Morgan Stanley | RESEARCH

November 7, 2023 01:04 AM GMT

Global Macro Commentary | Global

November 6

USTs bear-flatten after better-than-feared October SLOOS; KOSPI surges, USD/KRW drops on equity short-sale ban; BTPs lag in European rates sell-off; BoJ's Ueda emphasizes negative real yields; AUD weakens ahead of November RBA meeting; US 10y at 4.643% (+7.1bp).

Please refer to our latest Global Macro Strategist (If At First You Don't Succeed) as well as our recent publications and collaborations (Macro Monday Matters: Top Trades in FX & EM; Global Macro Strategy: Global FX Positioning; Podcast: The Global Macro Guide | Ep. 50).

- **USTs** bear-flatten as **October SLOOS** shows the rate of change in tightening of lending standards slows; however, credit availability and loan demand remain at historically pervasive levels.
- **KOSPI** surges 5.7% after the Korean Financial Services Commission announces it will re-impose a short-selling ban on equity shares at least until June; **USD/KRW** (-1.9%) drops below 1,300.
- After recent outperformance, **Italian BTPs** lag in the sell-off across **European duration**; the **10y BTP-Bund spread** widens by ~4bp.
- **BoJ Govenor Ueda** discusses YCC with further flexibility and places emphasis on negative real yields, which indicate accommodative monetary conditions can be maintained.
- **AUD** (-0.4%) trades weaker ahead of the **RBA meeting**, even as market pricing reflects greater odds (18bp) the RBA will restart rate hikes and continue its tightening cycle.

Developed Markets

United States:

Absent a clear fundamental catalyst to dictate trends across macro markets, there was a bit more divergence to begin the week. Price action across global sovereign bonds was decidedly bearish, except in Japan where JGBs caught up to the sizeable bond market rally at the end of the prior week. FX moves in the G10 were mixed as the US dollar showed broad, modest strength, most evident against Antipodeans. Even as market pricing reflected greater odds (18bp) for the RBA to restart rate hikes, AUD (-0.4%) traded lower. A surge in Korean equities (KOSPI: +5.7%), after the Korean Financial Services Commission announced it will re-impose a short-selling ban on equity shares at least until June, stood out clearly amid a mixed session for global equities (S&P 500: +0.18%). A streak of five consecutive sessions where

Morgan Stanley does and seeks to do business with companies covered in Morgan Stanley Research. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of Morgan Stanley Research. Investors should consider Morgan Stanley Research as only a single factor in making their investment decision.

For analyst certification and other important disclosures, refer to the Disclosure Section, located at the end of this report.

+= Analysts employed by non-U.S. affiliates are not registered with FINRA, may not be associated persons of the member and may not be subject to FINRA restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account.



MORGAN STANLEY & CO. LLC	
Martin W Tobias, CFA	
Strategist	
Martin.Tobias@morganstanley.com	+1 212 761-60
Zoe K Strauss	
Strategist	
Zoe.Strauss@morganstanley.com	+1 212 761-04
Eli P Carter	
Strategist	
Eli.Carter@morganstanley.com	+1 212 761-47
Lenoy Dujon	
US/Canada Economist	
Lenoy.Dujon@morganstanley.com	+1 212 761-27
MORGAN STANLEY & CO. INTERNATIONAL PLC+	
Marie-Anais C Francois	
Strategist	
Marie-Anais.Francois@morganstanley.com	+44 20 7425-18
MORGAN STANLEY MUFG SECURITIES CO., LTD.+	
Koichi Sugisaki	
Strategist	
Koichi.Sugisaki@morganstanleymufg.com	+81 3 6836-84
MORGAN STANLEY ASIA LIMITED+	
Gek Teng Khoo	
Strategist	
Gek.Teng.Khoo@morganstanley.com	+852 3963-03

spreads tightened for both investment grade and high yield corporate credit came to an end as spreads on both CDX indices widened marginally.

For the second time in as many quarters, closure of a small community bank preceded the Federal Reserve's Senior Loan Officer Opinion Survey (SLOOS). Late Friday evening, the FDIC announced a small community bank in Iowa closed, with the FDIC appointed a receiver. The estimated cost to the Deposit Insurance Fund (DIF) is \$14.8mn. This was the fifth bank to fail in the nation this year and the first in Iowa since 2011.

Overall, in the October 2023 SLOOS, banks reported tighter standards and weaker demand for commercial and industrial (C&I) loans to firms of all sizes over the third quarter. Banks also reported tighter standards and weaker demand for all commercial real estate (CRE) loan categories. For households, banks reported lending standards tightened across all categories of residential real estate (RRE) loans other than government residential mortgages, for which standards remained basically unchanged. For credit card, auto, and other consumer loans, standards tightened and demand weakened on balance.

Special questions asked banks to assess the likelihood of approving credit and auto loan applications by borrower FICO score in comparison with the beginning of the year. Banks reported they were less likely to approve loans for borrowers with FICO scores of 620 and 680 in comparison with the beginning of the year. Banks were more likely to approve credit card loan applications and about as likely to approve auto loan applications for borrowers with FICO scores of 720 over this same period.

An additional special question inquired about banks' rationale for changing loan standards during the third quarter of 2023. Banks most frequently cited a less favorable or more uncertain economic outlook; reduced tolerance for risk; deterioration in the credit quality of loans and collateral values; and concerns about funding costs as important reasons for tightening lending standards over the third quarter.

Those watching the second derivative in tightening of lending standards likely were encouraged that the rate of change slowed. Accordingly, the UST curve bearflattened as the front end (2y: 4.93%, +9.6bp) sold off sharply as this better-thanfeared SLOOS was perceived to not induce an even earlier start to rate cuts. November UST coupon auctions kick off with the \$48bn 3y auction at 1:00pm ET on Tuesday; this is \$2bn larger than the previous auction and \$6bn larger than the August new issue.

Japan:

Following a long weekend, **JGBs** bull-flattened on Monday, after the robust rally in USTs following weak US nonfarm payrolls this past Friday. Demand to square short positions was particularly strong at the 20y tenor, which had underperformed on the curve. The BoJ conducted scheduled JGB purchase operations across the curve; the results in the 5-10y sector were particularly strong. Those JGB purchase operations led to another round of demand to square short positions. 10y JGBs rallied 4.5bp d/d to 0.87%, while 20y JGBs rallied 6.0bp d/d, to 1.63%. TONA OIS bull-flattened alongside JGBs, with the 20y sector better received. XCCY basis

tightened, led by the front end amid broad USD weakness.

The rally in USTs, after weak US nonfarm payrolls and ISM Services PMI on Friday, buoyed risk sentiment and both USD and JPY broadly underperformed. This trend continued during Tokyo trading hours on Monday. The sharp decline in US yields suggests the fair level of USD/JPY is 145-146. However, **USD/JPY** traded resiliently at 149.50 and ground higher toward 150.00 in the NY morning, as US yields retraced Friday's rally. JPY weakness relative to the level implied by policy divergence appeared to come from the buoyant risk sentiment and subsequent demand for JPY carry trades. European currencies particularly outperformed; **EUR/JPY** ground higher toward 161.

Europe:

European duration opened lower after more than a 15bp rally in 10y Bunds last week. **10y Bund yields** closed the session 9bp higher at 2.74% while 10y German breakevens were little changed. Once again, the 10y sector led the move and 2s10s steepened 4bp in swaps (against 6m) and 5s10s30s cheapened more than 3bp to 28bp. In money markets, whites were relatively stable while reds and greens sold off 6-7bp, as the market now priced in an ECB depo rate at 3.12% by December 2024.

BTPs underperformed as the **10y BTP-Bund spread** widened by 3.5bp to 185bp after a protracted tightening in the past seven sessions (23bp). **10y OATs** and **10y Bonos** followed and underperformed 10y Bunds by 1bp and 2bp, respectively. In contrast, the cheaper trend in core ASW resumed as the whole complex tightened ~2.5bp (Bund ASW at 53bp).

Dollar Bloc:

In a relatively quiet trading session, the US dollar found some support amid a move higher in US yields in the NY afternoon (DXY USD Index: +0.2%). G10 currency moves were overall relatively contained as USD long positioning squared significantly at the end of last week and as FX market participants awaited additional communication from FOMC participants later this week.

AUD (-0.4%) traded weaker ahead of the RBA meeting, even as market pricing for the November meeting increased by ~2bp on Monday. Market pricing implies a greater likelihood the RBA will resume its tightening cycle than remaining on hold (18bp priced).

Emerging Markets

Asia:

AxJ currencies continued to rally following the soft US labor market report on Friday, which strengthened the case for an earlier start to rate cuts. **KRW** outperformed once again, as **USD/KRW** fell 1.8%, below the 1,300 level. This was aided by the 5.7% rally in KOSPI and \$918mn of foreign equity inflows after the FSC announced a short-selling ban on domestically listed stocks until June 2024. **MYR** outperformed, as **USD/MYR** fell 1.7% to a two-month low of 4.64, despite a lack of major positive domestic factors, akin to KRW. **USD/IDR** fell 1.2%, to 15,539, as foreign market participants acquired Indonesian equities and INDOGB rallied 22bp over Friday and Monday. AxJ rates rallied broadly. **Hong Kong, Singapore**, and **Korea** rates outperformed after the decline in US yields on Friday. **Thailand** rates rallied meaningfully; the 10y yield fell 4bp after headline CPI turned negative for the first time in two years. **China** rates were little changed; the curve shifted ~1bp lower.

Latin America:

LatAm currencies ended the session mixed amid US dollar strength. **BRL** (+0.3%) outperformed after headlines which reiterated the finance minister's continued pursuit of meeting the 0% deficit goal, although no concrete steps were taken. Meanwhile, **MXN** (-0.51%) and **CLP** (-0.76%) weakened. LatAm rates followed USTs during the session. **TIIEs** had losses concentrated in the belly (5y: +7bp), while **DIs** bear-steepened (January 2025s/2031s: +9bp). **Colombian** markets were closed on Monday in observance of a local holiday.

Exhibit 1: G4 Rates Closes (5pm NY)

		US			Germany			UK			Japan	
Tenor	6-Nov	1d ∆ (bp)) 2wk	6-Nov	1d ∆ (bp)	2wk	6-Nov	1d ∆ (bp)	2wk	6-Nov	1d ∆ (bp)	2wk
2у	4.935	9.6	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	3.006	5.1	~~~	4.704	4.7	~~	0.129	(1.4)	\frown
3y	4.725	8.6	\sim	2.778	5.9	~~~	4.429	6.3	\sim	0.189	(1.7)	\frown
5y	4.588	8.4	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	2.622	8.2	\sim	4.322	6.1	\sim	0.425	(2.6)	\frown
7y	4.642	8.4	\sim	2.641	8.8	\sim	4.212	8.8	\sim	0.642	(4.3)	\sim
10y	4.643	7.1	~	2.737	9.4	\sim	4.375	9.0	\sim	0.877	(4.3)	\sim
20y	4.991	4.9	~	3.014	9.2	\sim	4.818	7.9	~~~	1.636	(5.4)	\sim
30y	4.809	4.2	~	3.002	8.7	\sim	4.850	8.0	\sim	1.825	(4.7)	\sim

Source: Morgan Stanley Research, Bloomberg

Exhibit 2: Inflation Closes (5pm NY)

		US TIPS					10y Real \	ields, BE/	1		
Tenor	6-Nov	1d ∆ (bp)	2wk	10y	6-Nov	1d ∆ (bp)	2wk	10y	6-Nov	1d ∆ (bp)	2wk
5у	2.222	6.3	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	DBRi	0.485	8.9	\sim	BTPi	2.454	12.7	\sim
BEI	2.362	2.2	\sim	BEI	2.181	0.7	~	BEI	2.060	0.6	~
10y	2.226	5.3	~~~	UKTi	0.611	1.8	\sim				
BEI	2.417	2.1	\sim	BEI	3.764	(1.3)	\sim				
30y	2.295	2.2	~	JGBi	-0.514	(2.1)	\sim				
BEI	2.524	2.1	M	BEI	1.365	(2.3)					

Source: Morgan Stanley Research, Bloomberg

Exhibit 3: Macro Closes (5pm NY)

	Ν	lajors			EM	N		Equities / Commodities			
Spot	6-Nov	1d ∆ (%)	2wk	Spot	6-Nov	1d ∆ (%)	2wk	Index	6-Nov	1d ∆ (%)	2wk
DXY	105.27	0.2	\sim	CNH	7.28	(0.1)	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	S&P	4365.98	0.2	\sim
EUR	1.072	(0.1) 🚿	\sim	INR	83.22	(0.1)	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	Stoxx	4158.64	(0.4)	\sim
GBP	1.234	(0.3) 🔨	\sim	THB	35.50	(0.6)	~~	FTSE	7417.76	0.0	\sim
JPY	150.07	0.5 -	\sim	KRW	1297.45	(1.9)	\sim	Nikkei	32708.48	2.4	~~
CHF	0.899	0.1	\sim	ZAR	18.29	0.2	~	VIX	14.89	(0.1)	\sim
AUD	0.649	(0.4)	~	MXN	17.55	0.5	\sim	Gold (S)	1978.14	(0.7)	\sim
CAD	1.370	0.3	\sim	BRL	4.89	(0.3)	\sim	WTI (Fut)	80.82	0.4	\sim

Source: Morgan Stanley Research, Bloomberg

Please refer to our Market Data section for a more comprehensive snapshot.

The Day Ahead

Developed Markets

 On Monday, at 10:30pm ET, our economists expect the RBA will deliver a 25bp hike at its November meeting to bring the cash rate to 4.35% (P: 4.10%) - the first move after four consecutive meetings on hold. Data have materially beaten the RBA forecasts in recent months, and our economists expect the inflation path (which already was conditioned on further tightening) to be raised through the forecast horizon as part of the quarterly update of staff forecasts (to be detailed in full in Friday's Statement of Monetary Policy). This will be the key catalyst for a rate hike, consistent with the new Governor's recent communication. Our economists expect a tightening bias to be retained, but are on watch for any further shift in hawkish rhetoric given reaccelerating inflation, tight labor market and globally higher for longer rate expectations

- On Tuesday, at 7:00am GMT, our economists expect German Industrial Production fell 0.1% m/m in September (C: -0.1%; P: -0.2%), in line with subdued industrial activity, in particular construction, in recent PMIs and the IFO Business Climate
- At 10:00am GMT, our economists expect Euro Area Producer Prices fell 10.3% y/y in September (C: -12.5%; P: -11.5%), base effects from last year's surge in commodity prices keep the y/y growth rate in negative territory
- At 7:30pm GMT, ECB Governing Council Member Nagel will give a speech in London
- At 9:15am ET, Fed Vice Chair for Supervision Barr will speak about financial technology at the 7th Annual DC Fintech Week at Fannie Mae headquarters
- At 9:50am ET, Kansas City Fed President Schmid will deliver opening keynote remarks at energy conference hosted by the Dallas and Kansas City Fed banks
- At 10:00am ET, **Fed Governor Waller** will speak about using economic data to understand the economy at a St. Louis Fed conference
- At 12:00pm ET, New York Fed President Williams will moderate a discussion at an event hosted by the Economic Club of New York
- At 1:25pm ET, **Dallas Fed President Logan** will participate in a fireside chat at the Energy and the Economy conference hosted by the Dallas and Kansas City Fed banks
- At 1:30pm ET, Dallas Fed President Logan will speak at joint energy conference hosted by the Federal Reserve Banks of Dallas and Kansas City
- At 3:00pm ET, consensus expects US Consumer Credit increased \$9.5bn in September (P: -\$15.6bn). Consumer credit outstanding fell sharply last month because of Federal lending, most likely student lending. The restart of student loan payments is likely to restrain consumer spending this winter

Emerging Markets

• On Tuesday, our economists expect China Exports fell 3.0% y/y in

October (C: -3.5%; P: -6.2%), mainly due to a low base, while sequential momentum of external demand showed mixed signals. Our economists expect **Imports** fell by 5.0% y/y in **October** (C: -5.0%; P: -6.3%), due to incrementally better domestic demand. Overall, our economists expect the **Trade Surplus** came in at US\$83bn in **October** (C: US\$82bn; P: US\$77.8bn)

- At 9:00am HKT, consensus expects Philippines CPI eased to 5.6% y/y in October (P: 6.1%). Consensus expects Exports fell by 4.7% y/y in September (P: 4.2%) while Imports contracted by 9.0% y/y in September (P: -13.1%). Consensus expects the Trade Deficit remained largely stable at US\$4.10bn in September (P: -US\$4.13bn)
- At 12:00pm HKT, consensus expects **Malaysia Industrial Production** fell 0.1% y/y in **September** (P: -0.3%)
- At 7:30am GMT, consensus expects **Hungary Industrial Production** fell 6.4% y/y in **September** (P: -6.1%)
- At 4:00pm HKT, our economists and consensus expect Taiwan
 Headline CPI moderated slightly to 2.80% y/y in October (P: 2.93%).
 Consensus expects Exports stagnated in October in y/y terms (P: 3.4%) while Imports fell by 15.2% y/y in October (P: -12.2%).
 Consensus expects the Trade Surplus narrowed to US\$8.89bn in
 October (P: US\$10.32bn)
- At 5:00pm HKT, **Singapore FX Reserves** data for **October** will be released, the prior month came in at US\$337.4bn
- Hong Kong and the Philippines will release October FX Reserves data, the prior releases came in at US\$415.7bn and US\$98.1bn, respectively

Exhibit 4: G4 Central Bank Implied Pricing

							Central	Bank OIS							
Fed	Implied	1d ∆ (bp)	Total ∆	ECB	Implied	1d ∆ (bp)	Total ∆	BOE	Implied	1d ∆ (bp)	Total ∆	BOJ	Implied	1d ∆ (bp)	Total ∆
EFFR (11/3)	5.330	0.0	-	EONIA (11/3)	3.902	0.0	-	SONIA (11/3)	5.187	0.0		TONAR (11/2)	-0.011	0.0	
12/13/23	5.347	0.5	1.7	12/14/23	3.897	0.1	(0.5)	12/14/23	5.225	(0.1)	3.8	12/19/23	-0.008	0.2	0.3
01/31/24	5.367	1.0	3.7	01/25/24	3.890	0.2	(1.2)	02/01/24	5.251	0.6	6.4	01/23/24	0.022	(0.6)	3.3
03/20/24	5.301	1.7	(2.9)	03/07/24	3.814	(0.2)	(8.8)	03/21/24	5.227	0.5	4.0	03/19/24	0.060	0.0	7.1
09/18/24	4.741	9.9	(58.9)	09/12/24	3.245	1.7	(65.7)	08/01/24	4.982	4.0	(20.5)	07/31/24	0.209	(1.0)	22.0

Source: Morgan Stanley Research, Bloomberg

Central Bank Monitor

Developed Markets

• The **Boj** released **Minutes** from its **September Monetary Policy Meeting**. Regarding the inflation outlook, some members pointed out the passthrough effect from higher import prices appears more persistent than projected. A few members mentioned this inflation is driven by cost-push type inflation, despite risk of a prolonged rise in prices alongside a weaker JPY and higher oil prices. Many members also acknowledged the change in corporates' price-setting behavior. Some members cited a high probability of higher base pay at the next round of spring wage negotiations. Accordingly, many members want to monitor if wage growth will translate to higher consumer prices. Regarding the monetary policy outlook, members agreed sustainable and stable achievement of the price stability target, accompanied by wage increases had not yet come into sight. Thus, the BoJ needed to patiently continue monetary easing under its YCC policy. A few members pointed out the importance to confirm the linkage between wage growth development, including small enterprises, and subsequent price developments. Many members agreed the current YCC policy, with greater flexibility is appropriate. However, a few members noted market functioning remained low, but has shown some improvement in a reference to the August bond market survey

- BoJ Governor Ueda spoke at the regional leader meeting in Nagoya. He reiterated his view the recent upward revision to the inflation outlook was mainly driven by the prolonged effect from "first force" (i.e., pass-through effect from higher import prices). Given the recent slowdown in imports and corporate prices, he believes cost push inflation may gradually decelerate. He explained this is why the median FY25 forecast was below the FY24 forecast in their inflation outlook. He also mentioned the "second force" (i.e., wage/inflation spiral) will gradually take effect, as long-term inflation expectations as well as retail price outlooks grind higher. He said conviction for the 2% price stability target increased gradually, but not enough to have confidence. To assess the positive spiral between wage and inflation, he closely monitors: (1) if wage growth will continue going forward and become entrenched in society; and (2) if corporates set retail prices with future wage growth in mind. Regarding YCC with further flexibility, he said it was to balance between the positive effects to stimulate the economy by lowering long-term yields and side-effects related to long-term yields. He noted the importance of monitoring real yields to assess the easing impact. Given the recent rise in inflation expectations, he said real yields remain in negative territory, which suggests accommodative monetary conditions can be maintained
- **BoE Chief Economist Pill** said October inflation may drop below 5%, and he expects UK inflation will match price pressures in the rest of the world soon
- ECB Governing Council Member Holzmann said he "belong[s] to those that think we should be very careful, that we should stand ready again to hike if needed, and certainly don't declare victory too early on," but he added "We need to stay vigilant"
- **Boston Fed President Cook** reiterated the US banking system is resilient, but cautioned financial system risks have risen in recent years, and non-bank fragilities could amplify stress as growth slows
- The Fed's Senior Loan Officer Opinion Survey on Bank Lending Practices (SLOOS) showed credit availability and loan demand continued to fall. For businesses, lending standards continued to tighten for commercial real estate and C&I loans. A slightly smaller share of banks tightened than in recent quarters, but the tightening was still unusually pervasive. Demand for business loans also weakened sharply. In the residential mortgage space, banks reported tighter standards, and demand weakened across all residential real estate categories. For consumer loans, lending standards tightened for all consumer loan products, while demand weakened on

balance for auto, credit card, and other consumer loans (for more, read here)

Emerging Markets

- **PBoC** pledged to improve the efficiency of existing loans and make sure funds flow into the real economy. It reiterated it will stick to a stable and prudent monetary policy by keeping money supply neither too tight nor too loose, and ensure credit support for the real economy without excessive money supply through quantitative easing, while also looking to enrich the monetary policy toolbox. The central bank also said it will step up management of the FX market to keep CNY exchange rate stable at a reasonable and balanced level
- **Minutes** from the **October NBU Meeting** showed 10 MPC members spoke in favor of keeping interest rates unchanged. In addition, "MPC Members discussed the sustainability of the downtrend in inflation, the effects of previous steps to ease interest rate policy, the transition to managed flexibility of the exchange rate, the updated macroeconomic forecast, and changes to the balance of risks" (for more, read here)

Economic Release Notes

Developed Markets

- In Germany, Manufacturing Orders rose by 0.2% m/m in September (C: -1.5%; P: 1.9%)
- In **France**, the **final October Composite PMI** came in at 44.6 (C: 45.3; September: 44.1), 0.7pt below the preliminary estimate
- In **Germany**, the **final October Composite PMI** came in at 45.9 (C: 45.8; September: 46.4), 0.1pt above the preliminary estimate
- In the Euro Area, the final October Composite PMI came in at 46.5 (C: 46.5; September: 47.2), in-line with the preliminary estimate while the Services PMI came in at 47.8 (C: 47.8: September: 48.7), in-line with the preliminary estimate

Emerging Markets

- In Thailand, Headline CPI on a y/y basis fell into negative territory for the first time in two years. Headline CPI fell 0.31% y/y in October (C: 0.05%; P: 0.30%) while Core CPI ticked up to 0.66% y/y in October (C: 0.60%; P: 0.63%)
- In Indonesia, 3Q23 GDP grew 4.94% y/y (C: 5.00%; P: 5.17%) and 1.60% q/q (C: 1.67%; P: 3.86%). Fixed investment and private consumption were strong, up 5.77% y/y and 5.06% y/y, respectively
- In the **Czech Republic**, the **Trade Balance** rose to CZK12.8bn in **September** (C: CZK6.4bn; P: -CZK5.7bn)
- In the Czech Republic, Industrial Production fell 7.8% y/y in September (C: -5.4%; P: -1.7%)

Tactical Trading Model Signals – Currently Active Strategies

G4 10y Futures Smarter (beta) Trading Strategy – A "Smarter" (beta) Way to Trade G4 10y Futures Duration? (please see Exhibit 15 found later in

this publication for detailed breakdown)

- US 10y: Total 100%, Trade Longs Only: 100%, Fade Shorts Portfolio: 0%
- l **German 10y:** Total 200%, Trade Longs Only: 100%, Fade Shorts Portfolio: 100%
- I Japan 10y: Total 200%, Trade Longs Only: 100%, Fade Shorts Portfolio: 100%
- L UK 10y: Total 200%, Trade Longs Only: 100%, Fade Shorts Portfolio: 100%

Notes:

On Tuesday, the Treasury is scheduled to auction \$48bn in 3y notes, and our algorithms forecast a 0.1bp tail. In our full dataset, 3y auctions have averaged a 0.2bp tail and a 0.7bp tail over the past 1y and 10y, respectively.

Following a "Trade Longs" signal in the US price indices on Friday after a 5d MA cross above the 20d MA, US "Trade Longs" portfolio exposure increased to 100% on Monday with an anticipated exit date of December 12, 2023. This rendered total US "Trade Longs/Fade Shorts" exposures 100%.

What's Inside

- Market Data
- Risk Event Calendar
- Supply Calendar
- Cyclical and Secular Trends
- Pivot Points
- G4 Smarter (beta) Trading Strategy
- US Holiday Trading Strategy
- In Case You Missed It
- Global Macro Strategy Team

Please click here if you would like to receive our weekly strategic advice on global rates, FX, and EM!

Important note regarding economic sanctions. This research references country/ies which are generally the subject of comprehensive or selective sanctions programs administered or enforced by the U.S. Department of the Treasury's Office of Foreign Assets Control ("OFAC"), the European Union and/or by other countries and multinational bodies. Any references in this report to entities, debt or equity instruments, projects or persons that may be covered by such sanctions are strictly incidental to general coverage of the Russian Financial Services sector as germane to its overall

financial outlook, and should not be read as recommending or advising as to any investment activities in relation to such entities, instruments or projects. Users of this report are solely responsible for ensuring that their investment activities in relation to any sanctioned country/ies are carried out in compliance with applicable sanctions.

Market Data

Exhibit 5: Select Closes (5pm NY)

Government Bonds									
	1	US	Ger	many	I	JK	Ja	ipan	
Tenor	6-Nov	1d ∆ (bp)							
2у	4.935	9.6	3.006	5.1	4.704	4.7	0.129	(1.4)	
Зу	4.725	8.6	2.778	5.9	4.429	6.3	0.189	(1.7)	
5у	4.588	8.4	2.622	8.2	4.322	6.1	0.425	(2.6)	
7у	4.642	8.4	2.641	8.8	4.212	8.8	0.642	(4.3)	
10y	4.643	7.1	2.737	9.4	4.375	9.0	0.877	(4.3)	
20y	4.991	4.9	3.014	9.2	4.818	7.9	1.636	(5.4)	
30y	4.809	4.2	3.002	8.7	4.850	8.0	1.825	(4.7)	
Curve/Fly									
2s5s	-34.7	(1.2)	-38.4	3.1	-38.2	1.4	29.6	(1.2)	
2s10s	-29.1	(2.5)	-26.9	4.3	-32.9	4.3	74.8	(2.9)	
5s10s	5.5	(1.3)	11.5	1.2	5.3	2.9	45.2	(1.7)	
5s30s	22.1	(4.2)	38.0	0.5	52.8	1.9	140.0	(2.1)	
10s30s	16.5	(2.9)	26.5	(0.7)	47.6	(1.0)	94.8	(0.4)	
2s5s10s	-40.2	0.1	-49.9	1.9	-43.5	(1.5)	-15.6	0.5	
5s10s30s	-11.0	1.5	-15.0	1.9	-42.3	3.8	-49.6	(1.3)	
10s20s30s	53.0	(1.5)	28.9	0.3	41.1	(1.1)	57.0	(1.8)	

Bond Futures								
Contract	Settle	Chg	Agg Vol.	Vol. 1d ∆	Vol. 60d Z	OI 1w Chg		
TU	101-143	0-253	483,193	-677,076	-0.50	-38,388		
FV	105-086	0-15+	890,090	-1,259,318	-0.61	213,321		
TY	107-190	0-07+	1,165,982	-1,724,155	-0.83	2,853		
UXY	110-20+	0-01+	305,951	-432,542	-0.81	14,039		
US	112-150	-1-260	304,069	-412,406	-1.03	-16,053		
WN	115-290	-1-100	156,400	-224,965	-0.80	18,926		
DU	105.13	-0.09	430,050	-209,698	-0.51	-73,645		
OE	116.4	-0.4	671,167	-194,290	-0.11	-9,794		
RX	129.68	-0.86	763,093	-385,999	-0.40	-10,943		
UB	122.72	-1.9	88,333	-52,484	-0.37	1,260		
IK	111.52	-1.03	165,026	-55,929	-0.47	-13,047		
G	94.58	-0.74	150,518	-72,691	-0.58	-8,687		
JB	144.42	0.34	39,051	-6,207	0.09	11,101		
CN	117.14	-0.71	97,057	-77,334	-0.52	5,749		

Central Bank OIS											
Fed	Implied	1d ∆ (bp)	ECB	Implied	1d ∆ (bp)	BOE	Implied	1d ∆ (bp)	BOJ	Implied	1d ∆ (bp)
EFFR (11/3)	5.330	0.0	EONIA (11/3)	3.902	0.0	SONIA (11/3)	5.187	0.0	TONAR (11/2)	-0.011	0.0
12/13/23	5.347	0.5	12/14/23	3.897	0.1	12/14/23	5.225	(0.1)	12/19/23	-0.008	0.2
01/31/24	5.367	1.0	01/25/24	3.890	0.2	02/01/24	5.251	0.6	01/23/24	0.022	(0.6)
03/20/24	5.301	1.7	03/07/24	3.814	(0.2)	03/21/24	5.227	0.5	03/19/24	0.060	0.0
05/01/24	5.184	4.1	04/11/24	3.699	0.0	05/09/24	5.163	2.0	04/26/24	0.118	(1.0)
06/12/24	5.048	6.7	06/06/24	3.549	3.2	06/20/24	5.077	1.4	06/14/24	0.159	(1.8)
07/31/24	4.903	9.0	07/18/24	3.418	3.2	08/01/24	4.982	4.0	07/31/24	0.209	(1.0)
09/18/24	4.741	9.9	09/12/24	3.245	1.7						

				G10 C	rosses (5p	m NY)				
Q / B	USD	EUR	JPY	GBP	CAD	AUD	NZD	CHF	NOK	SEK
USD	-	1.072	0.007	1.234	0.730	0.649	0.596	1.112	0.090	0.092
030		(0.12%)	(0.46%)	(0.29%)	(0.31%)	(0.37%)	(0.57%)	(0.06%)	(0.11%)	(0.28%)
EUR	0.933		0.622	1.152	0.681	0.606	0.557	1.038	0.084	0.085
LON	0.12%		(0.34%)	(0.18%)	(0.19%)	(0.25%)	(0.47%)	0.09%	(0.12%)	(0.02%)
JPY	150.070	160.840	-	185.245	109.546	97.383	89.494	166.871	13.576	13.743
JFT	0.46%	0.37%		0.17%	0.16%	0.10%	(0.12%)	0.39%	0.35%	0.13%
GBP	0.810	0.868	0.540		0.591	0.526	0.483	0.901	0.073	0.074
GDP	0.30%	0.18%	(0.17%)		(0.02%)	(0.06%)	(0.29%)	0.27%	0.00%	0.00%
CAD	1.370	1.468	0.009	1.691	-	0.889	0.817	1.523	0.124	0.126
GAD	0.31%	0.19%	(0.16%)	0.01%		(0.06%)	(0.26%)	0.29%	0.08%	0.16%
AUD	1.541	1.652	1.027	1.902	1.125		0.919	1.713	0.139	0.141
AUD	0.37%	0.24%	(0.11%)	0.07%	0.06%		(0.21%)	0.34%	0.22%	0.21%
NZD	1.677	1.797	0.011	2.070	1.224	1.088	-	1.864	0.152	0.154
NZD	0.56%	0.48%	0.09%	0.22%	0.26%	0.22%		0.54%	0.40%	0.39%
CHF	0.899	0.964	0.599	1.110	0.657	0.584	0.536		8.133	8.242
UHF	0.07%	(0.06%)	(0.37%)	(0.26%)	(0.11%)	(0.58%)	(0.50%)		(0.11%)	(0.12%)
NOK	11.060	11.855	7.369	13.651	8.070	7.175	6.595	12.293		1.013
NUK	0.14%	0.05%	(0.26%)	(0.16%)	(0.23%)	(0.23%)	(0.54%)	0.10%		(0.03%)
SEK	10.915	11.700	7.274	13.474	7.968	7.086	6.513	12.141	0.987	
SEK	0.16%	0.12%	(0.19%)	(0.24%)	(0.18%)	(0.08%)	(0.30%)	0.15%	(0.02%)	

Source: Morgan Stanley Research, Bloomberg

	E	IR Swaps UR	
Tenor	6-Nov	1d ∆ (bp)	
2у	3.533	3.3	
Зу	3.303	5.3	
5y	3.166	6.2	
7у	3.165	6.7	
10y	3.228	7.5	
20y	3.240	6.7	
30y	3.008	5.4	
Curve/Fly			
2s5s	-36.6	2.9	
2s10s	-30.5	4.3	
5s10s	6.1	1.3	
5s30s	-15.8	(0.8)	
10s30s	-22.0	(2.2)	
2s5s10s	-42.8	1.6	
5s10s30s	28.1	3.5	
10s20s30s	24.5	0.5	

Inflation-Linked								
Bond	Real Yld	1d ∆ (bp)	BEI	1d ∆ (bp)				
TII 5y	2.222	6.3	2.362	2.2				
TII 10y	2.226	5.3	2.417	2.1				
TII 30y	2.295	2.2	2.524	2.1				
DBRi 10y	0.485	8.9	2.181	0.7				
BTPi 10y	2.454	12.7	2.060	0.6				
UKTi 10y	0.611	10.3	3.764	(1.3)				
JGBi 10y	-0.514	0.0	1.365	(2.3)				

•	

		S	TIR Futur	es		
Pack	\$ Avg.	1d ∆ (bp)	€ Avg.	1d ∆ (bp)	£ Avg.	1d ∆ (bp)
Whites	5.256	3.37	3.676	1.87	5.196	(0.12)
Reds	4.366	14.37	2.863	5.00	4.514	4.12
Greens	3.944	13.00	2.711	5.12	4.078	6.88
Blues	4.000	11.75	2.803	4.25	3.988	7.50

Sovereign 10y								
Last	1d ∆ (bp)	Country	Last	1d ∆ (bp)				
4.768	4.6	Italy	4.639	13.2				
3.357	9.9	Netherlands	3.324	34.3				
3.375	10.5	New Zealand	5.208	4.3				
3.807	6.8	Norway	3.846	5.3				
3.002	9.0	Portugal	3.428	12.2				
3.313	9.1	Spain	3.793	11.3				
3.337	10.2	Sweden	2.846	0.5				
3.154	9.3	Switzerland	1.171	7.5				
	4.768 3.357 3.375 3.807 3.002 3.313 3.337	Last 1d Δ (bp) 4.768 4.6 3.357 9.9 3.375 10.5 3.807 6.8 3.002 9.0 3.313 9.1 3.337 10.2	Last 1d Δ (bp) Country 4.768 4.6 Italy 3.357 9.9 Netherlands 3.375 10.5 New Zealand 3.807 6.8 Norway 3.002 9.0 Portugal 3.313 9.1 Spain 3.337 10.2 Sweden	Last 1d Δ (bp) Country Last 4.768 4.6 Italy 4.639 3.357 9.9 Netherlands 3.324 3.375 10.5 New Zealand 5.208 3.807 6.8 Norway 3.846 3.002 9.0 Portugal 3.428 3.313 9.1 Spain 3.793 3.337 10.2 Sweden 2.846				

Equity Indices									
Index	Last	1d ∆ (%)	Index	Last	1d ∆ (%)				
S&P	4366	0.18	Nikkei	32708	2.37				
SX5E	4159	(0.38)	Hang Seng	17967	1.71				
FTSE	7418	0.00	MSCI EM	948	1.90				

FX (5pm NY)									
Currency	Last	1d ∆ (%)	Currency	Last	1d ∆ (%)				
DXY	105.268	0.24	Gold	1978.140	(0.73)				
EUR	1.072	(0.12)	CNY	7.283	(0.09)				
JPY	150.070	0.46	INR	83.215	(0.08)				
GBP	1.234	(0.29)	IDR	15538.000	(1.21)				
CHF	0.899	0.07	KRW	1297.450	(1.88)				
CAD	1.370	0.31	MYR	4.643	(1.78)				
AUD	0.649	(0.37)	SGD	1.351	(0.27)				
NZD	0.596	(0.57)	TWD	32.152	(0.46)				
SEK	10.915	0.16	THB	35.498	(0.59)				
NOK	11.060	0.14	CZK	22.905	0.69				
ARS	350.026	0.00	HUF	354.020	0.08				
BRL	4.887	(0.33)	ILS	3.891	(0.92)				
CLP	881.970	0.77	PLN	4.157	0.13				
COP	3977.380	0.00	RUB	#N/A					
MXN	17.548	0.47	UAH	36.026	(0.65)				
PEN	3.761	0.52	ZAR	18.293	0.18				

Supply Calendar

Exhibit 6: Upcoming Issuance

Day	Date	Country	Time (GMT)	Time (EST)	Event
Tuesday	7-Nov	New Zealand	1:35 AM	8:35 PM	NZ\$100 Million 182-Day Bills
		New Zealand	1:35 AM	8:35 PM	NZ\$100 Million 98-Day Bills
		New Zealand	1:35 AM	8:35 PM	NZ\$50 Million 364-Day Bills
		Japan	3:35 AM	10:35 PM	10-Year Linker Bonds
		Spain	9:30 AM	4:30 AM	182-day Bills
		Spain	9:30 AM	4:30 AM	364-day Bills
		U.K.	10:00 AM	5:00 AM	GBP3.75 Billion of 4.625% 2034 Bonds
		Switzerland	10:00 AM	5:00 AM	183-day Bills
		Austria	10:00 AM	5:00 AM	0% 2028 Bonds
		Austria	10:00 AM	5:00 AM	2.9% 2033 Bonds
		Belgium	10:30 AM	5:30 AM	EU1 Billion of 119-day Bills
		Germany	10:30 AM	5:30 AM	I/L Bond
		Canada	3:30 PM	10:30 AM	C\$11.6 Billion of 98-day Bills
		Canada	3:30 PM	10:30 AM	C\$4.2 Billion of 182-day Bills
		Canada	3:30 PM	10:30 AM	C\$4.2 Billion of 364-day Bills
		U.S.	4:30 PM	11:30 AM	USD75 Bln 42-Day CMB
		U.S.	6:00 PM	1:00 PM	USD48 Bln 3-Year Notes
Wednesday	8-Nov	Australia	12:00 AM	7:00 PM	A\$800 Million 2.75% 2035 Bonds
		Denmark	9:15 AM	4:15 AM	2.25% 2033 Bonds
		Denmark	9:15 AM	4:15 AM	0.1% 2034 Linkers
		Switzerland	10:00 AM	5:00 AM	Bonds
		Norway	10:00 AM	5:00 AM	NOK2 Billion of 1.75% 2027 Bonds
		Sweden	10:00 AM	5:00 AM	SEK2.5 Billion of 1.75% 2033 Bonds
		U.K.	10:00 AM	5:00 AM	GBP900 Million of 0.125% 2051 Linkers
		Germany	10:30 AM	5:30 AM	EU4 Billion of 2.6% 2033 Bonds
		U.S.	4:30 PM	11:30 AM	17-Week Bills
		Canada	5:00 PM	12:00 PM	C\$4 Billion of 4% 2029 Bonds
		U.S.	6:00 PM	1:00 PM	USD40 Bln 10-Year Notes
		Australia	11:30 PM	6:30 PM	A\$1 Billion 105-Day Bills
		Australia	11:30 PM	6:30 PM	A\$1 Billion 133-Day Bills
Thursday	9-Nov	New Zealand	1:35 AM	8:35 PM	NZ\$30M 2.5% 2035 Inflation-Linked Bonds
		New Zealand	1:35 AM	8:35 PM	NZ\$100 Million 2.75% 2037 Bonds
		New Zealand	1:35 AM	8:35 PM	NZ\$225 Million 2% 2032 Bonds
		New Zealand	1:35 AM	8:35 PM	NZ\$175 Million 4.5% 2030 Bonds
		Japan	3:30 AM	10:30 PM	4 Trillion Yen of 6-Month Bills
		Japan	3:35 AM	10:35 PM	30-Year Bonds
		Italy	10:00 AM	5:00 AM	EU6 Billion of 366-day Bills
		U.S.	4:30 PM	11:30 AM	4-Week Bills
		U.S.	4:30 PM	11:30 AM	8-Week Bills
		U.S.	6:00 PM	1:00 PM	USD24 Bln 30-Year Bonds
Friday	10-Nov	Japan	3:30 AM	10:30 PM	5.6 Trillion Yen of 3-Month Bills
		Italy	10:00 AM	5:00 AM	Bonds
		U.K.	11:00 AM	6:00 AM	GBP2 Billion of 91-day Bills
		U.K.	11:00 AM	6:00 AM	GBP1 Billion of 28-day Bills
		U.K.	11:00 AM	6:00 AM	GBP2.5 Billion of 182-day Bills
					-

Source: Morgan Stanley Research, Bloomberg

Cyclical and Secular Trends

Government Bonds

In The Tactical Bull Market Is Back, we discussed a simple methodology based on the Ichimoku Kinko charting technique for classifying market movements as bullish, bearish, or range-bound. Then, we define whether the movement is cyclical or secular in nature.

Exhibit 7: Summary of cyclical (tactical & strategic) and secular bull, bear, and range-bound rates markets

					Cyclical	Cyclical	Secular
	Daily	Daily	Daily		Tactical	Strategic	
	Last	Cloud Lower	Cloud Upper	200d MA	Daily	Weekly	Monthly
UST 2y	4.935	4.957	5.040	4.625	Bull Market	Bear Market	Bear Market
UST 5y	4.588	4.360	4.524	4.075	Bear Market	Bear Market	Bear Market
UST 10y	4.643	4.214	4.431	3.948	Bear Market	Bear Market	Bear Market
UST 30y	4.809	4.322	4.543	4.080	Bear Market	Bear Market	Bear Market
DBR 2y	3.023	3.122	3.214	2.958	Bull Market	Bear Market	Bear Market
DBR 5y	2.627	2.686	2.750	2.527	Bull Market	Bear Market	Bear Market
DBR 10y	2.739	2.689	2.773	2.509	Range bound	Bear Market	Bear Market
DBR 30y	3.006	2.798	2.932	2.602	Bear Market	Bear Market	Bear Market
UKT 2y	4.721	4.972	5.045	4.404	Bull Market	Bear Market	Bear Market
UKT 5y	4.329	4.546	4.546	4.076	Bull Market	Bear Market	Bear Market
UKT 10y	4.377	4.386	4.449	4.074	Bull Market	Bear Market	Bear Market
UKT 30y	4.852	4.644	4.785	4.390	Bear Market	Bear Market	Bear Market
JGB 10y	0.883	0.605	0.720	0.539	Bear Market	Bear Market	Bear Market
JGB 20y	1.644	1.269	1.443	1.231	Bear Market	Bear Market	Bear Market
JGB 30y	1.831	1.526	1.703	1.464	Bear Market	Bear Market	Bear Market
JGB 40y	2.070	1.678	1.850	1.657	Bear Market	Bear Market	Bear Market
ACGB 2y	4.374	3.936	3.986	3.680	Bear Market	Bear Market	Bear Market
ACGB 5y	4.411	3.949	4.011	3.669	Bear Market	Bear Market	Bear Market
ACGB 10y	4.768	4.221	4.303	3.910	Bear Market	Bear Market	Bear Market
ACGB 20y	5.073	4.515	4.604	4.260	Bear Market	Bear Market	Bear Market
NZGB 2y	5.387	5.284	5.284	5.104	Bear Market	Bear Market	Range bound
NZGB 5y	5.034	4.863	4.863	4.607	Bear Market	Bear Market	Range bound
NZGB 10y	5.208	4.892	4.892	4.631	Bear Market	Bear Market	Bear Market
CAN 2y	4.445	4.744	4.827	4.339	Bull Market	Bear Market	Bear Market
CAN 5y	3.868	4.061	4.143	3.627	Bull Market	Bear Market	Bear Market
CAN 10y	3.810	3.766	3.893	3.393	Range bound	Bear Market	Bear Market
CAN 30y	3.607	3.591	3.705	3.310	Range bound	Bear Market	Bear Market

Source: Morgan Stanley Research, Bloomberg

Foreign Exchange

					Cyclical	Cyclical	Secula
	Daily	Daily	Daily		Tactical	Strategic	
	Last	Cloud Lower	Cloud Upper	200d MA	Daily	Weekly	Monthl
DXY	105.27	103.43	105.32	103.52	Range bound	Range bound	Bull Marke
USDJPY	150.07	143.89	147.80	140.49	Bull Market	Bull Market	Bull Marke
USDCAD	1.3700	1.3408	1.3511	1.3492	Bull Market	Bull Market	Bull Marke
USDCHF	0.8994	0.8889	0.9032	0.9003	Range bound	Bear Market	Bear Marke
USDNOK	11.0599	10.4000	10.7104	10.6075	Bull Market	Bull Market	Bull Marke
USDSEK	10.9146	10.7433	11.0338	10.6739	Range bound	Bull Market	Bull Marke
EURUSD	1.0718	1.0665	1.0859	1.0806	Range bound	Bull Market	Bear Marke
GBPUSD	1.2344	1.2348	1.2554	1.2435	Bear Market	Bull Market	Bear Marke
AUDUSD	0.6489	0.6424	0.6589	0.6619	Range bound	Bear Market	Bear Marke
NZDUSD	0.5964	0.5963	0.6084	0.6118	Range bound	Bear Market	Bear Marke
EURJPY	160.84	155.59	157.88	151.78	Bull Market	Bull Market	Bull Marke
NOKSEK	0.9870	1.0293	1.0324	1.0066	Bear Market	Bear Market	Bull Mark
AUDNZD	1.0881	1.0813	1.0824	1.0819	Bull Market	Range bound	Bull Marke
USDBRL	4.8870	4.8878	4.9600	4.9973	Bear Market	Bear Market	Range boun
USDMXN	17.55	17.22	17.33	17.70	Bull Market	Bear Market	Bear Mark
USDARS	350.03	307.28	349.96	261.28	Bull Market	Bull Market	Bull Mark
USDCLP	881.97	857.83	885.09	833.06	Range bound	Range bound	Bull Mark
USDCOP	3,977.38	3,999.92	4,031.23	4,364.90	Bear Market	Bear Market	Bull Mark
USDPEN	3.7610	3.6804	3.7551	3.7386	Bull Market	Bear Market	Bull Marke
USDZAR	18.29	18.38	18.93	18.58	Bear Market	Bull Market	Bull Mark
USDTRY	28.4364	26.3903	26.9269	23.3342	Bull Market	Bull Market	Bull Mark
USDILS	3.8914	3.7182	3.8184	3.7072	Bull Market	Bull Market	Bull Mark
USDRUB	118.69	76.43	77.44	#N/A	Bull Market	Bull Market	Bull Mark
USDPLN	4.1571	4.1916	4.3034	4.2217	Bear Market	Bear Market	Bull Mark
USDCZK	22.9049	22.2549	22.7972	22.1368	Bull Market	Range bound	Bull Mark
USDHUF	354.02	356.24	363.54	352.17	Bear Market	Bear Market	Bull Mark
USDCNY	7.2702	7.2347	7.2930	7.0728	Range bound	Bull Market	Bull Mark
USDIDR	15,538.00	15,261.50	15,417.75	15,191.85	Bull Market	Bull Market	Bull Mark
USDINR	83.22	82.47	82.93	82.47	Bull Market	Bull Market	Bull Mark
USDKRW	1,297.45	1,300.23	1,330.11	1,308.08	Bear Market	Range bound	Bull Mark
USDMYR	4.6430	4.6022	4.6810	4.5529	Range bound	Bull Market	Bull Mark
USDPHP	55.92	55.66	56.68	55.63	Range bound	Bull Market	Bull Mark
USDSGD	1.3506	1.3477	1.3638	1.3457	Range bound	Range bound	Range bour
USDTWD	32.1520	31.5325	32.0165	31.1261	Bull Market	Bull Market	Bull Mark
USDTHB	35.4980	35.1755	35.9103	34.7812	Range bound	Bull Market	Bull Mark
				00.2	Bull Market	Bull Market	Bull Mark

Exhibit 8: Summary of cyclical (tactical and strategic) and secular bull, bear, and range-bound FX markets

SILVER	23.03	23.25	23.69	23.28	Bear Market	Bull Market	Range bound
CRUDE OIL	80.82	83.20	87.18	76.74	Bear Market	Bull Market	Bull Market

Source: Morgan Stanley Research, Bloomberg

Pivot Points

Pivot points are charting levels used by day traders to determine market direction, support, and resistance levels. We calculate daily pivot points using the previous week's open, high, low, and closing levels.

Exhibit 9:	US Treasur	y benchmark dail	y pivots, support,	and resistance levels
------------	------------	------------------	--------------------	-----------------------

	UST 2y	UST 3y	UST 5y	UST 7y	UST 10y	UST 30y
Daily resistance 3	5.004	4.802	4.672	4.727	4.721	4.875
Daily resistance 2	4.987	4.782	4.651	4.706	4.701	4.859
Daily resistance 1	4.967	4.764	4.632	4.688	4.685	4.847
Daily pivot high	4.917	4.713	4.579	4.634	4.637	4.810
Daily pivot low	4.908	4.704	4.568	4.623	4.627	4.802
Daily Support 1	4.891	4.684	4.547	4.602	4.608	4.785
Daily Support 2	4.872	4.666	4.529	4.583	4.591	4.774
Daily Support 3	4.849	4.643	4.504	4.558	4.569	4.757

Source: Morgan Stanley Research

Exhibit 10: US Treasury futures daily pivots, support, and resistance levels

	TU1	FV1	TY1	UXY1	US1	WN1
Daily resistance 3	101-226	105-286	108-150	111-23+	113-263	117-255
Daily resistance 2	101-202	105-227	108-066	111-131	113-133	117-076
Daily resistance 1	101-186	105-193	108-016	111-067	113-053	116-285
Daily pivot high	101-162	105-13+	107-25+	110-28+	112-243	116-105
Daily pivot low	101-156	105-122	107-235	110-261	112-212	116-06+
Daily Support 1	101-136	105-075	107-172	110-181	112-113	115-246
Daily Support 2	101-122	105-041	107-122	110-117	112-033	115-135
Daily Support 3	101-108	105-007	107-076	110-062	111-28+	115-040

Source: Morgan Stanley Research

Exhibit 11: 10y government bond yield daily pivots, support and resistance levels

	UST 10y	CAN 10y	DBR 10y	UKT 10y	JGB 20y	ACGB 10y
Daily resistance 3	4.721	3.865	2.785	4.424	1.689	4.786
Daily resistance 2	4.701	3.852	2.774	4.413	1.673	4.782
Daily resistance 1	4.685	3.839	2.760	4.398	1.664	4.778
Daily pivot high	4.637	3.803	2.725	4.362	1.649	4.768
Daily pivot low	4.627	3.796	2.719	4.356	1.644	4.766
Daily Support 1	4.608	3.783	2.708	4.345	1.633	4.762
Daily Support 2	4.591	3.770	2.694	4.330	1.624	4.758
Daily Support 3	4.569	3.754	2.678	4.314	1.618	4.753

Source: Morgan Stanley Research

Exhibit 12: Foreign exchange rates daily pivots, support, and resistance levels

	DXY	EURUSD	USDJPY	GBPUSD	AUDUSD	USDCAD
Daily resistance 3	105.58	1.0770	150.63	1.2460	0.6537	1.3751
Daily resistance 2	105.50	1.0755	150.49	1.2426	0.6522	1.3739
Daily resistance 1	105.41	1.0745	150.31	1.2404	0.6514	1.3723
Daily pivot high	105.18	1.0730	149.87	1.2370	0.6499	1.3684
Daily pivot low	105.14	1.0727	149.80	1.2362	0.6496	1.3677
Daily Support 1	105.06	1.0715	149.66	1.2336	0.6484	1.3665
Daily Support 2	104.97	1.0705	149.48	1.2314	0.6476	1.3649
Daily Support 3	104.86	1.0697	149.29	1.2296	0.6468	1.3632

	EURJPY	EURCHF	EURNOK	EURSEK	NOKSEK	AUDNZD
Daily resistance 3	161.52	0.9667	11.8996	11.7521	0.9906	1.0915
Daily resistance 2	161.35	0.9656	11.8885	11.7277	0.9890	1.0907
Daily resistance 1	161.18	0.9650	11.8805	11.7126	0.9881	1.0899
Daily pivot high	160.73	0.9640	11.8551	11.6882	0.9865	1.0878
Daily pivot low	160.64	0.9636	11.8495	11.6788	0.9859	1.0874
Daily Support 1	160.47	0.9629	11.8384	11.6638	0.9849	1.0866
Daily Support 2	160.30	0.9623	11.8304	11.6487	0.9840	1.0858
Daily Support 3	160.10	0.9619	11.8186	11.6432	0.9836	1.0849

Exhibit 13: Foreign exchange rates daily pivots, support, and resistance levels

Auction Preview

3y Auction Outlook

On Tuesday, the Treasury is scheduled to auction \$48bn in 3y notes, and our algorithms forecast a 0.1bp tail. In our full dataset, 3y auctions have averaged a 0.2bp tail and a 0.7bp tail over the past 1y and 10y, respectively.

Exhibit 14:	3y Auction	Preview
-------------	-------------------	---------

Auction Date	11/7/2023	Variables Our Models Considered	Input Value
Auction Tenor Auction Issuance Our Call	US 3Y \$48bn Tail	Auction Maturity Size of Auction (\$USD Bn) % Change in Size of Auction 3 Day Change in Nominal Yield leading into Auction	3Y 48 4.35% -2.8
Model	Predicted Tail (Signal <0 is Through)	4 Day Change in Nominal Yield leading into Auction	-20.1
Extreme Gradient Boosting K-Nearest	0.0	1 Day Change in DXY leading into Auction 1 day change in 2s10s curve	0.222
Neighbors Gradient Boosting	0.3 0.1	leading into Auction 1 day change in 2s30s curve leading into Auction	-2.5
Random Forest	0.4	Morgan Stanley Financial Conditions Index	-5.4
Lasso Regression	-0.6	2 day change in Libor Swap Spread leading into Auction	-0.1
Multiple Linear Regression	-0.7	Binary: Is the Auction a Reopening?	No
XGB and KNN Hybrid	0.1	Change to Fed Funds Target Rate over Past 6 months	0.25
All Models Hybrid	-0.1	6m Slope of Fed Funds Futures Curve	-13.8

G4 Smarter (beta) Trading Strategy

MORGAN STANLEY	& CO.	LLC
----------------	-------	-----

Matthew Hornbach, CMT

Matthew.Hornbach@morganstanley.com

+1 212 761-1837

Enhancements to a G4 10y government bond futures momentum strategy have produced higher Sharpe ratios and stronger returns, relative to total return government bond indices for the G4, US, Germany, Japan, and the UK since 2000. See A "Smarter" (Beta) Way to Trade G4 10y Futures Duration? for more information on these strategies.

Trading Strategy 1 – "Trade Longs/Fade Shorts"

When the 5-day moving average crosses above the 20-day moving average, buy the futures contract (long duration) and hold for a 25-business-day period. When the 5-day moving average crosses below the 20-day moving average, buy the futures contract and hold for a 25-business-day period. In short, this strategy buys futures when the Simple Moving Average Crossover (SMAX) generates both a long and a short signal, given the historical outperformance of long signals traded long and the underperformance of short signals traded short. Given that the SMAX could generate both a long and a short signal within the predefined holding period, an investor may have a 200% long position since each of the two signals would be traded in separate portfolio sleeves.

Trading Strategy 2 – Trade "Longs Only"

When the 5-day moving average crosses above the 20-day moving average, buy the futures contract (long duration) and hold for a 25-business-day period. When the 5-day moving average crosses below the 20-day moving average, do nothing. In short, an investor ONLY trades long signals initiated by the SMAX given their historical precedent to outperform.

Current Risk, G4 10y Futures	G4 Strategy Weight	Trade Longs Portfolio	Fade Shorts Portfolio	Total Risk Trade Longs Only	Total Risk Trade Longs/Fade Shorts (max 200%)	Trade Longs Portfolio Entry Date	Trade Longs Portfolio Exit Date	Fade Shorts Portfolio Entry Date	Fade Shorts Portfolio Exit Date
JB 10y Future	32.50%	100%	100%	100%	200%	10/16/2023	11/21/2023	10/23/2023	11/29/2023
GE 10y Future	29.25%	100%	100%	100%	200%	10/30/2023	12/4/2023	10/20/2023	11/24/2023
US 10y Future	30.50%	100%	0%	100%	100%	11/6/2023	12/12/2023	-	-
UK 10y Future	7.75%	100%	100%	100%	200%	11/3/2023	12/8/2023	10/19/2023	11/23/2023

Exhibit 15: Trading Signals for G4 Smarter (beta) Trading Strategy

US Holiday Trading Strategy

Combining the individual trading signals based on 10y Treasury future (TY) price patterns before and after US holidays has generated an annual strategy with no down years since 1987. See Trading 10y Treasury Futures Around US Holidays for more information.

Using historical data since 1983, we created a trading strategy using 10y Treasury futures (TY) that trades 11 times per year, either long or short, before or after the following US holidays: New Year's Day, Martin Luther King Day, Presidents' Day, Good Friday, Memorial Day, Independence Day, Labor Day, Columbus Day, Thanksgiving, and Christmas. Exhibit 16 displays the trading rules:

Exhibit 16: Trading rules for US holiday trading model using US 10y futures contracts (TY)

Holiday	Day of Week	Direction	Before/After Holiday	Trading Rule (business days, 3pm NY unless specified)	Trade Entry (business days)	Trade Exit (business days)
New Year's Day	Rotates	Long TY	After	Buy TY New Years +1, Sell TY New Years +4	New Year + 1	New Year + 4
Martin Luther King Day 1	Monday	Long TY	Before	Buy TY Tuesday before MLK, Sell Friday before MLK	MLK - 4	MLK - 1
Martin Luther King Day 2	Monday	Short TY	After	Sell TY Tuesday after MLK, Buy Friday after MLK	MLK + 1	MLK + 4
President's Day	Monday	Long TY	After	Buy TY Tuesday after Pres. Day, Sell TY Friday after Pres. Day	Pres. Day + 1	Pres. Day + 4
Good Friday	Friday	Long TY	After	Buy TY Monday after Good Friday, Sell TY Friday after Good Friday	Good Friday + 1	Good Friday + 5
Memorial Day	Monday	Long TY	After	Buy TY Tuesday after Mem. Day, Sell TY Friday after Mem. Day	Mem. Day + 1	Mem. Day + 4
Independence Day (July 4th)	Rotates	Long TY	After	Buy TY Independence Day + 2, Sell TY Independence Day + 4	Ind. Day + 2	Ind. Day + 4
Labor Day	Monday	Long TY	Before	Buy TY Monday before Labor Day, Sell TY Thursday before Labor Day	Labor Day - 4	Labor Day - 2
Columbus Day	Monday	Short TY	Before	Sell TY Monday before Col. Day, Buy TY Thursday before Col. Day	Colum. Day - 5	Colum. Day - 2
Thanksgiving	Thursday	Long TY	Before	Buy TY Friday before Thanksgiving, Sell TY Tuesday before Thanksgiving	Thanksgiving - 4	Thanksgiving - 2
Christmas	Rotates	Short TY	Before	Sell TY Christmas Day - 4, Buy TY Christmas Day - 1	Christmas - 4	Christmas - 1

Source: Morgan Stanley Research. Note: Past performance is no guarantee of future results.

In Case You Missed It

Global Macro

Global Macro Strategy: Global FX Positioning: Largest Weekly Drop In USD Positioning Since July

6 Nov 2023

In the week ending Friday, November 3, options pricing data indicate that investors added long NZD and CAD positions, and increased short NOK (versus EUR) and USD (DXY) positions. In the futures market, USD shorts were added against AUD and JPY, while investors bought USD against CHF andCAD in the week ending Tuesday, October 31.

Global Macro Strategist: If At First You Don't Succeed

3 Nov 2023

Buy, buy bonds again. After the FOMC meeting, we reengaged with the long duration trade in the US. We remain neutral on the USD for now. While financial conditions have returned to nearly September FOMC meeting levels, economic data come mixed, with more recent data showing negative momentum.

Government Bond Auction Pipeline: The Month Ahead

3 Nov 2023

We review the supply, coupon and redemption picture for the US, UK, Euro, JPY, AUS, NZ, CAN and CNY government bond markets over the next month. This week, G7 net DV01 to be \$107.2m/bp, compared to an average* \$55.7m/bp. US \$82.9 m/bp; Euro \$9.3m/bp; UK \$7.4m/bp; JPN \$5.5m/bp.

Podcast: The Global Macro Guide: November 3

3 Nov 2023

In this podcast series, host Martin Tobias discusses the most important highlights of the week just past, and talks about the most important events of the week to come.

US Economics & Global Macro Strategy: FOMC Reaction: Comfortable and Balanced 2 Nov 2023

On balance, the door to a December hike remains ajar, even as support on the Committee has waned. We do not see the data and financial conditions supporting further tightening. Our strategists add 3m3Oy ATM -25 receivers, and stay long SFRZ4 on SFRU3Z4Z5 fly, and long agency MBS.

Nordic Macro Watch | Norges Bank: All Eyes on Inflation

2 Nov 2023

Norges Bank remained on hold, in line with expectations. The forward guidance from September was re-affirmed, noting that a 25bp hike in December is likely. The guidance came with what we see as a slightly dovish twist – explicitly noting the chance of a hold, should downwards momentum in underlying inflation be confirmed in the upcoming data. On balance, we see a hike in December, but the decision will be very close.

UK BoE Reaction: Events, Dear Boy, Events

2 Nov 2023

In line with expectations, the BoE kept Bank Rate on hold today. The messaging was clear

UPDATE

– rates will, on current forecasts, have to stay restrictive for some time. Data developments, as has been the case through this entire cycle, can change the forecasts, and the BoE's stance. Hence, we continue to expect 2024 cuts, and Bank Rate at 4% by the end of next year.

US Public Policy & Economics Brief: Figuring Out Fiscal Policy

1 Nov 2023

Fiscal expansion is often cited as a reason for positive US growth surprises & government bond yield increases in 2023. Yet, we assess that expansion has peaked, at least until after the 2024 election. Hence, investors focused on upside catalysts for growth & yields should look elsewhere.

Japan Economics & Macro/Equity Strategy: BoJ Further Increasing Flexibility in Conduct of YCC

31 Oct 2023

BoJ decided to regard the upper bound of 1.0% as a "reference", which will allow 10yr JGB yields to inch slightly above 1%. We discuss implications on USDJPY, JGB yields and Japanese equities.

Global EM

Macro Monday Matters: Top Trades in FX & EM

6 Nov 2023

Reducing USD longs against the G10 was the right call. From here, falling bond yields will help but don't guarantee a weaker USD given continued soft global data, now neutral USD positioning and the significant loosening of financial conditions.

Mexico Economics & Strategy: Central Bank Preview: Staying the Course 3 Nov 2023

Our call: We think that the central bank will hold rates constant at 11.25% at the November 9 meeting. Strategy view: We expect the Banxico meeting to be broadly a non-event from a markets standpoint, though risks are skewed very mildly to the hawkish side via a potential revision higher of CPI projections.

Saudi Arabia Economics and Sovereign Credit Strategy: Oil Output Cuts Take Their Toll 3 Nov 2023

Real GDP and budget balance data for 3Q23 came in weak, reflecting the impact of deep oil production cuts. We revise our 2023 growth forecast to -0.5%Y from 0.6%Y previously, and see the budget deficit widening to 2.4% in 2023. In sovereign credit, we prefer Abu Dhabi over Saudi Arabia in the belly and prefer pipeline bonds in the quasi-sovereign space.

EM Strategy: The GBI-EM Investors' Lowdown

3 Nov 2023

Investors started to cut duration risks more meaningfully from mid-September. Given that it normally takes three months to cut duration from OW to neutral, they are still in the middle of position reduction. EM duration could continue to be a pain trade should US data surprise on the upside.

EM Fixed Income Flows Update: Where Supply Meets Demand

3 Nov 2023

EM flows: EMDD flows registered outflows worth US\$1.9bn this week versus outflows of US\$2.0bn in the previous week.

Brazil Economics and Strategy: Central Bank Review: Unchanged Forward Guidance 2 Nov 2023

Central bank decision: In line with our call, the central bank decided to cut rates by 50bp, to 12.25%. As expected, it was an unanimous decision. Market reading (EM Strategy): The November BCB statement was a non-event from a market standpoint, as policymakers highlighted the challenging global outlook (as expected), but did not address the ongoing fiscal noise.

Egypt Economics and Sovereign Credit Strategy: Update: Rerouting to the Roadmap 1 Nov 2023

Despite the improvement in the BoP and continued privatisation efforts, Egypt still faces challenges to its external and fiscal accounts, with additional uncertainty related to recent geopolitical developments. Strengthening the IMF anchor will be key for Egypt's macro stabilisation post-elections, in our view. We remain neutral on the credit.

EM Sovereign Credit Strategy: Taking a Closer Look at MENA Exporter Resilience 31 Oct 2023

MENA exporter fundamentals should remain comparatively resilient, even in an escalated conflict. We prefer Abu Dhabi over Saudi Arabia/Qatar in the belly, turn neutral on Bahrain following decompression and move Sharjah to a dislike stance given growth risks.

EM Strategy: Asia Macro Strategy: Are Asia Bond Yields Attractive Now? 31 Oct 2023

We stay bearish on Asia FX and local duration. Despite the sell-off, the Asia real rates spread over US real rates is rather tight, suggesting that its valuation is not attractive yet. We increase our bearish exposure.

Disclosure Section

The information and opinions in Morgan Stanley Research were prepared or are disseminated by Morgan Stanley & Co. LLC and/or Morgan Stanley C.T.V.M. S.A. and/or Morgan Stanley Casa de Bolsa, S.A. de C.V. and/or Morgan Stanley Canada Limited and/or Morgan Stanley & Co. International plc and/or Morgan Stanley Europe S.E. and/or RMB Morgan Stanley Proprietary Limited and/or Morgan Stanley MUFG Securities Co., Ltd. and/or Morgan Stanley Capital Group Japan Co., Ltd. and/or Morgan Stanley Asia Limited and/or Morgan Stanley Asia (Singapore) Pte. (Registration number 199206298Z) and/or Morgan Stanley Asia (Singapore) Securities Pte Ltd (Registration number 200008434H), regulated by the Monetary Authority of Singapore (which accepts legal responsibility for its contents and should be contacted with respect to any matters arising from, or in connection with, Morgan Stanley Research) and/or Morgan Stanley Taiwan Limited and/or Morgan Stanley & Co. International plc, Seoul Branch, and/or Morgan Stanley Australia Limited (A.B.N. 67 003 734 576, holder of Australian financial services license No. 233742, which accepts responsibility for its contents), and/or Morgan Stanley Wealth Management Australia Pty Ltd (A.B.N. 19 009 145 555, holder of Australian financial services license No. 240813, which accepts responsibility for its contents), and/or Morgan Stanley India Company Private Limited having Corporate Identification No (CIN) U22990MH1998PTC115305, regulated by the Securities and Exchange Board of India ("SEBI") and holder of licenses as a Research Analyst (SEBI Registration No. INHO0001105), Stock Broker (SEBI Stock Broker Registration No. INMO00011203), and depository participant with National Securities Depository Limited (SEBI Registration No. INDO-NSDL-S67-2021) having registered office at 18th Floor, Tower 2, One World Center, Plot- 841, Jupiter Textle Mill Compound, Senapati Bapat Marg, Lower Parel, Mumbai 400013, India Telephone no. +91-22-61181000; Compliance Officer Details: Mr. Anil Shenoy, Tel. No.: +91-22-61

For important disclosures, stock price charts and equity rating histories regarding companies that are the subject of this report, please see the Morgan Stanley Research Disclosure Website at www.morganstanley.com/researchdisclosures, or contact your investment representative or Morgan Stanley Research at 1585 Broadway, (Attention: Research Management), New York, NY, 10036 USA.

For valuation methodology and risks associated with any recommendation, rating or price target referenced in this research report, please contact the Client Support Team as follows: US/Canada +1 800 303-2495; Hong Kong +852 2848-5999; Latin America +1 718 754-5444 (U.S.); London +44 (0)20-7425-8169; Singapore +65 6834-6860; Sydney +61 (0)2-9770-1505; Tokyo +81 (0)3-6836-9000. Alternatively you may contact your investment representative or Morgan Stanley Research at 1585 Broadway, (Attention: Research Management), New York, NY 10036 USA.

Analyst Certification

The following analysts hereby certify that their views about the companies and their securities discussed in this report are accurately expressed and that they have not received and will not receive direct or indirect compensation in exchange for expressing specific recommendations or views in this report: David S. Adams, CFA; Eli P Carter; Min Dai; Guneet Dhingra, CFA; Marie-Anais C Francois; Francesco Grechi; Matthew Hornbach; Gek Teng Khoo; James K Lord; Wanting Low; Eric S Oynoyan; Zoe K Strauss; Koichi Sugisaki; Lorenzo Testa; Martin W Tobias, CFA; Andrew M Watrous; Ioana Zamfir.

Global Research Conflict Management Policy

Morgan Stanley Research has been published in accordance with our conflict management policy, which is available at www.morganstanley.com/institutional/research/conflictpolicies. A Portuguese version of the policy can be found at www.morganstanley.com.br

Important Regulatory Disclosures on Subject Companies

Within the last 12 months, Morgan Stanley managed or co-managed a public offering (or 144A offering) of securities of Germany, United States of America.

Within the last 12 months, Morgan Stanley has received compensation for investment banking services from Germany.

In the next 3 months, Morgan Stanley expects to receive or intends to seek compensation for investment banking services from Germany, Japan, United Kingdom, United States of America. Within the last 12 months, Morgan Stanley has received compensation for products and services other than investment banking services from Germany.

Within the last 12 months, Morgan Stanley has provided or is providing investment banking services to, or has an investment banking client relationship with, the following company: Germany, Japan, United Kingdom, United States of America.

Within the last 12 months, Morgan Stanley has either provided or is providing non-investment banking, securities-related services to and/or in the past has entered into an agreement to provide services or has a client relationship with the following company: Germany.

The equity research analysts or strategists principally responsible for the preparation of Morgan Stanley Research have received compensation based upon various factors, including quality of research, investor client feedback, stock picking, competitive factors, firm revenues and overall investment banking revenues. Equity Research analysts' or strategists' compensation is not linked to investment banking or capital markets transactions performed by Morgan Stanley or the profitability or revenues of particular trading desks.

Morgan Stanley and its affiliates do business that relates to companies/instruments covered in Morgan Stanley Research, including market making, providing liquidity, fund management, commercial banking, extension of credit, investment services and investment banking. Morgan Stanley sells to and buys from customers the securities/instruments of companies covered in Morgan Stanley Research on a principal basis. Morgan Stanley may have a position in the debt of the Company or instruments discussed in this report. Morgan Stanley trades or may trade as principal in the debt securities (or in related derivatives) that are the subject of the debt research report.

Certain disclosures listed above are also for compliance with applicable regulations in non-US jurisdictions.

STOCK RATINGS

Morgan Stanley uses a relative rating system using terms such as Overweight, Equal-weight, Not-Rated or Underweight (see definitions below). Morgan Stanley does not assign ratings of Buy, Hold or Sell to the stocks we cover. Overweight, Equal-weight, Not-Rated and Underweight are not the equivalent of buy, hold and sell. Investors should carefully read the definitions of all ratings used in Morgan Stanley Research. In addition, since Morgan Stanley Research contains more complete information concerning the analyst's views, investors should carefully read Morgan Stanley Research, in its entirety, and not infer the contents from the rating alone. In any case, ratings (or research) should not be used or relied upon as investment advice. An investor's decision to buy or sell a stock should depend on individual circumstances (such as the investor's existing holdings) and other considerations.

Global Stock Ratings Distribution

(as of October 31, 2023)

The Stock Ratings described below apply to Morgan Stanley's Fundamental Equity Research and do not apply to Debt Research produced by the Firm.

For disclosure purposes only (in accordance with FINRA requirements), we include the category headings of Buy, Hold, and Sell alongside our ratings of Overweight, Equal-weight, Not-Rated

and Underweight. Morgan Stanley does not assign ratings of Buy, Hold or Sell to the stocks we cover. Overweight, Equal-weight, Not-Rated and Underweight are not the equivalent of buy, hold, and sell but represent recommended relative weightings (see definitions below). To satisfy regulatory requirements, we correspond Overweight, our most positive stock rating, with a buy recommendation; we correspond Equal-weight and Not-Rated to hold and Underweight to sell recommendations, respectively.

	Coverage Universe		Investment Banking Clients (IBC)			Other Material Investment Services Clients (MISC)	
Stock Rating Category	Count	% of Total	Count	% of Total IBC	% of Rating Category	Count	% of Total Other MISC
Overweight/Buy	1337	37%	270	43%	20%	594	39%
Equal-weight/Hold	1664	46%	299	47%	18%	700	46%
Not-Rated/Hold	3	0%	0	0%	0%	1	0%
Underweight/Sell	588	16%	61	10%	10%	220	15%
Total	3,592		630			1515	

Data include common stock and ADRs currently assigned ratings. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months. Due to rounding off of decimals, the percentages provided in the "% of total" column may not add up to exactly 100 percent.

Analyst Stock Ratings

Overweight (O or Over) - The stock's total return is expected to exceed the total return of the relevant country MSCI Index or the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis over the next 12-18 months.

Equal-weight (E or Equal) - The stock's total return is expected to be in line with the total return of the relevant country MSCI Index or the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis over the next 12-18 months.

Not-Rated (NR) - Currently the analyst does not have adequate conviction about the stock's total return relative to the relevant country MSCI Index or the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Underweight (U or Under) - The stock's total return is expected to be below the total return of the relevant country MSCI Index or the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Unless otherwise specified, the time frame for price targets included in Morgan Stanley Research is 12 to 18 months.

Analyst Industry Views

Attractive (A): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be attractive vs. the relevant broad market benchmark, as indicated below.

In-Line (I): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be in line with the relevant broad market benchmark, as indicated below. Cautious (C): The analyst views the performance of his or her industry coverage universe over the next 12-18 months with caution vs. the relevant broad market benchmark, as indicated below. Benchmarks for each region are as follows: North America - S&P 500; Latin America - relevant MSCI country index or MSCI Latin America Index; Europe - MSCI Europe; Japan - TOPIX; Asia relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.

Important Disclosures for Morgan Stanley Smith Barney LLC & E*TRADE Securities LLC Customers

Important disclosures regarding the relationship between the companies that are the subject of Morgan Stanley Research and Morgan Stanley Smith Barney LLC or Morgan Stanley or any of their affiliates, are available on the Morgan Stanley Wealth Management disclosure website at www.morganstanley.com/online/researchdisclosures. For Morgan Stanley specific disclosures, you may refer to www.morganstanley.com/researchdisclosures.

Each Morgan Stanley research report is reviewed and approved on behalf of Morgan Stanley Smith Barney LLC and E*TRADE Securities LLC. This review and approval is conducted by the same person who reviews the research report on behalf of Morgan Stanley. This could create a conflict of interest.

Other Important Disclosures

Morgan Stanley & Co. International PLC and its affiliates have a significant financial interest in the debt securities of Germany, Japan, United Kingdom.

Morgan Stanley Research policy is to update research reports as and when the Research Analyst and Research Management deem appropriate, based on developments with the issuer, the sector, or the market that may have a material impact on the research views or opinions stated therein. In addition, certain Research publications are intended to be updated on a regular periodic basis (weekly/monthly/quarterly/annual) and will ordinarily be updated with that frequency, unless the Research Analyst and Research Management determine that a different publication schedule is appropriate based on current conditions.

Morgan Stanley is not acting as a municipal advisor and the opinions or views contained herein are not intended to be, and do not constitute, advice within the meaning of Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act.

Morgan Stanley produces an equity research product called a "Tactical Idea." Views contained in a "Tactical Idea" on a particular stock may be contrary to the recommendations or views expressed in research on the same stock. This may be the result of differing time horizons, methodologies, market events, or other factors. For all research available on a particular stock, please contact your sales representative or go to Matrix at http://www.morganstanley.com/matrix.

Morgan Stanley Research is provided to our clients through our proprietary research portal on Matrix and also distributed electronically by Morgan Stanley to clients. Certain, but not all, Morgan Stanley Research products are also made available to clients through third-party vendors or redistributed to clients through alternate electronic means as a convenience. For access to all available Morgan Stanley Research, please contact your sales representative or go to Matrix at http://www.morganstanley.com/matrix.

Any access and/or use of Morgan Stanley Research is subject to Morgan Stanley's Terms of Use (http://www.morganstanley.com/terms.html). By accessing and/or using Morgan Stanley Research, you are indicating that you have read and agree to be bound by our Terms of Use (http://www.morganstanley.com/terms.html). In addition you consent to Morgan Stanley processing your personal data and using cookies in accordance with our Privacy Policy and our Global Cookies Policy (http://www.morganstanley.com/privacy_pledge.html), including for the purposes of setting your preferences and to collect readership data so that we can deliver better and more personalized service and products to you. To find out more information about how Morgan Stanley

Morgan Stanley | RESEARCH

processes personal data, how we use cookies and how to reject cookies see our Privacy Policy and our Global Cookies Policy (http://www.morganstanley.com/privacy_pledge.html). If you do not agree to our Terms of Use and/or if you do not wish to provide your consent to Morgan Stanley processing your personal data or using cookies please do not access our research. Morgan Stanley Research does not provide individually tailored investment advice. Morgan Stanley Research has been prepared without regard to the circumstances and objectives of those who receive it. Morgan Stanley recommends that investors independently evaluate particular investments and strategies, and encourages investors to seek the advice of a financial adviser. The appropriateness of an investment or strategy will depend on an investor's circumstances and objectives. The securities, instruments, or strategies discussed in Morgan Stanley Research may not be suitable for all investors, and certain investors may not be eligible to purchase or participate in some or all of them. Morgan Stanley Research is not an offer to buy or sell or the solicitation of an offer to buy or sell any security/instrument or to participate in any particular trading strategy. The value of and income from your investments may vary because of changes in interest rates, foreign exchange rates, default rates, prepayment rates, securities/instruments prices, market indexes, operational or financial conditions of companies or other factors. There may be time limitations on the exercise of options or other rights in securities/instruments transactions. Past performance is not necessarily a guide to future performance. Estimates of future performance are based on assumptions that may not be realized. If provided, and unless otherwise stated, the closing price on the cover page is that of the primary exchange for the subject company's securities/instruments.

UPDATE

The fixed income research analysts, strategists or economists principally responsible for the preparation of Morgan Stanley Research have received compensation based upon various factors, including quality, accuracy and value of research, firm profitability or revenues (which include fixed income trading and capital markets profitability or revenues), client feedback and competitive factors. Fixed Income Research analysts, strategists' or economists' compensation is not linked to investment banking or capital markets transactions performed by Morgan Stanley or the profitability or revenues of particular trading desks.

The "Important Regulatory Disclosures on Subject Companies" section in Morgan Stanley Research lists all companies mentioned where Morgan Stanley owns 1% or more of a class of common equity securities of the companies. For all other companies mentioned in Morgan Stanley Research, Morgan Stanley may have an investment of less than 1% in securities/instruments or derivatives of securities/instruments of companies and may trade them in ways different from those discussed in Morgan Stanley Research. Employees of Morgan Stanley not involved in the preparation of Morgan Stanley Research may have investments in securities/instruments or derivatives of securities/instruments of companies mentioned and may trade them in ways different from those discussed in Morgan Stanley Research. Employees of Morgan Stanley not involved in the preparation of Morgan Stanley Research may have investments in securities/instruments or derivatives of securities/instruments of companies mentioned and may trade them in ways different from those discussed in Morgan Stanley Research. Derivatives may be issued by Morgan Stanley or associated persons.

With the exception of information regarding Morgan Stanley, Morgan Stanley Research is based on public information. Morgan Stanley makes every effort to use reliable, comprehensive information, but we make no representation that it is accurate or complete. We have no obligation to tell you when opinions or information in Morgan Stanley Research change apart from when we intend to discontinue equity research coverage of a subject company. Facts and views presented in Morgan Stanley Research have not been reviewed by, and may not reflect information known to, professionals in other Morgan Stanley business areas, including investment banking personnel.

Morgan Stanley Research personnel may participate in company events such as site visits and are generally prohibited from accepting payment by the company of associated expenses unless pre-approved by authorized members of Research management.

Morgan Stanley may make investment decisions that are inconsistent with the recommendations or views in this report.

To our readers based in Taiwan or trading in Taiwan securities/instruments: Information on securities/instruments that trade in Taiwan is distributed by Morgan Stanley Taiwan Limited (*MSTL*). Such information is for your reference only. The reader should independently evaluate the investment risks and is solely responsible for their investment decisions. Morgan Stanley Research may not be distributed to the public media or quoted or used by the public media without the express written consent of Morgan Stanley. Any non-customer reader within the scope of Article 7-1 of the Taiwan Stock Exchange Recommendation Regulations accessing and/or receiving Morgan Stanley Research is not permitted to provide Morgan Stanley Research to any third party (including but not limited to related parties, affiliated companies and any other third parties) or engage in any activities regarding Morgan Stanley Research which may create or give the appearance of creating a conflict of interest. Information on securities/instruments that do not trade in Taiwan is for informational purposes only and is not to be construed as a recommendation or a solicitation to trade in such securities/instruments. MSTL may not execute transactions for clients in these securities/instruments.

Certain information in Morgan Stanley Research was sourced by employees of the Shanghai Representative Office of Morgan Stanley Asia Limited for the use of Morgan Stanley Asia Limited. Morgan Stanley is not incorporated under PRC law and the research in relation to this report is conducted outside the PRC. Morgan Stanley Research does not constitute an offer to sell or the solicitation of an offer to buy any securities in the PRC. PRC investors shall have the relevant qualifications to invest in such securities and shall be responsible for obtaining all relevant approvals, licenses, verifications and/or registrations from the relevant governmental authorities themselves. Neither this report nor any part of it is intended as, or shall constitute, provision of any consultancy or advisory service of securities investment as defined under PRC law. Such information is provided for your reference only.

Morgan Stanley Research is disseminated in Brazil by Morgan Stanley C.T.V.M. S.A. located at Av. Brigadeiro Faria Lima, 3600, 6th floor, São Paulo - SP, Brazil; and is regulated by the Comissão de Valores Mobiliários; in Mexico by Morgan Stanley México, Casa de Bolsa, S.A. de C.V which is regulated by Comision Nacional Bancaria y de Valores. Paseo de los Tamarindos 90, Torre 1, Col. Bosques de las Lomas Floor 29, 05120 Mexico City; in Japan by Morgan Stanley MUFG Securities Co., Ltd. and, for Commodities related research reports only, Morgan Stanley Capital Group Japan Co., Ltd; in Hong Kong by Morgan Stanley Asia Limited (which accepts responsibility for its contents) and by Morgan Stanley Bank Asia Limited; in Singapore by Morgan Stanley Asia (Singapore) Pte. (Registration number 199206298Z) and/or Morgan Stanley Asia (Singapore) Securities Pte Ltd (Registration number 200008434H), regulated by the Monetary Authority of Singapore (which accepts legal responsibility for its contents and should be contacted with respect to any matters arising from, or in connection with, Morgan Stanley Research) and by Morgan Stanley Bank Asia Limited, Singapore Branch (Registration number T14FC0118)); in Australia to "wholesale clients" within the meaning of the Australian Corporations Act by Morgan Stanley Australia Limited A.B.N. 67 003 734 576, holder of Australian financial services license No. 233742, which accepts responsibility for its contents; in Australia to "wholesale clients" and "retail clients" within the meaning of the Australian Corporations Act by Morgan Stanley Wealth Management Australia Pty Ltd (A.B.N. 19 009 145 555, holder of Australian financial services license No. 240813, which accepts responsibility for its contents; in Korea by Morgan Stanley & Co International plc, Seoul Branch; in India by Morgan Stanley India Company Private Limited having Corporate Identification No (CIN) U22990MH1998PTC115305, regulated by the Securities and Exchange Board of India ("SEBI") and holder of licenses as a Research Analyst (SEBI Registration No. INH000001105); Stock Broker (SEBI Stock Broker Registration No. INZ000244438), Merchant Banker (SEBI Registration No. INM000011203), and depository participant with National Securities Depository Limited (SEBI Registration No. IN-DP-NSDL-567-2021) having registered office at 18th Floor, Tower 2, One World Center, Plot-841, Jupiter Textile Mill Compound, Senapati Bapat Marg, Lower Parel, Mumbai 400013, India Telephone no. +91-22-61181000; Compliance Officer Details: Mr. Anil Shenoy, Tel. No.: +91-22-61181000 or Email: Anil.Shenoy@morganstanley.com; Grievance officer details: Mr. Anil Shenoy, Tel. No.: +91-22-61181000 or Email: msic-compliance@morganstanley.com; in Canada by Morgan Stanley Canada Limited; in Germany and the European Economic Area where required by Morgan Stanley Europe S.E., authorised and regulated by Bundesanstalt fuer Finanzdienstleistungsaufsicht (BaFin) under the reference number 149169; in the US by Morgan Stanley & Co. LLC, which accepts responsibility for its contents. Morgan Stanley & Co. International plc, authorized by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority, disseminates in the UK research that it has prepared, and research which has been prepared by any of its affiliates, only to persons who (i) are investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended, the "Order"); (ii) are persons who are high net worth entities falling within Article 49(2)(a) to (d) of the Order; or (iii) are persons to whom an invitation or inducement to engage in investment activity (within the meaning of section 21 of the Financial Services and Markets Act 2000, as amended) may otherwise lawfully be communicated or caused to be communicated. RMB Morgan Stanley Proprietary Limited is a member of the JSE Limited and A2X (Pty) Ltd. RMB Morgan Stanley Proprietary Limited is a joint venture owned equally by Morgan

Morgan Stanley | RESEARCH

Stanley International Holdings Inc. and RMB Investment Advisory (Proprietary) Limited, which is wholly owned by FirstRand Limited. The information in Morgan Stanley Research is being disseminated by Morgan Stanley Saudi Arabia, regulated by the Capital Market Authority in the Kingdom of Saudi Arabia, and is directed at Sophisticated investors only.

The information in Morgan Stanley Research is being communicated by Morgan Stanley & Co. International plc (DIFC Branch), regulated by the Dubai Financial Services Authority (the DFSA), and is directed at Professional Clients only, as defined by the DFSA. The financial products or financial services to which this research relates will only be made available to a customer who we are satisfied meets the regulatory criteria to be a Professional Client. A distribution of the different MS Research ratings or recommendations, in percentage terms for Investments in each sector covered, is available upon request from your sales representative.

The information in Morgan Stanley Research is being communicated by Morgan Stanley & Co. International plc (QFC Branch), regulated by the Qatar Financial Centre Regulatory Authority (the QFCRA), and is directed at business customers and market counterparties only and is not intended for Retail Customers as defined by the QFCRA.

As required by the Capital Markets Board of Turkey, investment information, comments and recommendations stated here, are not within the scope of investment advisory activity. Investment advisory service is provided exclusively to persons based on their risk and income preferences by the authorized firms. Comments and recommendations stated here are general in nature. These opinions may not fit to your financial status, risk and return preferences. For this reason, to make an investment decision by relying solely to this information stated here may not bring about outcomes that fit your expectations.

The trademarks and service marks contained in Morgan Stanley Research are the property of their respective owners. Third-party data providers make no warranties or representations relating to the accuracy, completeness, or timeliness of the data they provide and shall not have liability for any damages relating to such data. The Global Industry Classification Standard (GICS) was developed by and is the exclusive property of MSCI and S&P.

Morgan Stanley Research, or any portion thereof may not be reprinted, sold or redistributed without the written consent of Morgan Stanley.

Indicators and trackers referenced in Morgan Stanley Research may not be used as, or treated as, a benchmark under Regulation EU 2016/1011, or any other similar framework.

The issuers and/or fixed income products recommended or discussed in certain fixed income research reports may not be continuously followed. Accordingly, investors should regard those fixed income research reports as providing stand-alone analysis and should not expect continuing analysis or additional reports relating to such issuers and/or individual fixed income products. Morgan Stanley may hold, from time to time, material financial and commercial interests regarding the company subject to the Research report.

Registration granted by SEBI and certification from the National Institute of Securities Markets (NISM) in no way guarantee performance of the intermediary 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.

The following authors are Fixed Income Research Analysts/Strategists and are not opining on or expressing recommendations on equity securities: Min Dai; David S. Adams, CFA; Eli P Carter; Koichi Sugisaki; James K Lord; Eric S Oynoyan; Zoe K Strauss; Marie-Anais C Francois; Francesco Grechi; Matthew Hornbach; Ioana Zamfir; Gek Teng Khoo; Guneet Dhingra, CFA; Martin W Tobias, CFA; Andrew M Watrous; Lorenzo Testa.

The following authors are neither Equity Research Analysts/Strategists nor Fixed Income Research Analysts/Strategists and are not opining on or expressing recommendations on equity or fixed income securities: Sarah A Wolfe; Lenoy Dujon.

© 2023 Morgan Stanley