on the Committee for revisiting the modifications made in 2020 to the strategy statement, namely adoption of a flexible average inflation target and an asymmetric view on the labor market. Ultimately, we expect the Committee will return closer to the pre-2020 versions of these two items. Most likely, Powell will

Deutsche Bank Securities Inc.



present those results at Jackson Hole. After that is completed, the Committee will then return to discussing enhancements to communications strategies, including any adjustments to the SEP.

Turning to the data docket, several releases ahead of the conclusion of the FOMC meeting could on the margin influence the tone coming out of the meeting. Tuesday's advance goods trade balance (-\$97.6bn forecast vs. -\$96.6bn previously) will hopefully show some further stability after historically large swings in the first quarter due to tariffs. The June trade data will also sharpen Fed officials estimates for Wednesday's advance Q2 real GDP (+1.6% vs. -0.5%) release.

However, more important will be the labor market data released during the meeting. Tuesday's JOLTS will provide fresh data on measures of labor slack that Powell follows closely. Recall that in May, the guits rate and the job openings-tounemployed ratio tightened slightly. Barring a meaningful drop off in the private sector hiring rate and/or notable increase in the layoff rate, Powell (and the FOMC) should have more confidence in continuing to describe the labor market as "solid". The jobs-plentiful / jobs hard-to-get components in Tuesday's consumer confidence release (96.1 vs. 93.0) will also provide some insights for Fed officials as this series has historically been highly correlated with the unemployment rate. Lastly, while Wednesday's ADP survey (+55k vs. -33k) should not inform the Fed's views on Friday's nonfarm payroll print, a further acceleration in job losses could trigger greater concern from some on the Committee. That being said, there have been episodes in the past where shortterm growth trends in ADP and BLS private hiring have diverged. Hence, the Fed would be looking across a suite of labor indicators to see if they are telling the same story rather than relying on just one.

Data releases after the FOMC meeting will be equally important to the outlook as market participants reassess prospects for a potential rate cut at the September FOMC meeting. Thursday's personal income (+0.3% vs. -0.4%) and consumption (+0.3% vs. -0.1%) report for June will provide the latest reading on the core PCE deflator (+0.30% vs. +0.18%), the Fed's preferred inflation metric. As we noted recently (see "US Economic Chartbook: US Inflation Outlook: Tip of the tariff iceberg "), though the latest CPI and PPI data missed consensus expectations to the downside with respect to the headline and core series, the categories that feed into the core PCE deflator point to a somewhat stronger print which would have the effect of raising the year-over-year growth rate of the series to 2.8%, its highest rate since February and consistent with no progress in over a year. Indeed, the latest data showed clearer evidence that tariffs are leading to higher prices for core goods components, including recreational goods, household furnishings, and toys, among other categories - one reason we expect the bulk of the FOMC to remain cautious on when it might be appropriate to next reduce rates.

Thursday's Q2 employment cost index (+0.8% vs. +0.9%) will provide policymakers further insights into labor cost trends. Though we expect the Q2 data to show further moderation in the ECI in year-over-year terms (to 3.5%), recent changes to immigration policy could eventually challenge the Fed's view that the labor market is not a source of inflationary pressures if growth accelerates more than we expect next year.

Deutsche Bank Securities Inc.



More important to the near-term outlook for monetary policy will be Friday's July employment report. Our headline (+75k vs. +147k) nonfarm payroll forecast reflects payback from last month's 64k surge in state and local government education employment, which was likely a function of the seasonal factor. However, our private payroll (+100k vs. +74k) estimate is closer to the three-month trailing average of 115k. If our forecasts prove close to the mark, the unemployment rate should edge up to 4.2%. Regarding other details of the release, we expect average hourly earnings (+0.3% vs. +0.2%) to tick up slightly amidst steady hours worked (34.2hrs vs. 34.2hrs), which would have the effect of raising the year-over-year growth rate of our payroll proxy for nominal income growth by 40bps to 4.9%.

Regarding our payrolls forecast, as we pointed out last month, we have noticed a pattern of subdued summer payroll gains - at least relative to their January-May averages - over the past couple of years. For example, average private payrolls from June - August of 2023 were roughly 32% below their January - May average. In 2024, the drop-off was even more pronounced with the average June - August private payrolls a little over 65% below their January - May average. However, we believe the breakeven rate of payroll gains (that is, the pace of job growth that would keep the unemployment rate steady) is something closer to 100k per month at present (see "US Economic Perspectives: Potential paths for breakeven employment "). As mentioned above, the Trump Administration's immigration policies are likely to slow net immigration flows, and potentially could lead to an outright decrease in the foreign-born population. Correspondingly, the breakeven rate of payroll gains could be even lower, closer to 50k per month. As such, even modest payroll gains could have the effect of tightening the labor market. As always, we will hold our post-employment call at 9:00AM to discuss the data and impact on the Fed outlook, to register click here.

Friday's manufacturing ISM (49.5 vs. 49.0), final University of Michigan consumer sentiment (62.0 vs. 61.8) and unit motor vehicle sales (15.5mn vs. 15.3mn) will round out this week's data deluge. Recent trade deals and the ongoing rally in risk assets could present upside risks to the ISM and sentiment. We should also note that the Fed will likely keep an eye on the inflation expectations components of the University of Michigan survey, which moderated but remained elevated in the preliminary release (see "US Economic Perspectives: Market inflation expectations are less sanguine than they look"). Unit motor vehicle sales will provide a preliminary glimpse into current-quarter consumer spending.

In summary, the Fed is likely to remain non-committal with respect to the near-term monetary policy outlook. This week's data deluge could very likely influence which way market participants may start to lean – in particular, if Friday's employment data meaningfully disappoint. However, it's worth noting that the initial headline payroll print has exceeded the median consensus forecast in each of the last four months as the economy has been resilient to several shocks thus far – one reason why the Fed has been in no hurry to cut this year.

Region	Name	Date	Dove/Hawk	Voter	Events
FRB	FRB	Jul-19 - Jul-31			Fed external communications blackout
Chair	Powell	Jul-22	Neutral	Υ	Welcome remarks at Regulatory Conference

Deutsche Bank Securities Inc.



Please see the following pages for a forecast summary and estimates of the upcoming US high-frequency data over the next several weeks.

Economic Activity		20	25			2	026			20	27		2025F	2026F	2027F
(% qoq, saar)	Q1F	Q2F	Q3F	Q4F	Q1F	Q2F	Q3F	Q4F	Q1F	Q2F	Q3F	Q4F	Q4/Q4	Q4/Q4	Q4/Q4
GDP	-0.5	1.6	1.3	1.5	1.7	1.9	2.1	2.5	2.2	2.4	2.1	2.2	1.0	2.0	2.2
Private consumption	0.5	1.7	1.4	1.5	1.6	1.7	1.9	2.1	2.1	2.2	2.1	2.2	1.3	1.8	2.1
nvestment	23.8	-18.3	1.9	2.6	2.5	2.7	2.9	4.3	3.2	3.6	2.6	2.5	1.4	3.1	3.0
Nonresidential	10.3	-0.8	0.1	0.9	1.2	2.3	2.4	2.4	2.8	2.9	3.2	3.2	2.6	2.1	3.0
Residential	-1.3	-5.5	-3.0	-3.0	-2.0	2.0	3.0	3.0	2.5	2.4	2.6	2.3	-3.2	1.5	2.4
Gov't consumption	-0.6	-0.3	-0.7	-0.2	1.1	1.8	1.6	1.6	1.5	1.5	1.5	1.5	-0.5	1.6	1.5
Exports	0.4	1.6	2.0	1.5	1.6	2.1	2.1	2.0	2.0	2.1	2.0	2.1	1.4	1.9	2.0
mports	38.0	-24.0	1.1	1.3	1.7	1.9	1.7	1.9	2.1	2.0	1.9	2.0	1.8	1.8	2.0
Contribution (pp): Inventories	2.6	-3.5	0.4	0.4	0.3	0.1	0.1	0.3	0.1	0.2	-0.1	-0.1	-0.1	0.0	0.1
Net trade	-4.6	4.7	0.0	0.0	-0.1	-0.1	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	0.0	-0.1	-0.1
Jnemployment rate, %	4.1	4.2	4.4	4.6	4.6	4.6	4.5	4.5	4.4	4.4	4.4	4.3	4.6	4.5	4.3
Prices (% yoy)															
CPI	2.7	2.5	3.0	3.1	3.0	3.1	2.9	2.6	2.6	2.6	2.5	2.5	3.1	2.6	2.5
Core CPI	3.1	2.8	3.1	3.1	3.0	3.1	2.8	2.6	2.5	2.5	2.4	2.4	3.1	2.6	2.4
PCE	2.5	2.4	2.9	3.1	2.8	2.9	2.6	2.4	2.4	2.3	2.2	2.2	3.1	2.4	2.2
Core PCE	2.8	2.7	3.0	3.1	2.9	2.9	2.6	2.4	2.3	2.2	2.1	2.1	3.1	2.4	2.1
Fed Funds	4.375	4.375	4.375	4.125	3.625	3.625	3.625	3.625	3.625	3.625	3.625	3.625	4.125	3.625	3.62

Source: BEA, BLS, FRB & Deutsche Bank



Figure 5: D	ata Cale	nudi di		recast	.5		1											
Jul-21	Jul-22 g Economic Indicators Fed Chair Powell gives welcome remarks					Jul-23				Jul-24				Jul-25				
eading Economi						e remarks	Existing H				Initial Clair					ods Orders		
0:00AM Apr	-1.4%		at the Regula				10:00 AM	Apr:	4.00M		8:30AM	Jul-05	228k	-4k -7	8:30 AM	Apr:	May:	Jun:
May Jun:			Fed Chair I at the Fed's			remarks		May: Jun:	4.04 3.93			Jul-12 Jul-19	221 217	-/	Headline Ex-Trans.	-6.6% Unch.	+16.4	-11.2 +0.2
Juli.	-0.3		at the reu s	integrateur	eview.		20 Yr Bond		3.93	\$13bn	New Home		217	-4	Core	-1.5%	+1.7	+0.2
							20 11 80110	Auction		\$13011	10:00 AM	Apr:	722k		Cole	-1.570	T1.7	+0.2
												May:	623					
												Jun:						
											2 Yr Note A		ment	\$69bn				
											5 Yr Note A			\$70bn				
											7 Yr Note A			\$44bn				
											2 Yr FRN A			\$30bn				
											10 Yr TIPS	Auction		\$21bn				
FORECAST															•			
Jul-28			Jul-29				Jul-30				Jul-31				Aug-01			
Yr Note Auction		\$69bn	Advance G	oods Trad		е	ADP Emple	oyment Re			Initial Clair				Employme	nt		
Yr Note Auction	ı	\$70bn	8:30 AM	Apr:	-\$87.6B		8:15 AM	May:	+29k		8:30AM	Jul-12	221k	-7k	8:30 AM	May:	Jun:	Jul:
				May:	-96.6			Jun:	-33			Jul-19	217	-4	Payrolls	+144k	+147	+75
				Jun:	-97.6			Jul:	+55			Jul-26	225	+8	Private	+137k	+74	+100
			June JOLT				Real GDP			Deflator	Personal Ir				UnRate	4.2%	4.1	4.2
			Consumer				8:30 AM	4024:	+2.4%	+2.3%	8:30 AM	Apr:	May:	Jun:	Hrly Erngs	+0.4%	+0.2	+0.3
			10:00 AM	May:	98.4			1Q25:	-0.5	+3.8	Income	+0.7%	-0.4	+0.3	Workwk	34.3	34.2	34.2
				Jun:	93.0		Adv:	2025:	+1.6	+2.5	Consump.	+0.2%	-0.1	+0.3	ISM Index			
				Jul:	96.1		Pending Ho				Core PCE	+0.1%	+0.2	+0.30	10:00 AM	May:	48.5	
		7 Yr Note A			\$44bn	10:00 AM	Apr:	-6.3%		Employme					Jun:	49.0		
			2 Yr FRN A	uction		\$30bn		May:	+1.8		8:30AM	Q424:	+0.9%		Cons	Jul:	49.5	
						FOMC Mee	Jun:	-1.0			Q125: Q225:	+0.9		Consumer		50.0		
							1	_	ont	¢E0hn	Chicago D		+0.8		10:00 AM	May:	52.2	
							3 Yr Note A			\$58bn \$42bn	Chicago Pl 9:45 AM		40.5		Final:	Jun: <i>Jul:</i>	60.7 <i>62.0</i>	
							30 Yr Bond			\$42bH \$25bn	9.45 AIVI	May: Jun:	40.4			on Spending		
							30 11 80110	Aillouilce	illelit	\$25011		Jul:	42.1		10:00 AM	Apr:	-0.2%	
												Jul.	42.7		10.00 AIVI	May:	-0.276	
																Jun:	+0.2	
															Unit motor	vehicle sale		
															Onit motor	May:	15.6	
																Jun:	15.3	
																Jul:	15.5	
Aug-04			Aug-05				Aug-06				Aug-07				Aug-08			
Factory Orders			Internation	al Trade B	Balance		10 Yr Note	Auction		\$42bn	Productivit	у		ULCs				
10:00 AM Apr:	-3.9%		8:30 AM	Apr:	-\$60.3B						8:30AM	4Q24:	+1.7%	+3.8%				
May	+8.2			May:	-71.5							1Q25:	-1.5	+6.6				
Jun.	-10.2			Jun:	-75.0						Prelim:	2025:	+2.5	+1.0				
			ISM Servic								Wholesale							
			10:00 AM	May:	49.9						10:00 AM	Apr:	+0.1%					
				Jun:	50.8							May:	-0.3					
				Jul:	51.2							Jun:	+0.2					
			3 Yr Note A	Auction		\$58bn					Consumer							
											3:00 PM	Apr:	+\$16.9B					
												May:	+5.1					
											20.14	Jun:	+7.2	ear.				
Aug 11			Aug 10				Aug 12				30 Yr Bond	Auction		\$25bn	Aug 15			
Aug-11			Aug-12 CPI Price		Total	Core	Aug-13				Aug-14 PPI		Total	Coro	Aug-15 Retail Sale			
			8:30AM	May:	+0.1%	+0.1%					8:30AM	May:	+0.3%	+0.4%	8:30AM	May:	Jun:	Jul:
			0.50AIVI	Jun:	+0.170	+0.176					J.50AIVI	Jun:	+0.3% Unch.	Unch.	Total	-0.9%	+0.6	+0.5
				Jul:	+0.3	+0.21						Jul:	+0.2	+0.2	Ex Autos	-0.9%	+0.5	+0.5
				Jul.	, 0. /	, 0.21					20 Yr Bond			\$13bn	Control	+0.2%	+0.5	+0.5
											30 Yr TIPS			\$13011 \$8bn	1	pire State S		+0.5
															8:30AM	Jun:	-16.0	
																Jul:	-5.5	
																Aug:	+1.0	
															Industrial F			Cap. U
															9:15AM	May:	Unch.	77.5%
																Jun:	+0.3	77.6
																Jul:	+0.2	77.8
			1												Business II			
							1								10:00 AM		Unch.	
							1								TU.UU AIVI	Apr:	Onton.	
															TU.UU AIVI	Apr: May:	Unch.	
															10.00 AW			
															Consumer	May: Jun:	Unch.	
																May: Jun:	Unch.	
															Consumer	May: Jun: Sentiment	Unch. +0.1	

Source: Deutsche Bank



Appendix 1

Analyst Certification

The views expressed in this report accurately reflect the personal views of the undersigned lead analyst(s). In addition, the undersigned lead analyst(s) has not and will not receive any compensation for providing a specific recommendation or view in this report. Matthew Luzzetti, Ph.D., Brett Ryan, Justin Weidner, Amy Yang.

Important Disclosures

Prices are current as of the end of the previous trading session unless otherwise indicated and are sourced from local exchanges via Reuters, Bloomberg and other vendors. Other information is sourced from Deutsche Bank, subject companies, and other sources. For further information regarding disclosures relevant to Deutsche Bank Research, please visit our global disclosure look-up page on our website at https://research.db.com/Research/Disclosures/FICCDisclosures. Aside from within this report, important risk and conflict disclosures can also be found at <a href="https://research.db.com/Research/Disclosures/D



Additional Information

The information and opinions in this report were prepared by Deutsche Bank AG or one of its affiliates (collectively 'Deutsche Bank'). Though the information herein is believed to be reliable and has been obtained from public sources believed to be reliable, Deutsche Bank makes no representation as to its accuracy or completeness. Hyperlinks to third-party websites in this report are provided for reader convenience only. Deutsche Bank neither endorses the content nor is responsible for the accuracy or security controls of those websites.

If you use the services of Deutsche Bank in connection with a purchase or sale of a security that is discussed in this report, or is included or discussed in another communication (oral or written) from a Deutsche Bank analyst, Deutsche Bank may act as principal for its own account or as agent for another person.

Deutsche Bank may consider this report in deciding to trade as principal. It may also engage in transactions, for its own account or with customers, in a manner inconsistent with the views taken in this research report. Others within Deutsche Bank, including strategists, sales staff and other analysts, may take views that are inconsistent with those taken in this research report. Deutsche Bank issues a variety of research products, including fundamental analysis, equity-linked analysis, quantitative analysis and trade ideas. Recommendations contained in one type of communication may differ from recommendations contained in others, whether as a result of differing time horizons, methodologies, perspectives or otherwise. Deutsche Bank and/or its affiliates may also be holding debt or equity securities of the issuers it writes on. Analysts are paid in part based on the profitability of Deutsche Bank AG and its affiliates, which includes investment banking, trading and principal trading revenues.

Opinions, estimates and projections constitute the current judgment of the author as of the date of this report. They do not necessarily reflect the opinions of Deutsche Bank and are subject to change without notice. Deutsche Bank provides liquidity for buyers and sellers of securities issued by the companies it covers. Deutsche Bank research analysts sometimes have shorter-term trade ideas that may be inconsistent with Deutsche Bank's existing longerterm ratings. Some trade ideas for equities are listed as Catalyst Calls on the Research Website (https://research.db.com/Research/), and can be found on the general coverage list and also on the covered company's page. A Catalyst Call represents a high-conviction belief by an analyst that a stock will outperform or underperform the market and/or a specified sector over a time frame of no less than two weeks and no more than three months. In addition to Catalyst Calls, analysts may occasionally discuss with our clients, and with Deutsche Bank salespersons and traders, trading strategies or ideas that reference catalysts or events that may have a nearterm or medium-term impact on the market price of the securities discussed in this report, which impact may be directionally counter to the analysts' current 12-month view of total return or investment return as described herein. Deutsche Bank has no obligation to update, modify or amend this report or to otherwise notify a recipient thereof if an opinion, forecast or estimate changes or becomes inaccurate. Coverage and the frequency of changes in market conditions and in both general and company-specific economic prospects make it difficult to update research at defined intervals. Updates are at the sole discretion of the coverage analyst or of the Research Department Management, and the majority of reports are published at irregular intervals. This report is provided for informational purposes only and does not take into account the particular investment objectives, financial situations, or needs of individual clients. It is not an offer or a solicitation of an offer to buy or sell any financial instruments or to participate in any particular trading strategy. Target prices are inherently imprecise and a product of the analyst's judgment. The financial instruments discussed in this report may not be suitable for all investors, and investors must make their own informed investment decisions. Prices and availability of financial instruments are subject to change without notice, and investment transactions can lead to losses as a result of price fluctuations and other factors. If a financial instrument is denominated in a currency other than an investor's currency, a change in exchange rates may adversely affect the investment. Past performance is not necessarily indicative of future results. Performance calculations exclude transaction costs, unless otherwise indicated. Unless otherwise indicated, prices are current as of the end of the previous trading session and are sourced from local exchanges via Reuters, Bloomberg and other vendors. Data is also sourced from Deutsche Bank, subject companies, and other parties. Artificial intelligence tools may be used in the preparation of this material, including but not limited to assist in fact-finding, data analysis, pattern recognition, content drafting and editorial corrections pertaining to research material.



The Deutsche Bank Research Department is independent of other business divisions of the Bank. Details regarding our organizational arrangements and information barriers we have to prevent and avoid conflicts of interest with respect to our research are available on our website (https://research.db.com/Research/) under Disclaimer.

Macroeconomic fluctuations often account for most of the risks associated with exposures to instruments that promise to pay fixed or variable interest rates. For an investor who is long fixed-rate instruments (thus receiving these cash flows), increases in interest rates naturally lift the discount factors applied to the expected cash flows and thus cause a loss. The longer the maturity of a certain cash flow and the higher the move in the discount factor, the higher will be the loss. Upside surprises in inflation, fiscal funding needs, and FX depreciation rates are among the most common adverse macroeconomic shocks to receivers. But counterparty exposure, issuer creditworthiness, client segmentation, regulation (including changes in assets holding limits for different types of investors), changes in tax policies, currency convertibility (which may constrain currency conversion, repatriation of profits and/or liquidation of positions), and settlement issues related to local clearing houses are also important risk factors. The sensitivity of fixed-income instruments to macroeconomic shocks may be mitigated by indexing the contracted cash flows to inflation, to FX depreciation, or to specified interest rates - these are common in emerging markets. The index fixings may - by construction - lag or mis-measure the actual move in the underlying variables they are intended to track. The choice of the proper fixing (or metric) is particularly important in swaps markets, where floating coupon rates (i.e., coupons indexed to a typically short-dated interest rate reference index) are exchanged for fixed coupons. Funding in a currency that differs from the currency in which coupons are denominated carries FX risk. Options on swaps (swaptions) the risks typical to options in addition to the risks related to rates movements.

Derivative transactions involve numerous risks including market, counterparty default and illiquidity risk. The appropriateness of these products for use by investors depends on the investors' own circumstances, including their tax position, their regulatory environment and the nature of their other assets and liabilities; as such, investors should take expert legal and financial advice before entering into any transaction similar to or inspired by the contents of this publication. The risk of loss in futures trading and options, foreign or domestic, can be substantial. As a result of the high degree of leverage obtainable in futures and options trading, losses may be incurred that are greater than the amount of funds initially deposited - up to theoretically unlimited losses. Trading in options involves risk and is not suitable for all investors. Prior to buying or selling an option, investors must review the 'Characteristics and Risks of Standardized Options', at https://www.theocc.com/company-information/documents-and-archives/publications. If you are unable to access the website, please contact your Deutsche Bank representative for a copy of this important document.

Participants in foreign exchange transactions may incur risks arising from several factors, including the following: (i) exchange rates can be volatile and are subject to large fluctuations; (ii) the value of currencies may be affected by numerous market factors, including world and national economic, political and regulatory events, events in equity and debt markets and changes in interest rates; and (iii) currencies may be subject to devaluation or government-imposed exchange controls, which could affect the value of the currency. Investors in securities such as ADRs, whose values are affected by the currency of an underlying security, effectively assume currency risk.

Unless governing law provides otherwise, all transactions should be executed through the Deutsche Bank entity in the investor's home jurisdiction. Aside from within this report, important conflict disclosures can also be found at https://research.db.com/Research/ on each company's research page. Investors are strongly encouraged to review this information before investing.

Deutsche Bank (which includes Deutsche Bank AG, its branches and affiliated companies) is not acting as a financial adviser, consultant or fiduciary to you or any of your agents (collectively, "You" or "Your") with respect to any information provided in this report. Deutsche Bank does not provide investment, legal, tax or accounting advice, Deutsche Bank is not acting as your impartial adviser, and does not express any opinion or recommendation whatsoever as to any strategies, products or any other information presented in the materials. Information contained herein is being provided solely on the basis that the recipient will make an independent assessment of the merits of any investment decision, and it does not constitute a recommendation of, or express an opinion on, any product or service or any trading strategy.



The information presented is general in nature and is not directed to retirement accounts or any specific person or account type, and is therefore provided to You on the express basis that it is not advice, and You may not rely upon it in making Your decision. The information we provide is being directed only to persons we believe to be financially sophisticated, who are capable of evaluating investment risks independently, both in general and with regard to particular transactions and investment strategies, and who understand that Deutsche Bank has financial interests in the offering of its products and services. If this is not the case, or if You are an IRA or other retail investor receiving this directly from us, we ask that you inform us immediately.

In July 2018, Deutsche Bank revised its rating system for short term ideas whereby the branding has been changed to Catalyst Calls ("CC") from SOLAR ideas; the rating categories for Catalyst Calls originated in the Americas region have been made consistent with the categories used by Analysts globally; and the effective time period for CCs has been reduced from a maximum of 180 days to 90 days.

United States: Approved and/or distributed by Deutsche Bank Securities Incorporated, a member of FINRA and SIPC. Analysts located outside of the United States are employed by non-US affiliates and are not registered/qualified as research analysts with FINRA.

European Economic Area (exc. United Kingdom): Approved and/or distributed by Deutsche Bank AG, a joint stock corporation with limited liability incorporated in the Federal Republic of Germany with its principal office in Frankfurt am Main. Deutsche Bank AG is authorized under German Banking Law and is subject to supervision by the European Central Bank and by BaFin, Germany's Federal Financial Supervisory Authority.

United Kingdom: Approved and/or distributed by Deutsche Bank AG acting through its London Branch at 21 Moorfields, London EC2Y 9DB. Deutsche Bank AG in the United Kingdom is authorised by the Prudential Regulation Authority and is subject to limited regulation by the Prudential Regulation Authority and Financial Conduct Authority. Details about the extent of our authorisation and regulation are available on request.

Hong Kong SAR: Distributed by Deutsche Bank AG, Hong Kong Branch, except for any research content relating to futures contracts within the meaning of the Hong Kong Securities and Futures Ordinance Cap. 571. Research reports on such futures contracts are not intended for access by persons who are located, incorporated, constituted or resident in Hong Kong. The author(s) of a research report may not be licensed to carry on regulated activities in Hong Kong, and if not licensed, do not hold themselves out as being able to do so. The provisions set out above in the 'Additional Information' section shall apply to the fullest extent permissible by local laws and regulations, including without limitation the Code of Conduct for Persons Licensed or Registered with the Securities and Futures Commission. This report is intended for distribution only to 'professional investors' as defined in Part 1 of Schedule of the SFO. This document must not be acted or relied on by persons who are not professional investors. Any investment or investment activity to which this document relates is only available to professional investors and will be engaged only with professional investors.

India: Prepared by Deutsche Equities India Private Limited (DEIPL) having CIN: U65990MH2002PTC137431 and registered office at 14th Floor, The Capital, C-70, G Block, Bandra Kurla Complex, Mumbai (India) 400051. Tel: +91 22 7180 4444. It is registered by the Securities and Exchange Board of India (SEBI) as a Stock broker bearing registration no.: INZ000252437; Merchant Banker bearing SEBI Registration no.: INM000010833 and Research Analyst bearing SEBI Registration no.: INH000001741. DEIPL's Compliance / Grievance officer is Ms. Rashmi Poddar (Tel: +91 22 7180 4929 email ID: complaints.deipl@db.com). Registration granted by SEBI and certification from NISM in no way guarantee performance of DEIPL or provide any assurance of returns to investors. Investment in securities market are subject to market risks. Read all the related documents carefully before investing. DEIPL may have received administrative warnings from the SEBI for breaches of Indian regulations. Deutsche Bank and/or its affiliate(s) may have debt holdings or positions in the subject company. With regard to information on associates, please refer to the "Shareholdings" section in the Annual Report at: https://www.db.com/ir/en/annual-reports.htm

Japan: Approved and/or distributed by Deutsche Securities Inc.(DSI). Registration number - Registered as a financial instruments dealer by the Head of the Kanto Local Finance Bureau (Kinsho) No. 117. Member of associations: JSDA, Type II Financial Instruments Firms Association and The Financial Futures Association of Japan. Commissions and



risks involved in stock transactions - for stock transactions, we charge stock commissions and consumption tax by multiplying the transaction amount by the commission rate agreed with each customer. Stock transactions can lead to losses as a result of share price fluctuations and other factors. Transactions in foreign stocks can lead to additional losses stemming from foreign exchange fluctuations. We may also charge commissions and fees for certain categories of investment advice, products and services. Recommended investment strategies, products and services carry the risk of losses to principal and other losses as a result of changes in market and/or economic trends, and/or fluctuations in market value. Before deciding on the purchase of financial products and/or services, customers should carefully read the relevant disclosures, prospectuses and other documentation. 'Moody's', 'Standard Poor's', and 'Fitch' mentioned in this report are not registered credit rating agencies in Japan unless Japan or 'Nippon' is specifically designated in the name of the entity. Reports on Japanese listed companies not written by analysts of DSI are written by Deutsche Bank Group's analysts with the coverage companies specified by DSI. Some of the foreign securities stated on this report are not disclosed according to the Financial Instruments and Exchange Law of Japan. Target prices set by Deutsche Bank's equity analysts are based on a 12-month forecast period.

Korea: Distributed by Deutsche Securities Korea Co.

South Africa: Deutsche Bank AG Johannesburg is incorporated in the Federal Republic of Germany (Branch Register Number in South Africa: 1998/003298/10).

Singapore: This report is issued by Deutsche Bank AG, Singapore Branch (One Raffles Quay #18-00 South Tower Singapore 048583, 65 6423 8001), which may be contacted in respect of any matters arising from, or in connection with, this report. Where this report is issued or promulgated by Deutsche Bank in Singapore to a person who is not an accredited investor, expert investor or institutional investor (as defined in the applicable Singapore laws and regulations), they accept legal responsibility to such person for its contents.

Taiwan: Information on securities/investments that trade in Taiwan is for your reference only. Readers should independently evaluate investment risks and are solely responsible for their investment decisions. Deutsche Bank research may not be distributed to the Taiwan public media or quoted or used by the Taiwan public media without written consent. Information on securities/instruments that do not trade in Taiwan is for informational purposes only and is not to be construed as a recommendation to trade in such securities/instruments.

Qatar: Deutsche Bank AG in the Qatar Financial Centre (registered no. 00032) is regulated by the Qatar Financial Centre Regulatory Authority. Deutsche Bank AG - QFC Branch may undertake only the financial services activities that fall within the scope of its existing QFCRA license. Its principal place of business in the QFC: Qatar Financial Centre, Tower, West Bay, Level 5, PO Box 14928, Doha, Qatar. This information has been distributed by Deutsche Bank AG. Related financial products or services are only available only to Business Customers, as defined by the Qatar Financial Centre Regulatory Authority.

Russia: The information, interpretation and opinions submitted herein are not in the context of, and do not constitute, any appraisal or evaluation activity requiring a license in the Russian Federation.

Kingdom of Saudi Arabia: Deutsche Securities Saudi Arabia (DSSA) is a closed joint stock company authorized by the Capital Market Authority of the Kingdom of Saudi Arabia with a license number (No. 37-07073) to conduct the following business activities: Dealing, Arranging, Advising, and Custody activities. DSSA registered office is Faisaliah Tower, 17th Floor, King Fahad Road - Al Olaya District Riyadh, Kingdom of Saudi Arabia P.O. Box 301806.

United Arab Emirates: Deutsche Bank AG in the Dubai International Financial Centre (registered no. 00045) is regulated by the Dubai Financial Services Authority. Deutsche Bank AG - DIFC Branch may only undertake the financial services activities that fall within the scope of its existing DFSA license. Principal place of business in the DIFC: Dubai International Financial Centre, The Gate Village, Building 5, PO Box 504902, Dubai, U.A.E. This information has been distributed by Deutsche Bank AG. Related financial products or services are available only to Professional Clients, as defined by the Dubai Financial Services Authority.



Australia and New Zealand: This research is intended only for 'wholesale clients' within the meaning of the Australian Corporations Act and New Zealand Financial Advisors Act, respectively. Please refer to Australia-specific research disclosures and related information at https://www.dbresearch.com/PROD/RPS_EN-

PROD/PROD000000000521304.xhtml . Where research refers to any particular financial product recipients of the research should consider any product disclosure statement, prospectus or other applicable disclosure document before making any decision about whether to acquire the product. In preparing this report, the primary analyst or an individual who assisted in the preparation of this report has likely been in contact with the company that is the subject of this research for confirmation/clarification of data, facts, statements, permission to use company-sourced material in the report, and/or site-visit attendance. Without prior approval from Research Management, analysts may not accept from current or potential Banking clients the costs of travel, accommodations, or other expenses incurred by analysts attending site visits, conferences, social events, and the like. Similarly, without prior approval from Research Management and Anti-Bribery and Corruption ("ABC") team, analysts may not accept perks or other items of value for their personal use from issuers they cover.

Additional information relative to securities, other financial products or issuers discussed in this report is available upon request. This report may not be reproduced, distributed or published without Deutsche Bank's prior written consent.

Backtested, hypothetical or simulated performance results have inherent limitations. Unlike an actual performance record based on trading actual client portfolios, simulated results are achieved by means of the retroactive application of a backtested model itself designed with the benefit of hindsight. Taking into account historical events the backtesting of performance also differs from actual account performance because an actual investment strategy may be adjusted any time, for any reason, including a response to material, economic or market factors. The backtested performance includes hypothetical results that do not reflect the reinvestment of dividends and other earnings or the deduction of advisory fees, brokerage or other commissions, and any other expenses that a client would have paid or actually paid. No representation is made that any trading strategy or account will or is likely to achieve profits or losses similar to those shown. Alternative modeling techniques or assumptions might produce significantly different results and prove to be more appropriate. Past hypothetical backtest results are neither an indicator nor guarantee of future returns. Actual results will vary, perhaps materially, from the analysis.

The method for computing individual E,S,G and composite ESG scores set forth herein is a novel method developed by the Research department within Deutsche Bank AG, computed using a systematic approach without human intervention. Different data providers, market sectors and geographies approach ESG analysis and incorporate the findings in a variety of ways. As such, the ESG scores referred to herein may differ from equivalent ratings developed and implemented by other ESG data providers in the market and may also differ from equivalent ratings developed and implemented by other divisions within the Deutsche Bank Group. Such ESG scores also differ from other ratings and rankings that have historically been applied in research reports published by Deutsche Bank AG. Further, such ESG scores do not represent a formal or official view of Deutsche Bank AG.

It should be noted that the decision to incorporate ESG factors into any investment strategy may inhibit the ability to participate in certain investment opportunities that otherwise would be consistent with your investment objective and other principal investment strategies. The returns on a portfolio consisting primarily of sustainable investments may be lower or higher than portfolios where ESG factors, exclusions, or other sustainability issues are not considered, and the investment opportunities available to such portfolios may differ. Companies may not necessarily meet high performance standards on all aspects of ESG or sustainable investing issues; there is also no guarantee that any company will meet expectations in connection with corporate responsibility, sustainability, and/or impact performance.

Copyright © 2025 Deutsche Bank AG



David Folkerts-Landau

Group Chief Economist and Global Head of Research

Pam Finelli Global Chief Operating Officer Research	Steve Pollard Global Head of Company Research and Sales	Jim Reid Global Head of Macro and Thematic Research	Tim Rokossa Head of Germany Research
Gerry Gallagher Head of European Company Research	Matthew Barnard Head of Americas Company Research	Peter Milliken Head of APAC Company Research	Debbie Jones Global Head of Sustainability and Data Innovation, Research
Sameer Goel Global Head of EM & APAC Research	Francis Yared Global Head of Rates Research	George Saravelos Global Head of FX Research	Peter Hooper Vice-Chair of Research

International Production Locations

Deutsche Bank AG	Deutsche Bank AG	Deutsche Bank AG	Deutsche Securities Inc.
Deutsche Bank Place	Equity Research	Filiale Hongkong	1-3-1 Azabudai
Level 16	Mainzer Landstrasse 11-	International Commerce	Azabudai Hills Mori JP
Corner of Hunter & Phillip	17	Centre	Tower
Streets	60329 Frankfurt am Main	1 Austin Road West,	Minato-ku, Tokyo 106-
Sydney, NSW 2000	Germany	Kowloon,	0041
Australia	Tel: (49) 69 910 00	Hong Kong	Japan
Tel: (61) 2 8258 1234		Tel: (852) 2203 8888	Tel: (81) 3 6730 1000
Deutsche Bank AG	Deutsche Bank Securities	Deutsche Bank AG	

21 Moorfields Inc. London EC2Y 9DB The Deutsche Bank United Kingdom Center Tel: (44) 20 7545 8000 1 Columbus Circle New York NY 10019

Inc.
The Deutsche Bank
Center
Columbus Circle
New York, NY 10019
Tel: (1) 212 250 2500

Filiale Singapur
One Raffles Quay, South
Tower
Singapore 048583
Tel: (65) 6423 8001