

Global Data Watch

- Raising our sights on current-quarter growth and inflation
- Case for DM CB pause fades; risk of material synchronized hikes rises
- China reopening bounce boosted by fading housing drag
- Next week: Global flash mfg PMI rebounds; big gains in US PCE

Longer, higher, deeper

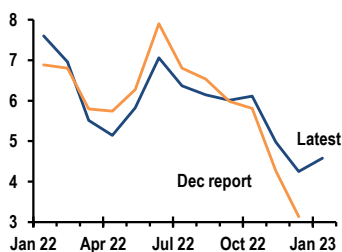
There are good reasons to discount the strength of US activity and inflation readings last month. Already challenging seasonality around the turn is being magnified by mild January weather, both of which are being potentially amplified by the unprecedented volatility since the pandemic. Nevertheless, it would be a mistake to ignore the signals that are challenging widely held views. The most obvious challenge is to the call for the US economy to slide into recession early this year. Smoothing through the recent volatility, we see US GDP tracking 2%ar growth this quarter. A second challenge is to the belief that global core inflation is on a path to central bank comfort zones. Instead, global core inflation surprised to the upside last month and is rising above a 4%ar in the three months through January. Much of the surprise comes from the US, where an encouraging drop in core CPI inflation to 3.1%ar in the last three months of 2022 was revised away this week. Together with January's 0.4% increase, the US core CPI is now running at a 4.5%ar over the past four months—a material change in the inflation narrative (Figure 1).

It is natural to simply extend horizons a few months for the timing of a coming US recession and global inflation slide. While sympathetic to the view that the current expansion could be short-lived, the latest news boosts the risks that the coming recession will take longer to materialize, require higher policy rates, and prove deeper than is generally expected. Supporting this view are important underlying signals from recent data flow:

- **Higher nominal growth means stronger profits.** Recession narratives (including our own) rest on building pressure that elicits a

Figure 1: US core CPI

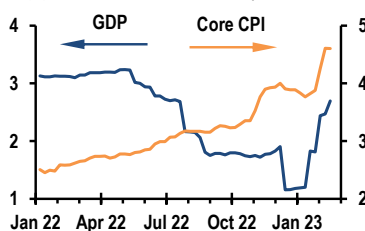
%3m, saar



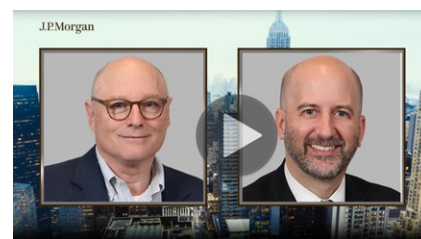
Source: BLS, J.P. Morgan

Figure 2: J.P Morgan 1Q23 global forecasts

%q/q saar; both scales; forecast by date made



Source: J.P. Morgan Global Economics



Economic and Policy Research

Bruce Kasman

(1-212) 834-5515
bruce.c.kasman@jpmorgan.com

Joseph Lupton

(1-212) 834-5735
joseph.p.lupton@jpmorgan.com

Michael S Hanson

(1-212) 622-8603
michael.s.hanson@jpmchase.com
JPMorgan Chase Bank NA

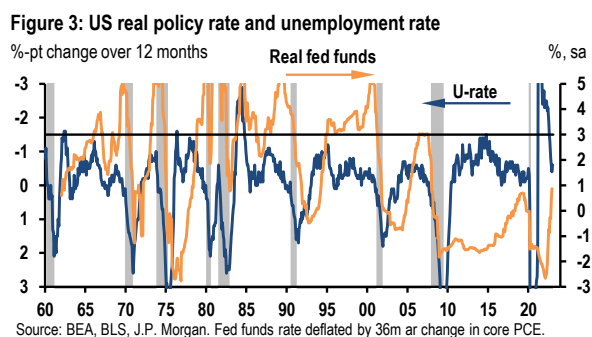
Contents

When you wish upon r*	10
Euro area consumption to improve, not bounce	14
South Africa: Tightrope of fiscal trade-offs	17
Turkey: The economic implications of the earthquake	20
Australia: The writing on the wall	22
China: The scale and impact of excess saving	24
Expected turn in Singapore's core CPI places MAS on hold	28
India: Inflation convergence	31
Global Economic Outlook Summary	4
Global Central Bank Watch	6
Nowcast of global growth	7
Selected recent research from J.P. Morgan Economics	9
Data Watches	
United States	33
Euro area	41
Japan	46
Canada	50
Mexico	52
Brazil	54
Argentina	56
Andeans	58
United Kingdom	60
Sweden and Norway	63
Emerging Europe	65
South Africa	70
Australia and New Zealand	72
China, Hong Kong, and Taiwan	74
Korea	76
ASEAN	78
India	82
Asia focus	84
Regional Data Calendars	85

See page 94 for analyst certification and important disclosures.

pullback in business spending and hiring. Although credit conditions are tightening, the health of corporate balance sheets limits the immediate impact of this channel. A decline in earnings would be a more powerful lever, but the upward revisions to near-term growth and inflation forecasts suggest pressure is more limited than expected at this stage. Indeed, we have revised up annualized global GDP growth projections by 1.2%-pts on average for the current and past quarters (Figure 2). In the US, revisions to real growth and inflation place nominal GDP growth at a roughly 6%*ar* over this period—a revenue backdrop that should support solid profit gains.

• **When you wish upon r^* .** Central banks continue to tighten and the drag from this dramatic change in monetary conditions remains the biggest threat to the expansion. However, in the aftermath of the pandemic shock, dramatic changes have taken place in key areas that had depressed neutral policy rates in the last decade. US real policy rates remain well below levels that have historically been associated with recession (Figure 3). Thus, if the past year’s policy tightening does not deliver a slide into recession soon, rising estimates of neutral rates are likely to pressure DM central banks to hike further later this year.



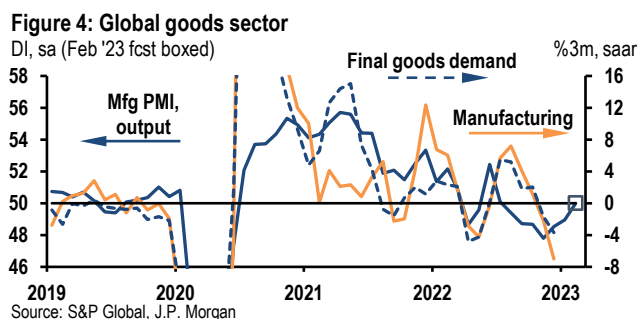
• **Inflation risks are synchronized.** It will take time to ascertain the magnitude of the inflation unwind now underway. However, the latest news shows widespread growth resilience, further labor market tightness, and core inflation persistence—suggesting that the coming inflation slide will be incomplete across a broad set of economies. Experience shows that global downturns are amplified when synchronized. While there are good reasons to see the next recession as milder than average (healthy balance sheets, modest investment cycles, and businesses that are reticent to shed hard-to-find labor), the pressure for more central bank tightening across economies risks a more synchronized and thus deeper downturn.

Last week we discussed a “boiling the frog” scenario, in which central banks are unable to pause and continue to lean

against tight labor markets and an incomplete inflation slide. If this dynamic incorporates incremental 25bp adjustments across the DM, the combination of resilient growth and slow-moving central banks could sustain positive risk appetites in markets. It would, however, lay the groundwork for a more synchronized downturn. The immediate risk to this scenario is the possibility that central banks move more quickly. Markets are now pricing in some chance of a 50bp Fed hike in March, an outcome that would likely become an active topic of debate if February data reinforce January’s upside surprises. If the Fed took such action, it could generate strong negative repercussions in markets.

Global goods sector woes to recovery

While we feel confident that the global economy will avoid a recession in 1H23, global manufacturing is in the midst of a downturn. Output dropped 7%*ar* over the three months through December (Figure 4). Regionally, weakness was concentrated in Asia, where output fell at a double-digit pace. Some of the pullback was anticipated as the pace of inventory growth looked to have gotten ahead of demand, but an estimated 3.7%*ar* tumble in our global final goods demand proxy over the same period raised concern.



There are tentative signs of improvement from surveys. After ticking up in December, our global manufacturing output PMI expanded further in January. We look for the global index to firm 1-point this month—supported by an expected 1.2-point gain in the DM from next week’s flash readings. There are limited activity readings to support this view beyond the US January output rebound and the rise in Korean exports in early February, but they raise our confidence. On the demand side, our nowcasters point to a stall in business equipment spending in the first two months of the year, with global capex tracking a soft 1%*ar* this quarter. However, the news on the consumer is improving. While global auto sales slumped in January, this owed entirely to a holiday- and policy-related downturn in China that offset a 4%*m/m* gain elsewhere. Similarly, this week’s US retail sales show spending bouncing back sharply after earlier declines. On balance, we expect final goods demand growth to turn positive this quarter, led by consumer spending. If right, this will help drive the inven-

tory correction and promote a modest lift in global industry that is consistent with our global outlook.

Debt dynamics divide DM CBs

As central banks consider further tightening, questions about the interest sensitivity of household balance sheets come to the fore. This issue is particularly salient in Canada and Scandinavia. In Canada, household debt as a share of disposable income has risen significantly and now stands around 170%—30%-pts above its pre-GFC value—whereas in the US it has declined 30%-pts from its pre-GFC peak to around 90%. As interest rates have jumped, Canada's mortgage debt service ratio climbed to 18.7% in 3Q22 from 16.3% before the start of the tightening cycle. (By contrast, at 4% the US ratio remains just below its pre-pandemic value through 3Q22.)

The Scandies also face particularly elevated debt levels and a high proportion of borrowers sensitive to short-term rate fluctuations. Canada and Sweden are the only two DM economies whose debt service ratios were higher in 2Q22 than pre-pandemic. Sizable declines in house prices from last year's peaks are also pressuring indebted homeowners in both countries; prices are down more modestly in Norway so far. While these economies' central banks all retain a hawkish bias for now, the BoC has already announced a pause and we think interest sensitivity concerns will put a ceiling on how much further the Riksbank and Norges Bank can go.

By contrast, the BoE's reluctance to hike significantly above current levels reflects concerns about long lags in the transmission mechanism rather than especially high interest sensitivity. The average duration of UK mortgages is now much longer than in past hiking cycles with variable-rate mortgages falling to 16% of the total—down 10%-pts from before the pandemic. Against this backdrop, we think the BoE will continue to hike next quarter as it responds to inflation risks associated with tight labor markets.

Hints of bottoming in China housing

Policy supports are complementing reopening dynamics in China. Along with stronger-than-expected credit extension in January, the pace of special local government bond issuance is on track to fulfill the ¥411bn (0.3% of GDP) issuance schedule in February, making combined Jan-Feb issuance the second highest on record. Recent easing measures look to be getting some traction. The pace of daily housing transaction declines looks to be moderating, while home prices stabilized in January after declining for 11 consecutive months. At the same time, mobility data continue to recover: our subway traffic index reached 20% higher than its 2019 average, domestic flights stabilized above 90% of their 2019 average,

and international flights are now 16.6% of the pre-pandemic level. While auto sales collapsed in January, we attribute much of the drop to the expiration of incentives and Lunar New Year seasonals.

Israel to tighten more

Mirroring a broader global trend among recent data, incoming releases suggest Israel's growth is holding up better than expected while inflation remains stickier. In 4Q22 GDP grew a surprising 5.8%*ar*, underpinned by strong domestic demand. Inflation accelerated to 5.4%*ooya* as price pressures broadened. Combined with fiscal uncertainty, judicial reform tensions, higher DM rates, and a weaker currency, pressure on the BoI to tighten further is growing. We stick to our call for a 25bp move at the upcoming meeting, but raise our expected terminal rate to 4.25%. Risks are clearly skewed toward a larger hike next week and an even higher terminal rate.

Short-circuiting South Africa's budget

Favorable terms of trade have buoyed the South African government's finances over the past two years, and authorities set ambitious targets for fiscal consolidation and a lower debt ratio from next year. But an electricity crisis (with four to eight hours of rotating cuts per day) has dimmed the growth outlook. The SARB sees this situation extending into next year, shaving 2%-pts off of 2023 growth. An outlook for sub-1% growth will dull the appetite for real expenditure cuts set out in October, in our view. Assuming a large part of the electricity utility's debt will also lift government spending. We expect a plan to hold the fiscal deficit at around 4.8% of GDP, although the realized level will likely be 5.3% this year. That won't be enough to stabilize the debt level or avoid concerns about the fiscal outlook later this year.

ASEAN central bank paths diverge

We forecast ASEAN central banks to diverge due to anticipated differences in inflation outcomes. We expect central banks in Indonesia, Malaysia, and Singapore to remain on hold but have further hikes penciled in for Thailand, where concerns about escalating labor costs and a broadening of demand-side pressures as Chinese tourists return take precedence over an easing of commodity prices. In the Philippines, the BSP once again hiked 50bp this week, bringing the policy rate to 6%. The January CPI surprised materially to the upside, with rising services inflation and higher inflation expectations pointing to potential further strength. We now pencil in a 25bp move for March, with risks of a 50bp move if February delivers another upside inflation surprise.

Global Economic Outlook Summary

	Real GDP			Real GDP						Consumer prices			
	% over a year ago			% over previous period, saar						% over a year ago			
	2022	2023	2024	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23	2Q22	4Q22	2Q23	4Q23
United States	2.1	1.6 ↑	0.4	3.2	2.9	<u>2.0</u> ↑	0.8	0.5	-0.5	8.6	7.1	4.1	3.2 ↑
Canada	3.6	1.1	1.5	2.9	1.3	0.3	0.3	0.8	1.0	7.5	6.7	3.2	2.0
Latin America	3.6	0.7	1.0 ↑	2.6 ↓	<u>0.5</u> ↑	-0.5 ↓	0.5 ↑	0.5 ↑	0.8	9.7	8.0	5.7	5.5
Argentina	5.4	-0.5	-2.0	7.0	<u>-3.2</u>	-1.5	-2.0	-2.0	0.0	61.8	92.0	104.2	108.5
Brazil	3.0	0.5	1.0	1.6	<u>-0.4</u>	-0.4	0.4	0.6	0.8	11.9	6.1	3.5	5.6
Chile	2.7	-1.0	2.3	-4.6	<u>2.5</u>	-2.5	-1.7	1.0	2.5	11.5	12.8	8.5	5.2
Colombia	7.5 ↓	0.9	2.0	1.9 ↓	2.7 ↑	<u>-3.0</u> ↓	2.0	1.5	1.5	9.3	12.6	12.2	8.1
Ecuador	2.9	2.5	2.5	6.8	1.0	2.5	1.5	3.0	2.5	3.5	3.8	2.2	2.4
Mexico	3.0	1.4	0.9	3.6	1.8	<u>0.7</u>	0.8	0.3	0.5	7.8	8.0	6.0	5.0
Peru	2.7	2.1 ↑	2.8 ↑	4.8	1.3 ↑	-1.1 ↓	4.9 ↑	3.2 ↑	0.0 ↓	3.6	8.5	6.5	4.2
Uruguay	5.3	1.9	2.0	-0.3	<u>0.6</u>	2.5	2.0	1.5	1.0	9.3	8.3	6.6	6.5
Asia/Pacific	3.2	4.0	4.1	6.1	<u>2.2</u> ↓	5.0	5.2	4.0	4.2	3.2	3.4	2.4	2.8
Japan	1.0 ↓	0.7	0.5	-1.0 ↓	0.6	<u>1.2</u>	0.5	0.2	0.2	2.4	3.9	2.3	2.3
Australia	3.6	2.5	2.5	2.6	<u>2.4</u>	2.5	2.6	1.8	2.2	6.1	7.6	5.6	3.5
New Zealand	2.8	2.8	2.1	8.3	<u>1.7</u>	1.8	0.5	2.3	2.1	7.3	7.2	5.6	3.4
EM Asia	3.6	4.8	4.9	7.6	<u>2.5</u> ↓	5.9	6.2	4.8	5.1	3.1	3.0	2.2	2.8
China	3.0	5.6	5.6	10.1	3.0	<u>7.0</u>	7.4	5.5	6.1	2.2	1.8	1.4	2.7
India	6.9	5.0	5.0	2.0	<u>5.5</u>	5.4	5.3	5.1	4.8	7.3	6.1	5.1 ↑	5.6
Ex China/India	3.5	2.1	2.7	2.8 ↓	<u>-0.4</u> ↓	3.0	3.1	2.5	2.2	4.3	5.1	3.5	2.6
Hong Kong	-3.5	2.2	3.8	-10.3	0.0	<u>4.5</u>	6.0	6.0	4.2	1.5	1.8	2.6	2.6
Indonesia	5.3	3.1	4.1	0.1	5.2	<u>4.0</u>	3.8	3.8	3.5	3.8	5.5	3.6	2.6
Korea	2.6	1.1	1.7	1.3	-1.5	<u>2.3</u>	1.5	1.0	1.0	5.4	5.2	3.6	2.9
Malaysia	8.7	3.4	3.0	7.7	-10.0	<u>6.0</u>	6.0	3.0	2.5	2.8	3.9	2.8	2.2
Philippines	7.6	4.6	3.6	13.9	10.1	<u>4.0</u>	3.8	3.8	3.5	5.5	7.9	6.7	3.7
Singapore	3.6 ↑	1.3	0.6	3.2 ↓	0.3 ↓	<u>1.3</u>	1.0	0.5	0.3	5.9	6.6 ↑	4.7	2.8
Taiwan	2.4	1.2	2.5	7.5	-4.3	<u>1.5</u>	4.2	2.7	2.0	3.5	2.6	1.8	2.0
Thailand	2.6 ↓	2.7	2.9	4.4 ↓	-5.9 ↓	<u>3.2</u>	2.7	2.5	2.7	6.5	5.8 ↓	3.3	2.2
Western Europe	3.6	0.9	0.8	1.0	<u>0.3</u>	0.6	1.1	1.4	0.5	8.2	10.1	6.0 ↑	2.5
Euro area	3.5	1.2	0.9	1.2	0.4 ↓	<u>1.0</u>	1.5	1.5	0.5	8.0	10.0	5.7	2.2
Germany	1.9	0.8	0.9	1.9	-1.0	<u>1.0</u>	1.5	1.5	0.5	8.3	10.8	6.7	2.2
France	2.6	1.0	0.9	0.7	0.5	<u>1.0</u>	1.5	1.5	0.5	5.9	7.0	5.0	2.8
Italy	3.9	1.1	1.0	2.0	-0.5	<u>0.0</u>	2.0	1.8	0.8	7.4	12.5	7.0	1.0
Spain	5.5	1.8	1.4	0.9	0.9	<u>1.0</u>	2.3	2.0	1.3	8.9	6.5	3.9	3.3
Norway	3.8 ↑	0.8 ↑	0.8	2.3 ↓	3.4 ↑	-2.0	0.3	0.5	0.5	5.8	6.6	4.7	2.6
Sweden	2.8	-0.5	0.6	2.4	-2.4	<u>-2.5</u>	0.0	0.8	0.3	7.4	11.6	9.5	4.6
United Kingdom	4.0	0.1	0.6	-0.7	0.1	<u>-0.3</u>	-0.2	1.4	0.8	9.2	10.8	6.6 ↑	3.2 ↓
EMEA EM	2.2 ↓	1.3	2.4 ↑	1.9	1.8 ↓	1.8 ↓	2.4 ↑	1.2 ↑	0.8	23.4	23.5	13.2 ↑	12.4 ↑
Czech Republic	2.5	1.2	2.2	-1.0	-1.1	<u>2.0</u>	2.3	2.5	2.3	15.8	15.7	11.6	8.8
Hungary	4.6 ↓	1.3	2.6	-2.8 ↓	-1.6 ↑	<u>2.5</u>	2.3	3.0	2.5	10.6	22.7	24.1	11.8
Israel	6.4	3.0 ↑	2.9 ↓	2.1 ↑	5.8 ↑	<u>2.3</u> ↓	2.3	1.8 ↓	1.5	4.2	5.2	4.5 ↑	3.2 ↑
Poland	4.9 ↓	1.5	2.8	4.1	-9.3 ↓	<u>1.5</u>	2.3	2.8	3.0	13.9	17.3	14.3	8.9
Romania	4.8 ↓	3.7 ↑	4.5	4.8 ↓	4.4 ↑	<u>3.2</u> ↑	3.6	2.8 ↓	2.8 ↓	14.4	16.2 ↑	9.9 ↓	6.9 ↓
Russia	-2.0	0.2	2.0	1.4	<u>5.5</u>	0.5	1.0	1.5	1.8	16.9	12.2	3.2	5.1
South Africa	2.4	0.7	0.6	6.6	<u>-1.5</u>	1.0	1.0	0.5	-1.5	6.6	7.4	5.8 ↑	4.7 ↑
Turkey	5.3 ↑	2.1	2.7 ↑	-0.5	2.9 ↑	4.5 ↓	6.0 ↑	-2.0 ↑	-4.0 ↓	74.1	77.4	42.0 ↑	44.0 ↑
Global	3.0	2.3 ↑	2.1 ↑	3.7 ↓	<u>1.9</u>	2.7 ↑	2.6	2.1 ↑	1.7	7.2	7.3	4.4	3.5 ↑
Developed markets	2.6	1.3 ↑	0.7	2.0	<u>1.6</u>	1.3 ↑	0.9	0.9	0.1	7.7	7.9	4.6	2.8
Emerging markets	3.4	3.8	4.1 ↑	6.2 ↓	2.2 ↓	4.6 ↓	5.0 ↑	3.8 ↑	4.0	6.6	6.4	4.1 ↑	4.4
Emerging ex China	3.8	2.1 ↑	2.6 ↑	2.4 ↓	1.4 ↓	2.3 ↓	2.7 ↑	2.1 ↑	1.9	11.0	10.9	6.8 ↑	6.2 ↑
Global — PPP weighted	3.4	2.7 ↑	2.5 ↑	3.9	<u>2.0</u> ↓	2.9 ↑	2.9	2.5	2.2	8.2	8.1 ↓	5.0 ↑	4.3

Source: Government agencies and J.P. Morgan Global Economics. Details on request. Note: For some emerging economies seasonally adjusted GDP data are estimated by J.P. Morgan. Bold denotes changes from last edition of *Global Data Watch*, with arrows showing the direction of changes. Underline indicates beginning of J.P. Morgan forecasts. Unless noted, concurrent nominal GDP weights calculated with current FX rates are used in computing our global and regional aggregates. Regional CPI aggregates exclude Argentina and Ecuador. Source: J.P. Morgan. Any long-form nomenclature for references to China; Hong Kong; and Taiwan within this research material is Mainland China; Hong Kong SAR (China) and Taiwan (China).

G-3 economic outlook detail

	2022	2023	2024	2022	2023				2024
				4Q	1Q	2Q	3Q	4Q	1Q
United States									
Real GDP	2.1	1.6	0.4	2.9	2.0	0.8	0.5	-0.5	-0.5
Private consumption	2.8	2.1	1.2	2.1	3.1	1.8	1.3	0.8	0.4
Equipment investment	4.3	-0.1	-0.2	-3.7	-3.0	2.0	1.0	-4.0	-4.0
Non-residential construction	-7.4	-0.8	-0.3	0.4	-2.0	4.0	3.5	-4.0	-4.0
Intellectual property products	8.7	5.6	4.4	5.3	5.5	5.5	5.5	2.0	2.0
Residential construction	-10.7	-15.1	-3.1	-26.7	-7.3	-9.0	-8.0	-5.0	-4.0
Inventory change (\$ bn saar)	123.3	92.5	44.9	129.9	93.7	112.9	109.9	53.3	8.1
Government spending	-0.6	1.5	0.0	3.7	1.4	0.3	0.1	0.2	0.2
Exports of goods and services	7.2	1.5	-3.0	-1.3	2.0	-3.3	-3.3	-3.3	-3.0
Imports of goods and services	8.1	-1.3	0.1	-4.6	-1.0	4.3	1.0	-4.0	-4.0
Domestic final sales contribution	1.7	1.3	1.0	0.9	2.3	1.6	1.2	0.2	0.0
Inventories contribution	0.8	-0.2	-0.2	1.5	-0.7	0.4	-0.1	-1.1	-0.9
Net trade contribution	-0.3	0.4	-0.4	0.6	0.4	-1.2	-0.6	0.4	0.4
Consumer prices (%oya)	8.0	4.1	2.6	7.1	5.8	4.1	3.6	3.2	2.8
Excluding food and energy (%oya)	6.1	4.5	2.7	6.0	5.4	4.9	4.2	3.5	3.0
Core PCE deflator (%oya)	5.0	3.7	2.3	4.7	4.3	3.9	3.5	3.0	2.6
Federal budget balance (% of GDP, FY)	-5.4	-3.9	-4.4						
Personal saving rate (%)	3.3	3.0	2.2	2.9	3.4	3.3	2.9	2.7	2.5
Unemployment rate (%)	3.6	3.7	4.9	3.6	3.4	3.5	3.8	4.1	4.5
Industrial production, manufacturing	3.1	-0.6	-0.6	-2.5	-0.8	0.5	0.2	-3.0	-3.0
Euro area									
Real GDP	3.5	1.2	0.9	0.4	1.0	1.5	1.5	0.5	0.3
Private consumption	4.1	1.3	0.9	-2.0	2.0	1.5	1.3	0.8	0.3
Capital investment	4.3	2.5	1.0	-2.0	1.0	2.0	1.5	1.0	0.0
Government consumption	1.2	1.1	0.7	1.0	1.5	1.5	1.0	1.0	0.5
Exports of goods and services	7.5	4.1	3.8	3.0	3.0	4.0	4.0	4.0	3.5
Imports of goods and services	8.7	5.5	4.0	3.0	3.0	4.0	4.3	4.3	3.8
Domestic final sales contribution	3.3	1.4	0.8	-1.3	1.6	1.5	1.2	0.8	0.2
Inventories contribution	0.4	0.3	0.0	1.6	-0.7	-0.2	0.3	-0.3	0.0
Net trade contribution	-0.2	-0.5	0.0	0.1	0.1	0.1	0.0	0.0	0.0
Consumer prices (HICP, %oya)	8.4	4.8	2.0	10.0	7.6	5.7	4.0	2.2	2.1
ex food, alcohol and energy	3.9	4.2	2.2	5.1	5.2	4.7	4.0	3.1	2.4
General govt. budget balance (% of GDP, FY)	-3.7	-3.2	-3.1						
Unemployment rate (%)	6.7	6.6	6.8	6.6	6.6	6.6	6.6	6.7	6.8
Industrial production	0.7	1.0	1.7	-2.0	1.0	2.0	3.0	2.0	1.0
Japan									
Real GDP	1.0	0.7	0.5	0.6	1.2	0.5	0.2	0.2	0.6
Private consumption	2.1	1.7	0.8	2.0	2.0	1.2	1.0	0.8	0.8
Business investment	1.9	1.4	0.5	-2.1	3.0	1.0	-3.0	-1.0	1.0
Residential construction	-4.7	-1.1	0.1	-0.5	0.5	-1.0	-1.5	-1.5	1.0
Public investment	-7.1	-0.3	-0.5	-2.1	-0.5	-0.5	-0.5	-0.5	-0.5
Government consumption	1.5	0.2	-0.6	1.3	0.0	-2.0	0.0	1.0	-1.0
Exports of goods and services	4.9	2.0	0.2	5.7	-2.0	0.5	-1.0	-1.0	0.5
Imports of goods and services	7.9	2.1	0.3	-1.6	-1.0	-0.5	-1.0	-1.0	1.0
Domestic final sales contribution	1.2	1.1	0.4	0.9	1.6	0.3	0.0	0.4	0.4
Inventories contribution	0.4	-0.4	0.1	-1.7	-0.2	0.0	0.2	-0.2	0.3
Net trade contribution	-0.6	0.0	0.0	1.4	-0.2	0.2	0.0	0.0	-0.1
Consumer prices (%oya)	2.5	2.4	2.6	3.9	3.0	2.3	1.9	2.3	2.7
ex food and energy	-0.1	1.9	1.8	1.4	2.1	1.9	1.6	2.0	1.9
General govt. net lending (% of GDP, CY)	-6.9	-7.1	..						
Unemployment rate (%)	2.6	2.4	2.4	2.5	2.4	2.4	2.4	2.4	2.4
Industrial production	0.1	1.0	1.0	-12.1	1.0	4.0	3.0	-2.0	1.5
Memo: Global industrial production	1.1	1.1	1.1	-2.9	0.8	2.9	2.6	1.0	1.0
%oya				1.1	0.1	1.6	0.9	1.9	1.9

Source: Government agencies and J.P. Morgan Global Economics. Details on request.

Global Central Bank Watch

	Official rate	Current rate (%pa)	4-qrtr change (bp)		Last change	Next mtg	Forecast next change	Forecast (%pa)				
			Last	Next				Mar 23	Jun 23	Sep 23	Dec 23	Mar 24
Global		4.07	239	42				4.22	4.34	4.54	4.49	4.42
excluding US		3.82	173	39				3.93	4.01	4.28	4.21	4.12
Developed		3.49	332	49				3.77	3.98	3.98	3.98	3.94
Emerging		4.91	104	31				4.86	4.86	5.35	5.22	5.12
Latin America		12.15	449	-89				12.26	12.23	11.96	11.25	10.64
EMEA EM		7.40	41	349				7.26	7.29	10.93	10.89	10.64
EM Asia		3.41	66	-11				3.35	3.35	3.35	3.29	3.29
The Americas		5.70	448	28				5.91	6.11	6.08	5.98	5.87
United States	Fed funds	4.75	450	50	1 Feb 23 (+25bp)	22 Mar 23	Mar 23 (+25bp)	5.00	5.25	5.25	5.25	5.25
Canada	O/N rate	4.50	425	0	25 Jan 23 (+25bp)	8 Mar 23	1Q 24 (-50bp)	4.50	4.50	4.50	4.50	4.00
Brazil	SELIC O/N	13.75	300	-100	3 Aug 22 (+50bp)	22 Mar 23	Nov 23 (-50bp)	13.75	13.75	13.75	12.75	11.75
Mexico	Repo rate	11.00	505	50	9 Feb 23 (+50bp)	30 Mar 23	30 Mar 23 (+25bp)	11.25	11.50	11.50	11.50	11.50
Chile	Disc rate	11.25	575	-325	13 Oct 22 (+50bp)	4 Apr 23	May 23 (-50bp)	11.25	10.25	9.25	8.00	7.25
Colombia	Repo rate	12.75	875	-275	27 Jan 23 (+75bp)	31 Mar 23	31 Mar 23 (+25bp)	13.00	13.00	11.50	10.00	9.00
Peru	Reference	7.75	425	-225	12 Jan 23 (+25bp)	9 Mar 23	8 Jun 23 (-50bp)	7.75	7.25	6.25	5.50	4.75
Europe/Africa		3.74	252	126				4.05	4.25	5.00	4.99	4.89
Euro area	Depo rate	2.50	300	75	2 Feb 23 (+50bp)	16 Mar 23	Mar 23 (+50bp)	3.00	3.25	3.25	3.25	3.25
United Kingdom	Bank rate	4.00	350	50	2 Feb 23 (+50bp)	23 Mar 23	Mar 23 (+25bp)	4.25	4.50	4.50	4.50	4.25
Norway	Dep rate	2.75	225	0	15 Dec 22 (+25bp)	23 Mar 23	1Q 23 (+25bp)	3.00	3.00	3.00	2.75	2.50
Sweden	Repo rate	3.00	300	25	9 Feb 22 (+50bp)	26 Apr 23	26 Apr 23 (+25bp)	3.00	3.25	3.25	3.25	3.00
Czech Republic	2-wk repo	7.00	250	-100	22 Jun 22 (+125bp)	29 Mar 23	Aug 23 (-25bp)	7.00	7.00	6.50	6.00	5.50
Hungary	Base rate	13.00	1010	0	27 Sep 22 (+125bp)	28 Feb 23	Feb 24 (-100bp)	13.00	13.00	13.00	13.00	11.00
Israel	Base rate	3.75	365	50	2 Jan 23 (+50bp)	<u>20 Feb 23</u>	Feb 23 (+25bp)	4.00	4.25	4.25	4.25	4.00
Poland	7-day interv	6.75	400	0	7 Sep 22 (+25bp)	8 Mar 23	Mar 24 (-25bp)	6.75	6.75	6.75	6.75	6.50
Romania	Base rate	7.00	450	50	10 Jan 23 (+25bp)	4 Apr 23	Aug 23 (+25bp)	7.00	7.00	7.25	7.50	7.50
Russia	Key pol rate	7.50	-200	0	16 Sep 22 (-50bp)	17 Mar 23	1Q24 (-25bp)	7.50	7.50	7.50	7.50	7.25
South Africa	Repo rate	7.25	325	-25	26 Jan 23 (+25bp)	30 Mar 23	Nov 23 (-25bp)	7.25	7.25	7.25	7.00	7.00
Turkey	1-wk repo	9.00	-1400	2100	24 Nov 22 (-150bp)	<u>23 Feb 23</u>	Feb 23 (-100bp)	8.00	8.00	30.00	30.00	30.00
Asia/Pacific		2.88	70	-6				2.86	2.87	2.87	2.82	2.82
Australia	Cash rate	3.35	325	50	7 Feb 23 (+25bp)	7 Mar 23	Mar 23 (+25bp)	3.60	3.85	3.85	3.85	3.85
New Zealand	Cash rate	4.25	350	25	23 Nov 22 (+75bp)	<u>23 Feb 23</u>	Feb 23 (+50bp)	4.75	4.75	4.75	4.50	4.25
Japan	Pol rate IOER ¹	-0.10	-8	0	28 Jan 16 (-20bp)	10 Mar 23	On hold	-0.10	-0.10	-0.10	-0.10	-0.10
Hong Kong	Disc. wndw	5.00	-50	50	1 Feb 23 (+25bp)	-	Mar 23 (+25bp)	5.25	5.50	5.50	5.50	5.50
China	1-yr MLF	2.75	-10	-10	15 Aug 22 (-10bp)	-	1Q 23 (-10bp)	2.65	2.65	2.65	2.65	2.65
Korea	Base rate	3.50	225	0	13 Jan 23 (+25bp)	<u>23 Feb 23</u>	2Q 24 (-25bp)	3.50	3.50	3.50	3.50	3.50
Indonesia	BI RRR	5.75	225	0	19 Jan 23 (+25bp)	16 Mar 23	On Hold	5.75	5.75	5.75	5.75	5.75
India	Repo rate ²	6.50	250	-50	8 Feb 23 (+25bp)	6 Apr 23	Oct 23 (-25bp)	6.50	6.50	6.50	6.00	6.00
Malaysia	O/N rate	2.75	-175	0	3 Nov 22 (+25bp)	9 Mar 23	On hold	2.75	2.75	2.75	2.75	2.75
Philippines	Rev repo	6.00	400	25	16 Feb 23 (+50bp)	23 Mar 23	Mar 23 (+25bp)	6.25	6.25	6.25	6.25	6.25
Thailand	1-day repo	1.50	100	25	25 Jan 23 (+25bp)	29 Mar 23	Mar 23 (+25bp)	1.75	1.75	1.75	1.75	1.75
Taiwan	Official disc.	1.75	63	0	15 Dec 22 (+12.5bp)	23 Mar 23	On hold	1.75	1.75	1.75	1.75	1.75

Source: J.P. Morgan. ¹ BoJ sets the policy rate on IOER (O/N) and targets 10-year JGB yields as policy guidance

Bold denotes move since last GDW and forecast changes. Underline denotes policy meeting during upcoming week. Aggregates are GDP-weighted averages.

Any long-form nomenclature for references to China; Hong Kong; and Taiwan within this research material is Mainland China;

Hong Kong SAR (China) and Taiwan (China).

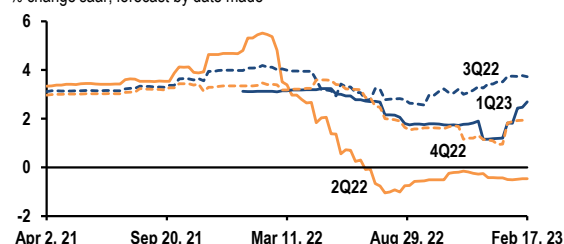
Nowcast of global growth: Still soft relative to outlook

The J.P. Morgan forecast for 1Q23 global real GDP growth is revised up 0.3%-pt this week to 2.7%*ar* (Figure 1). We raised our sights on current-quarter growth in the US, where January activity data has come in stronger than anticipated. We now see the US growing 2%*ar* (up from 1%). Strong data in the US have tempered near-term recession concerns and suggest the goods sector slowdown at the end of last year is starting to turn. We will learn more about near-term momentum in the DM economies next week with the release of the February flash PMIs, which we expect to post large gains albeit to still-low levels.

We continue collecting 4Q GDP reports. This week our tracking of 4Q growth ticked down 0.1%-pt to 1.9%*ar*. We received GDP growth results from Japan, Norway, Russia, the remaining CE4 economies, and a few smaller EM economies.

Figure 1: J.P. Morgan global GDP

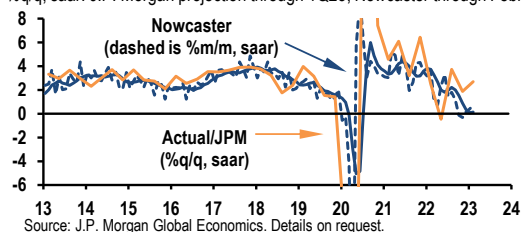
% change *saar*; forecast by date made



Source: J.P. Morgan Global Economics

Figure 2: Global real GDP

%q/q, *saar*. J.P. Morgan projection through 1Q23; Nowcaster through February

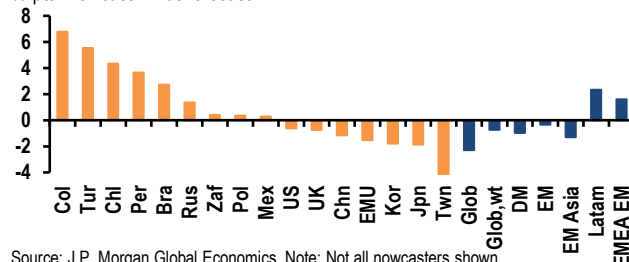


Source: J.P. Morgan Global Economics. Details on request.

The top-down global nowcaster estimate of 1Q23 global GDP growth stands at 0.4%*ar*, 2.3%-pts below our official forecast (Figure 2). The nowcaster suggests downside risk to growth in the US (-0.6%-pt), Euro area (-1.5%-pt), and China (-1.2%-pt) (Figure 3, Table 1). However, it is important to note that the nowcasters are less accurate early in the quarter, using model estimates to fill out much of the quarter's missing data. The aggregate of the bottom-up nowcasters is 0.7% below our forecast of the same country set.

Figure 3: Risk bias, 1Q23

%-pts. Nowcast minus forecast



Source: J.P. Morgan Global Economics. Note: Not all nowcasters shown

Table 1: Real GDP

%q/q, *saar*. Underline indicates J.P. Morgan forecast.

	4Q22		1Q23	
	Actual/Fcst	Nowcast	Forecast	Nowcast
Global	<u>1.9</u>	0.4	<u>2.7</u>	0.4
Weighted Avg*	<u>1.7</u>	0.2	<u>2.6</u>	1.9
Developed*	<u>1.7</u>	-0.4	<u>1.4</u>	0.4
US	2.9	-0.2	<u>2.0</u>	1.4
EMU	0.4	-0.4	<u>1.0</u>	-0.5
UK	0.1	-1.0	<u>-0.3</u>	-1.0
Canada	<u>1.3</u>	0.6	<u>0.3</u>	1.2
Japan	<u>0.6</u>	-1.0	<u>1.2</u>	-0.7
Emerging*	<u>1.9</u>	1.0	<u>4.6</u>	4.3
EM Asia*	<u>2.3</u>	1.1	<u>6.3</u>	5.0
China	3.0	1.5	<u>7.0</u>	5.8
Korea	-1.5	-0.2	<u>2.2</u>	0.5
Taiwan	-4.3	-5.9	<u>1.5</u>	-3.2
Singapore	0.3	2.3	<u>1.3</u>	1.9
Latam*	<u>0.5</u>	-0.9	<u>-0.6</u>	1.7
Brazil	-0.4	-1.2	<u>-0.4</u>	2.3
Mexico	1.8	0.9	<u>0.7</u>	0.9
Argentina	<u>-3.2</u>	-5.5	<u>-1.5</u>	0.2
Chile	<u>2.5</u>	-0.5	<u>-2.5</u>	1.8
Colombia	2.7	-2.6	<u>-3.0</u>	3.8
Peru	<u>1.3</u>	1.8	<u>-1.1</u>	2.6
EMEA EM*	<u>1.3</u>	2.8	<u>1.8</u>	3.4
Poland	-9.3	1.7	<u>1.5</u>	1.9
Hungary	-1.6	0.7	<u>2.5</u>	2.9
Czech Rep.	-1.1	-2.3	<u>2.0</u>	-0.4
Romania	4.4	1.8	<u>3.2</u>	4.5
Russia	5.5	1.4	<u>0.5</u>	1.9
Turkey	<u>2.9</u>	10.7	<u>4.5</u>	10.0
South Africa	<u>-1.5</u>	-0.1	<u>1.0</u>	1.4

Source: J.P. Morgan Global Economics. * Aggregates are GDP weighted averages of constituents. The long-form nomenclature for references to China and Taiwan is Mainland China and Taiwan (China).

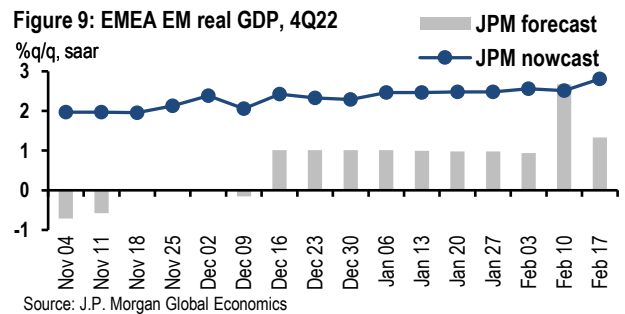
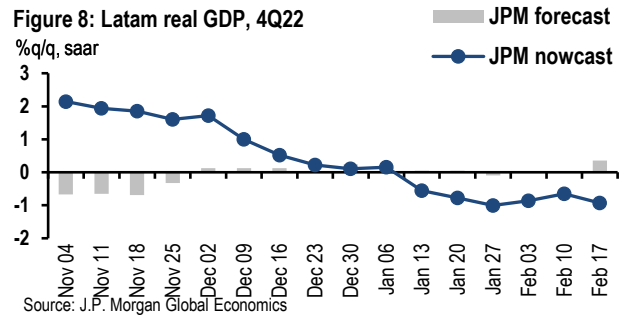
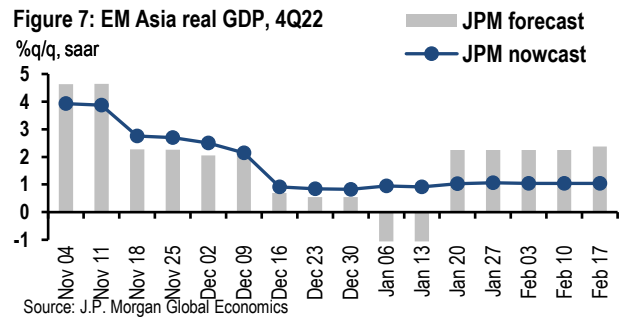
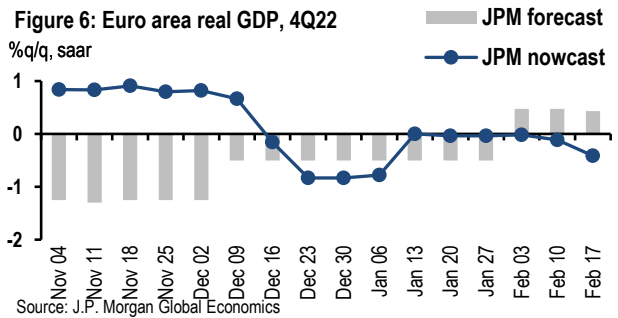
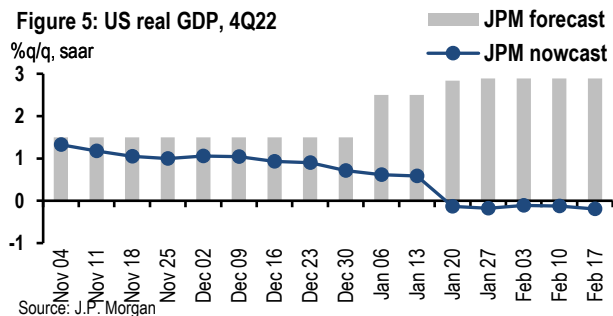
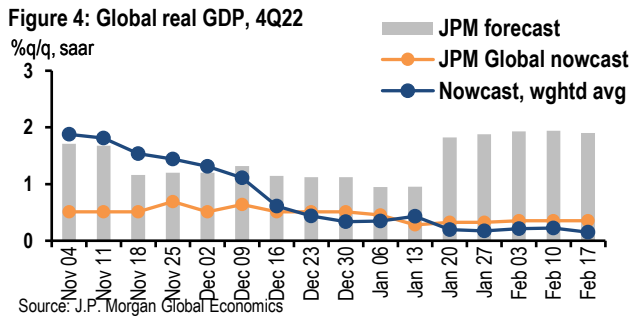
This week in our *Daily Economic Briefings*, we discussed a year-end slowdown in global IP and retail sales. Our [global manufacturing output](#) and [global real consumer goods spending](#) aggregates fell 0.9% and 0.5%, respectively, in December. We expect both indicators to improve in the early months of 2023, a view supported by strong January IP and retail sales data in the US. We updated [global auto sales](#) for January. Global auto sales were dragged down by a 23% plunge in China; global auto sales rose 4.1% outside of China.

Table 2: J.P. Morgan global aggregates

%ch, sa (ar for qrt). PMIs are levels. Confidence is std.dev from 2010-19 avg

	4Q22	1Q23	Dec 22	Jan 23	Feb 23	Mar 23
PMI, mfg	48.3	49.4	48.5	49.0	49.4	49.9
PMI, serv	48.4	50.2	48.1	50.1	50.1	50.5
IP	-2.0	-4.1	-0.4	-0.5	-0.3	-0.1
Retail sales	-2.8	-2.2	0.0	-0.1	0.0	0.1
Auto sales	-12.4	-11.6	-0.3	-0.8	-0.4	-0.4
G-3 cap. ship.	0.2	-9.0	-1.6	-0.8	-0.4	-0.5
G-3 cap. orders	-6.3	-9.5	-1.7	-0.4	-0.6	-0.5
Cap. exports	-8.8	-7.0	0.0	-1.1	-0.3	0.1
Bus conf	-1.3	-0.9	-1.0	-1.0	-0.9	-0.8
Cons conf	-1.3	-1.2	-1.2	-1.2	-1.2	-1.1
Nowcast (ar)	0.4	0.4	0.1	0.4	0.7	1.0

Source: J.P. Morgan Global Economics, S&P Global, and national statistical agencies. Note. Shaded values show forecasts computed by the Kalman filter estimates from the dynamic factor model. Underlined values are our estimates based on available data and our judgment.



For a primer on our nowcaster suite, see [methodology report](#) and [podcast](#).

Selected Recent Research: J.P. Morgan Economics

Global

[Identifying the shocks underlying global inflation](#), 3Feb23
[Enough to feed the needy?: External financing needs in EM Edge](#), 27Jan23
[Expect a large near-term goods inflation slide](#), 20Jan23
[Long-run growth forecasts: stable global, slowing DM](#), 13Jan23
[The weight of the world: Updated to 2021](#), 16Dec22
[Taking stock of EM macro risks](#), 18Nov22
[EM: The resilient and the vulnerable](#), 4Nov22
[Central banks hoping for a tall, cool Beveridge](#), 14Oct22

United States and Canada

[US: Are rates markets really expecting a recession?](#), 10Feb23
[US: Don't look up: A debt ceiling primer](#), 27Jan23
[US: One labor market, three buckets of core inflation](#), 13Jan23
[US: Inflation downshift is on its way](#), 21Oct22
[US: The price of price stability](#), 7Oct22

Western Europe

[Euro area pay growth is about to step up](#), 10Feb23
[EU Green Deal: subsidies without new EU funding](#), 10Feb23
[Euro area: lower gas prices point to further deficit fall](#), 27Jan23
[UK: Labor force loss approaches 4%](#), 27Jan23
[Sweden: Toughest wage talks of the millennium](#), 27Jan23
[Euro area: The gas price drag on inflation](#), 13Jan23
[UK: A new year brings hope, but with plenty of baggage](#), 13Jan23
[Euro area: divergences in the post-pandemic recovery](#), 16Dec22
[The EU gas price cap that wasn't](#), 2Dec22
[Scandinavia outlook 2023: A bumpy ride](#), 2Dec22
[EU steps towards a revamped fiscal framework](#), 18Nov22
[Italy: new government respects the macro constraints](#), 11Nov22
[French wage inflation: accelerate then slow](#), 4Nov22
[Sweden: A pair of fiscal impacts on policy rates](#), 4Nov22
[ECB rate hikes pass through to lending rates](#), 28Oct22
[Italy and Spain: gas price pass-through and inflation](#), 28Oct22
[Euro area: Halftime analysis of the income and price shocks](#), 21Oct22
[UK outlook: A recession, followed by weak growth](#), 21Oct22
[EU: Energy crisis response moves slowly](#), 14Oct22
[Euro area: Rents unlikely to lift medium-term inflation](#), 14Oct22
[Norges Bank's unique fiscal FX purchases](#), 7Oct22

Central Europe, Middle East, and Africa

[Hungary: the import collapse is already here](#), 10Feb23
[Zambia: CA dynamics amid copper rally](#), 3Feb23
[CEE twin deficits to ease as gas prices collapse](#), 20Jan23
[Nigeria 2023: Time for a course correction](#), 20Jan23
[From Russia with cash](#), 13Jan23
[Czech rent inflation: what goes up must come down?](#) 6Jan23
[Tunisia: Current account risks and opportunities](#), 16Dec2022
[Egypt: Testing the FX pressure valve](#), 2Dec22
[Nigeria: The new demonetization initiative](#), 18Nov22
[CEE: Energy shock delays fiscal consolidation \(again\)](#), 11Nov22

[Tale of the tape in the EM Edge: Comparing IMF and J.P. Morgan forecasts](#), 28Oct22
[Saudi Arabia: Where did the big surplus go?](#) 28Oct22
[Trendspotting: short-term price surveys and inflation in CEE](#), 7Oct22

Japan

[Japan: Losing \(yield curve\) control](#), 27Jan23
[BoJ's path to an exit](#), 20Jan23
[Japan is about to see higher wage inflation](#), 18Nov22
[Japan: One small step for YCC, one giant leap for policy](#), 7Oct22

Non-Japan Asia and Pacific

[Vietnam: A delicate balancing act](#), 10Feb23
[Philippines CPI: Marching to the beat of its own drum](#), 10Feb23
[The return of Indonesia's CAD and policy implications](#), 3Feb23
[Australia: Stable saving to give hikes more bite](#), 27Jan23
[Asia: On the coattails of China's re-opening](#), 20Jan23
[Australian inflation: Shocked to the core](#), 20Jan23
[Australia's mortgage reset: The quick fix](#), 13Jan23
[India: Giving credit where it's due](#), 2Dec22
[ASEAN's manufacturing renewal is for some, not all](#), 18Nov22
[Malaysia: Where's the goods \(balance\)?](#) 11Nov22
[Thailand: No need for speed](#), 11Nov22
[Australia: Parsing pass-through](#), 28Oct22
[Philippines: The twin deficits conundrum](#), 21Oct22
[From Real Rates to Rupee: The Debate within India's MPC](#), 21Oct22
[Australia: Where's the wage pressure?](#) 14Oct22
[China's supply chain and ASEAN: coping with the drags](#), 14Oct22

Latin America

[Evidence of Brazil's labor market turn](#), 3Feb23
[Brazil: The baseline, the uncertainties, and the trees](#), 13Jan23
[Argentina: The costs of the muddle-through strategy](#), 6Jan23
[Mexico 2023: Landing on soft tarmac](#), 2Dec22
[Brazil's budget: back to the drawing board](#), 11Nov22
[Mexico: Looking through the price reduction pact \(PACIC\)](#), 28Oct22

Special Reports and Global Issues

[Ten questions about China in 2023](#), 9Jan23
[India in 2023: Balancing Growth with Stability](#), 15Dec22
[Japan 2023 Economic Outlook: All it takes is faith and trust](#), 1Dec22
[UK 2023 outlook: constrained by the tragedy of weak supply](#), 29Nov22
[Greater China 2023 Economic Outlook](#), 24Nov22
[Euro area 2023: weak activity, bumpy disinflation](#), 23Nov22
[2023 Brazil Economic Outlook: A year of many changes](#), 22Nov22
[Lead us not into temptation: 2023 EM economic outlook](#), 22Nov22
[Wait for it: 2023 Global Economic Outlook](#), 21Nov22
[2023 US Economic Outlook: Bad moon rising](#), 16Nov22
[Know thyself: J.P. Morgan Asset Price Forecast Indexes](#), 1Nov22

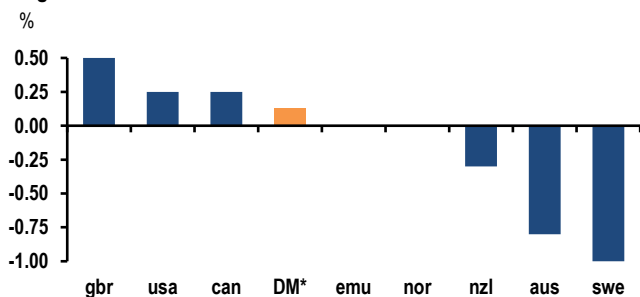
When you wish upon r*

- **Central banks are downshifting the speed of rate hikes based on view that neutral real rates are close to zero**
- **Low neutral rate estimates are a result of GFC reverberations which depressed demand and inflation**
- **The environment has changed, and the cyclical backdrop points towards higher neutral rates**
- **Changes matter. If large monetary policy shifts generate recessions, then neutral rate rise will be obscured**
- **Absent a recession, resilience in the face of a large policy shift will reinforce case for revising neutral higher**

A year ago, we argued it was inappropriate to accept the widely held view expressed by central banks that the [inflation process](#) would remain anchored by the credibility of their medium-term commitments. Confidence in the inflation process did indeed erode in the face of a broadening inflation surge last year, despite well anchored medium-term expectations. This erosion in faith helps explain the dramatic acceleration in the pace of policy tightening.

We believe faith in another pillar underlying central bank thinking is on track to erode this year: the notion that DM neutral real policy rates stand close to zero (Figure 1). Identifying a “neutral” rate is important as central banks consider how far they continue in the policy adjustment process currently underway. DM central banks appear to be looking for a position whereby holding policy rates at an appropriate level above neutral - a high-for-long stance - can be anticipated to gradually ease labor market tightness and lower inflation.

Figure 1: Real neutral rate estimates



Source: J.P. Morgan Global Economics. *Excludes Japan

The case for implementing this high-for-long strategy at levels close to current rates is, perhaps ironically, linked to the failure of the low-for-long strategy in the aftermath of the global financial crisis (GFC). Faced with effective lower bound constraints and high unemployment rates, central banks committed to maintaining a perceived highly accommodative stance for some time based on their expectation that it would gradually deliver reflation. In the event, labor mar-

kets healed more slowly than anticipated and inflation remain depressed, an outcome which resulted in a dramatic drop in estimates of underlying neutral policy stances. For most central banks neutral real rates are currently viewed to be close to zero, levels significantly lower than estimates before the GFC.

We attribute the ineffectiveness of last decade’s low-for-long stances to powerful disinflationary forces unleashed by the GFC outside the control of central banks. Importantly, conditions have changed dramatically. In contrast to last decade’s post-GFC balance sheet adjustment and regulatory tightening, the pandemic and has improved private sector balance sheets and created pent-up demand. In addition, fiscal policy shocks during this cycle have generally been positive thus far, a radically different backdrop to the aggressive European and US tightening through the first half of the last expansion. Finally, the supply shocks related to the pandemic have altered the inflation process in a way that is likely raising short-term inflation risk premia. In all, these developments suggest that neutral policy rates have moved higher from estimates at the end of the last expansion.

Whether this change is reflected in central bank behavior depends on the impact of last year’s disruptive shift in monetary policy stances. Over short horizons, changes in policy stances have an effect independent of the levels of rates. DM policy rates have risen by nearly 400bp over the past year, the largest increase in over forty years. To the extent that this shift tips the US or global economy into recession, any changes in the underlying level of neutral policy rates will be obscured for some time. If instead DM economies prove resilient in the face of this dramatic tightening, resilience and sticky inflation would reinforce the assessment that neutral rates have gone up. Absent a slide into recession this year, rising estimates of neutral rates are thus likely to play a role in policy decisions by DM central banks.

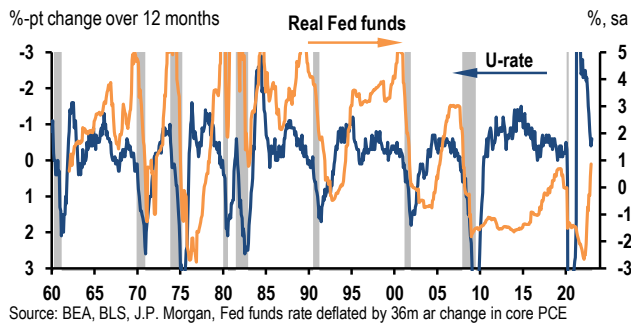
Structure is cyclical

A neutral policy rate is a relatively straightforward concept – the policy rate which stabilizes utilization rates. Containing elevated inflation generally requires a restrictive policy stance that lowers utilization rates, an effort which DM central banks are now undertaking. Last decade, lifting inflation required an accommodative stance in which policy rates were set below neutral. Over long periods of time, maintaining a neutral policy stance should be consistent with inflation targets for credible central banks.

Translating this concept into a practical tool is not easy. There are multiple near-term influences altering both the monetary transmission mechanism and the relationship between growth and utilization rates; these obscure estimation of neutral.

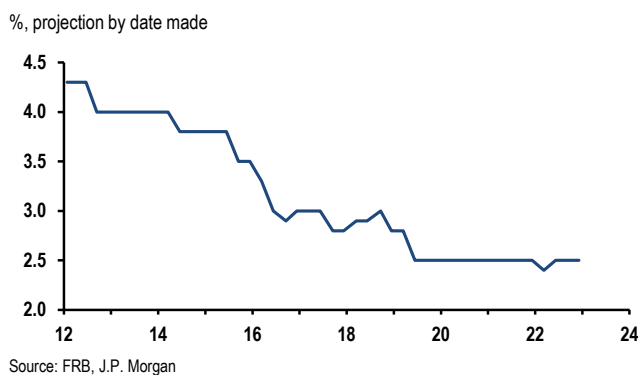
What's more, the economy's underlying structure evolves in ways that alter these linkages over time. It is thus no surprise that policymakers are genuinely cautious in making statements about where the neutral rates lies at any specific juncture. Indeed, history shows that both the average level of US real policy rates and the peak reached before recession has varied widely over the past six decades (Figure 2).

Figure 2: US real policy rate and unemployment rate



An estimate of neutral is, however, a necessary input for monetary policy decisions and there is broad agreement that neutral rates have fallen sharply over the past decade. Indeed, when the FOMC began publishing long-term interest rate forecasts in its survey of economic projections (SEP) in 2012 it estimated US nominal neutral policy rates at 4.25% (Figure 3). At present, the Fed's SEP estimates the nominal long-term policy rate at 2.5%. While this estimate does not map precisely into the assessment of the current stance, the implied r^* of 0.5% in this forecast is an indication that the Fed sees neutral real rates sitting close to zero.

Figure 3: Longer run Fed funds rate, median FOMC projection



While there are no consistent time series estimates of neutral policy rate forecasts produced by DM central banks, our economists' projections reinforce the general point that estimates are low. For the DM, our economists estimate average neutral real rates at 0.2%. The Fed rate is forecasted at 0.25% while estimates are zero for the Euro area. Real neutral rates are projected to be negative for Scandinavia and the Antipo-

deans.

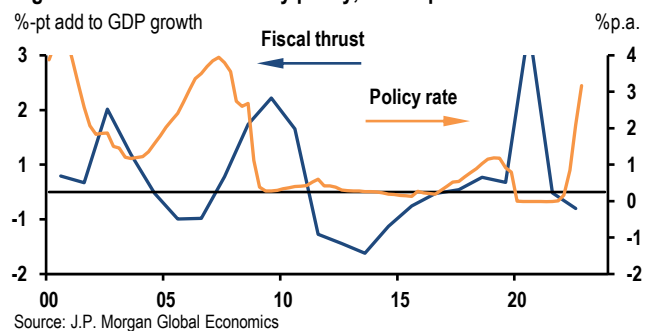
The r^* industrial complex

The view that real neutral rates have fallen sharply has been reinforced by a wide range of econometric work that estimates long term neutral rates (r^*). Most of the recent work in this area jumps off Laubach and Williams analysis, inferring r^* from movements in the output gap. These models simultaneously estimate the output gap and r^* by incorporating a Phillips curve relationship, which links output gaps to realized inflation. Although these r^* models vary in their complexity, they ultimately rely on the existence of a stable Philips curve relationship to tie down both the neutral rate and the output gap.

Against this backdrop, it is relatively easy to understand the dominant driver of the fall in r^* estimates over the last decade. Although several structural forces are highlighted - including weakening demographics, sliding productivity, and an EM savings glut - declining r^* estimates (and by extension neutral policy rates) are closely linked to the persistence of low inflation in the face of nominal policy rates remaining close to zero.

There is every reason to see the post-GFC period of persistent low inflation as evidence that the low-for-long stances maintained by central banks did not generate a sufficient reflationary impulse. However, given the enormous shock-waves generated by the GFC it is harder to assess the permanence of this shift. Indeed, the GFC shock unleashed a lengthy period of balance sheet adjustment and regulatory change which limited the private sector response to accommodative monetary policy. In addition, DM fiscal policy tightened substantially from 2011-15, a development which was accompanied a recession and crisis in the Euro area (Figure 4). Any consideration of neutral rates going forward needs to assess the degree to which the disinflationary backdrop of the post-GFC expansion carries forward into the post-pandemic recovery.

Figure 4: Fiscal and monetary policy, Developed markets



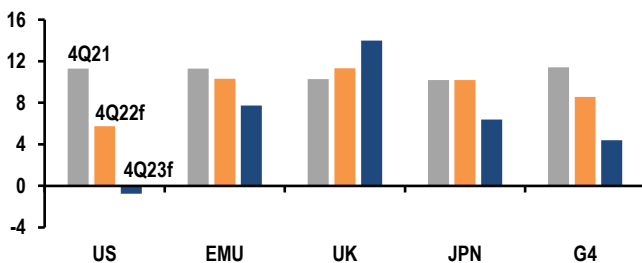
This time is different

A key building block of our macroeconomic forecasts in the aftermath of the pandemic shock is that dramatic changes have taken place in key areas that depressed neutral policy rates last decade. In particular,

- **Private sector balance sheets have improved materially.** One of the unusual features of the pandemic recession is that it generated an improvement in private sector balance sheets. Lockdowns during 2020-21 generated forced savings while government fiscal supports boosted household income and provided businesses with access to credit. The upshot of these developments is that the DM private sector has moved through the early phase of this expansion with excess savings and reduced leverage, developments which have promoted resiliency in the face of significant shocks (Figure 5).

Figure 5: Excess household saving, G4

% of household income, cum. above pre-pandemic pace

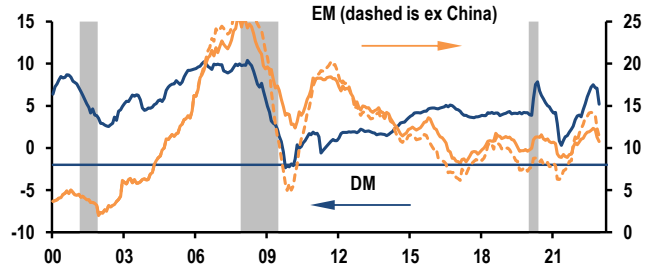


Source: J.P. Morgan Global Economics

- **No credit overhang to unwind.** In the aftermath of the GFC the global economy went a prolonged period in which private sector credit demand remained weak despite low interest rates (Figure 6). In the immediate aftermath of the 2008-9 recession this impulse was greatest in DM as households de-levered following a housing boom, the financial sector pulled back, and business sector hiring and spending remained cautious. Starting in 2013 a decade long boom in EM private sector credit unwound and was an important drag on global demand through the end of the expansion.

Figure 6: Domestic bank loans

% oya, both scales

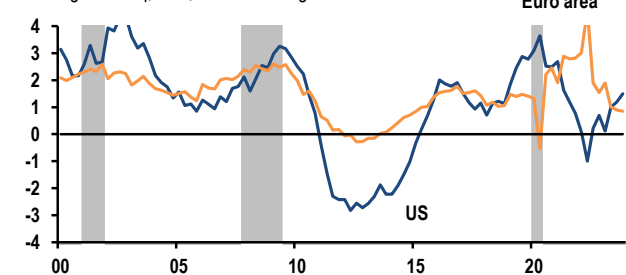


Source: J.P. Morgan Global Economics

- **The absence of a large fiscal shock, so far.** Although budget deficits fallen from a 2020 spike which pushed DM deficits to a level of 11% of GDP, fiscal policy is not moving in the aggressive counter-cyclical fashion seen over 2011-15. To be sure there are notable drags as US transfers programs and European short-term work programs have been removed and spending on COVID vaccines and treatments have been reduced. However, the sharp sustained slide in government spending in Europe and the US in the early years of the post-GFC expansion is not materializing during this expansion.

Figure 7: Real government spending

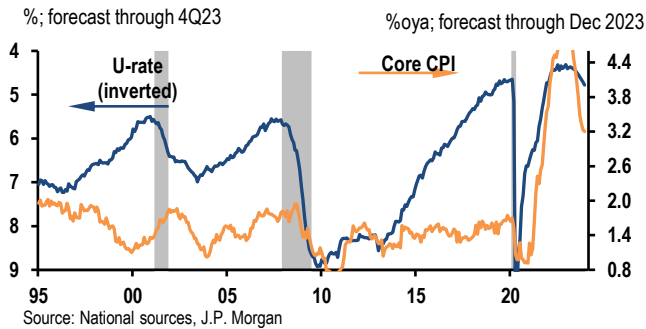
% change over 8q, saar, forecast through 4Q23



Source: J.P. Morgan Global Economics

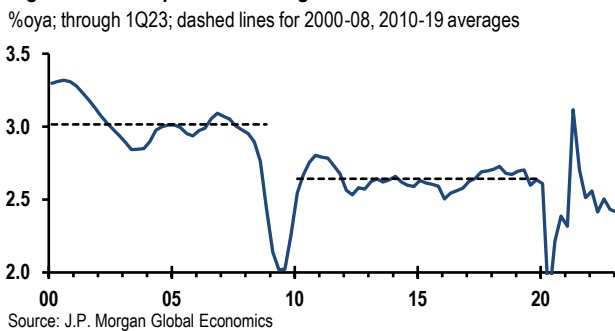
Alongside the removal of forces weighing on private sector demand, the pandemic has also altered the Philips-curve dynamics. Following a long period in which inflation remain stable in the face of significant variations in DM unemployment rates, inflation surged sharply during 2021-22 (Figure 8). Markets have looked through this spike as supply shocks have heavily influenced post-pandemic inflation. However, this year's disinflation dynamic will likely prove substantial but incomplete. Absent a recession dynamic taking hold, we anticipate views to shift about the interest rate that will be necessary to return inflation back to within central bank comfort zones.

Figure 8: DM unemployment rate and core CPI



In some fundamental sense, this discussion abstracts from key issues related to underlying structures which are sometimes placed at the center of the discussion of where r^* stands. These forces tend to generally continue to lean in the direction of lower neutral policy rates, particularly as our estimates of potential growth have continued to drift lower (Figure 9). However, we would emphasize that for the horizon that is relevant for central bank decisions over the coming two years, the business cycle forces at play are likely to prove dominant.

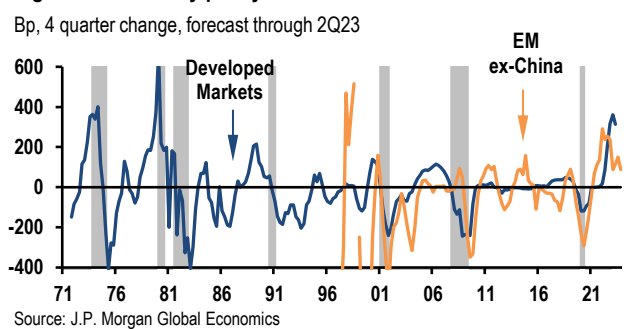
Figure 9: Global potential GDP growth



The rub: Change matters

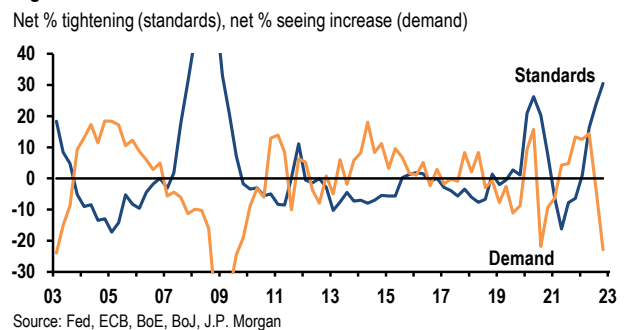
While neutral estimates reflect the level of policy consistent with stable utilization rates, changes in policy stances have significant independent effects on activity. The dramatic changes in monetary policy stances over the past year therefore has the potential to have a large impact on economic performance (Figure 10). With the DM central banks expected to cumulatively raise policy rates by roughly 400bp from their 2021 lows, the impulse from this shift will be a far greater immediate factor in determining near-term outcomes than the gap that has opened from the level of neutral rates.

Figure 10: Monetary policy rate



This point is reinforced by a range of US model estimates that suggest that a sustained 100bp rise in Fed policy rates should depress US GDP by at least 1%-pts over the course of six quarters. Viewed in this context there is a high probability that a roughly 500bp rise in Fed policy rates throws the US economy into recession. The change in monetary conditions during this tightening cycle reinforces this point as DM bond yields have moved up faster and cumulatively further than in any tightening cycle experienced since the early 1980s. G-4 bank lending standards are also tightening materially in a manner consistent with early slides into recession (Figure 11).

Figure 11: G4 business credit standards vs. loan demand



If this large tightening pushes economies into recession this year, then it will take sometime to disentangle the issue of whether real neutral policy rates remain close to zero. However, if the global economy maintains its balance, withstanding a tightening in monetary conditions that would be normally expected to generate recession, it would reinforce the view that neutral policy rates have moved materially higher.

Euro area consumption to improve, not bounce

- Euro area consumer absorbed huge price drag last year
- Lower inflation and solid income are supports in 2023
- Tighter financing conditions and limited use of excess saving suggest trend-like spending
- Spending to slow gradually during 2023 as drags build

Euro area consumer spending grew at almost a 4%ar in the middle of last year as a reopening boost to incomes offset a large inflation drag. But, with price pressures remaining intense into year-end and reopening effects fading, consumer spending weakened in 4Q22. Available data show consumer spending declining around 5%q/q saar in some countries, while the German statistics office has pointed to the consumer as the main factor behind the 1%q/q saar GDP fall in 4Q22.

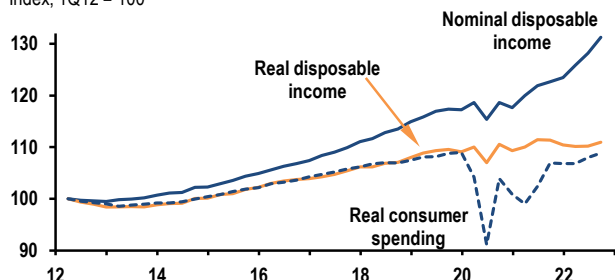
Our forecast shows sequential inflation pressures easing substantially in 1Q23 to a 2%ar and holding at that level for the rest of the year. This reflects the sharp move lower in energy prices in 1H23 and a moderation in core inflation that gathers pace in 2H23. That will help consumer spending as increases in wages will no longer be eaten away by sharply rising prices. But, unless prices fall outright, which we do not expect, consumer spending is likely to return to a trend-like pace. A stronger bounce is less likely. The exception could be 1Q23, but that would likely be as a direct reaction to what looks likely a surprisingly sharp fall in 4Q22.

Prices and incomes surged together

For most of last year, the surge in consumer prices was matched by a surge in incomes. The HICP grew at a 10%ar throughout 2022 and the consumption deflator averaged a 8%ar in the first three quarters of the year. However, household disposable income also grew at a 8.5%ar between 1Q22 and 3Q22. As a result, real disposable income was broadly stagnant last year at above the pre-pandemic level (Figure 1).

Figure 1: Euro area household spending and income

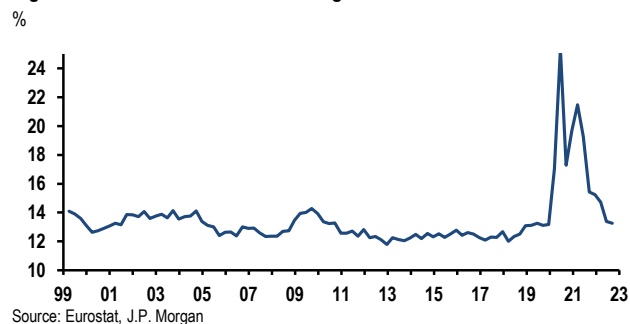
Index, 1Q12 = 100



Source: Eurostat, J.P. Morgan

The saving rate in 3Q22 was also still above the pre-pandemic level (Figure 2). This means that households have still not tapped into the huge forced saving of 13% of annual disposable income that they built up during the pandemic. We increasingly view this as a source of upside risk rather than as a big driver of our baseline forecast. In particular, only a third of the forced saving balances are held in liquid bank deposits, with the rest invested in equities and through investment funds. And much of this is likely to have accrued to higher income households that have a lower propensity to consume. What is possible is that the saving rate falls temporarily to smooth through some price pressures, but that was also not obvious in 4Q22 when consumer spending looks to have fallen sharply.

Figure 2: Euro area household saving rate

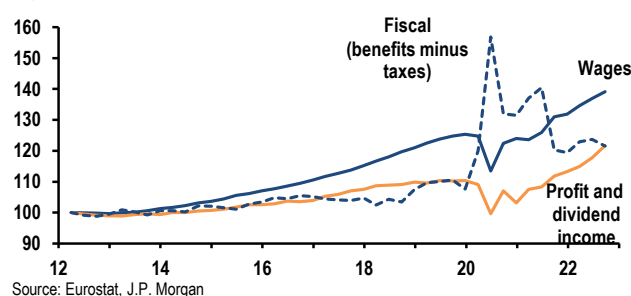


Source: Eurostat, J.P. Morgan

This suggests that household income remains a key driver of consumer spending. What led to the sharp pickup in nominal disposable income last year? It reflected essentially an acceleration in wage growth and a strong recovery in households' profit/property income, which includes net interest receipts, self-employment profits and dividend income (Figure 3). Total wages grew at a 6%ar rate from 1Q22 to 3Q22, almost half of that coming from higher employment and a longer workweek. Profit and property income grew at a 10%ar, helped by the post-pandemic reopening. The fiscal contribution was broadly neutral, reflecting a rotation from pandemic to energy supports.

Figure 3: Main components of Euro area household income

1Q12=100



Source: Eurostat, J.P. Morgan

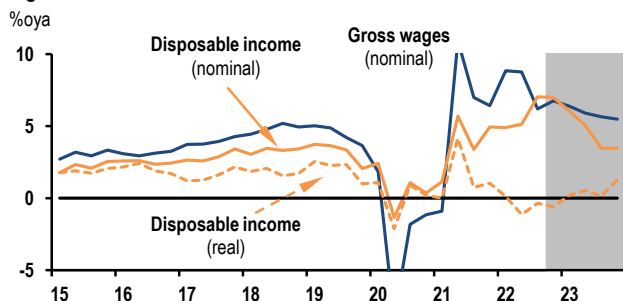
How much of a boost as inflation falls?

In order to gauge the impact of lower inflation this year, it is important to establish a reasonable baseline for nominal income growth. Last week, we [argued](#) that Euro area pay growth is about to step up. Negotiated pay growth looks set to move from around 3%oya in 2022 to 4%oya in 2023, driven to some extent by last year's high inflation rate (e.g. the lump-sum inflation premium payments built into many German pay deals).

Two other factors are likely to boost labor income. First, the PMI is pointing to ongoing jobs growth. Its employment index rose to 52.5 in January, which signals a strong 1.5% pace of jobs growth. Second, there was a 1%-pt wage drift last year, which is the gap between actual pay and negotiated pay. Actual pay, as measured by the compensation of employees in the national accounts, was boosted by the further recovery in the workweek and by other pay components, which can include bonuses and overtime payments. We assume that jobs growth will remain firm until later this year. The wage drift is likely to weaken however mainly because the post-pandemic recovery of the workweek has likely run its course. Overall, labor income may grow at a 5.5%-6% pace for most of this year.

Other income categories are likely to be less supportive. In fact, it is usual that the other parts of disposable income contribute less than labor income, so that gross wages grow more quickly than disposable income (Figure 4). One reason for this is the cyclical nature of social benefits (received) and taxes (paid). This year, the fiscal impact on household income is likely to turn negative as the increase in energy-related supports is likely smaller than the decrease in earlier COVID-related supports. With gas prices having fallen sharply in recent weeks, the cost and scale of some energy interventions is likely to be reduced as well, in some cases substantially. Also, some of the new fiscal measures, such as those in NGEU, are focused more on government investment than on household supports.

Figure 4: Euro area nominal labor income



Source: Eurostat, J.P. Morgan

Overall, we think that nominal disposable income may grow at a 3.5% pace this year. Taking away a drag from prices leaves real disposable incomes up at around 1.5%. Hence, without a further decline in the saving rate, real consumer spending is likely to grow at a trend-like pace, but not above it. The only exception in 1Q23 where a technical rebound from the surprisingly weak spending in 4Q22 is possible.

Other considerations

A few other considerations are relevant for gauging the near-term outlook for consumer spending.

- Energy in the HICP and in reality.** At the start of this year, the main moderation in our inflation forecast is coming from energy inflation, while core inflation is expected to slow more gradually. When thinking about the impact on consumer purchasing power, it is important to recognise that the gaps between what is recorded in the HICP and what consumers feel in practice. For example, the German electricity and gas price brakes start in March, but as they will be backdated to January the statistics office is letting them work in full already in the January HICP data. A full impact will also be assumed for tenants already in January, even though they may only pay an annual service charge to their landlord many months later. In the Netherlands, the HICP has misrecorded actual energy bills, which will only be fixed in the middle of this year and with no revision to past data. Hence, both the jump and subsequent decline in prices is overstated. Similar issues exist in some other countries. Caution must therefore be taken in linking the decline in inflation to rapid changes in consumer spending decisions.
- Mixed potential of a sentiment bounce.** The decline in energy prices may lead to positive sentiment effects beyond their actual impact on household budgets. The headline measure of consumer confidence has however likely overstated last year's weakness as views about the labor market, which do not affect the headline figure, have been much more resilient (Figure 5). Spending has also not fallen as much as confidence in recent months.

Figure 5: Euro area consumer confidence



Source: J.P. Morgan

- Pinched by rates and credit.** As inflation slows, pressure from higher interest rates will build. Bank lending to households has already slowed sharply, almost entirely due to lower house purchase loans (Figure 6). This is also evident from the last ECB bank lending survey, which shows a very sharp fall in loan demand by households and a significant tightening in lending standards. The pass-through to household mortgage rates is also still continuing. In our view, the household sector is in a relatively strong position and is supported by a solid labor market. But higher rates are still likely to affect some spending decisions, dampening somewhat the lift that is likely to come from lower inflation.

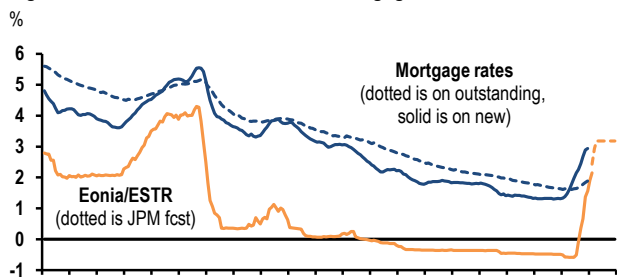
Figure 6: Euro area bank lending to households

€bn, monthly flow of net lending, adj. for securitizations/loan sales



Source: ECB, J.P. Morgan

Figure 7: Euro area interest rates on mortgages



Source: ECB, J.P. Morgan

A trend-like consumer that slows into 2H23

In terms of the latest data, we have been inclined to downplay the extent of the fall in retail sales in December. The retail data can be distorted and revision-prone in December, and car registration rose solidly in 4Q22. At the same time, the weakness in overall consumer spending that is being signaled by national GDP reports also points to some weakening in services consumption. The limited details in the data make this harder to assess. Overall, we expect consumer spending to recover in 1Q23 (2%q/q saar), incorporating some partial rebound from a decline in 4Q22 that we now put at -2%q/q saar. This may still have to be assessed once we get confirmation of the extent of the decline in 4Q22 and what likely drove it.

Beyond 1Q23, we expect trend-like consumer spending, but with a move from modestly above-trend in 1H23 to below trend in 2H23. That profile reflects the tightening in financing conditions and the likely front-loading of labor income gains (e.g. German one-off payments are likely to be bunched in 1H23). This points to solid growth of labor income and positive gains in real disposable income. The latter is softer than the former due to other income components such as the fiscal contribution. Assuming that consumer spending averages 1.75%ar in 1H23 and slows to 1%ar in 2H23, the saving rate will move only modestly below the pre-pandemic level of 13.2% in 4Q19. This suggests that the accumulated excess saving will decline only very modestly (Table 1). In some ways that remains a source of upside risks, but one that has become less likely to materialize over time.

Table 1: Euro area household income and spending

%q/q saar, except where stated

	2015-19	2022	1H23	2H23
GDP, real	1.9	1.9	1.3	1.0
Employment (1)	1.4	1.5	1.0	0.7
Employees	1.6	1.5	1.3	0.7
Wages, per employee (2)	2.2	5.1	5.5	4.3
Labor income (1+2)	3.9	6.8	6.8	4.9
Disposable income	2.8	7.0	3.9	3.0
Inflation (Cons. deflator)	1.0	7.6	2.0	2.3
Disposable income, real	1.7	-0.6	1.8	0.8
Consumer spending, real	1.6	1.4	1.8	1.0
Saving rate (% GDI), avg.	12.6	13.5	12.8	12.7
Excess saving (% GDI)	-	11.6	11.4	11.3

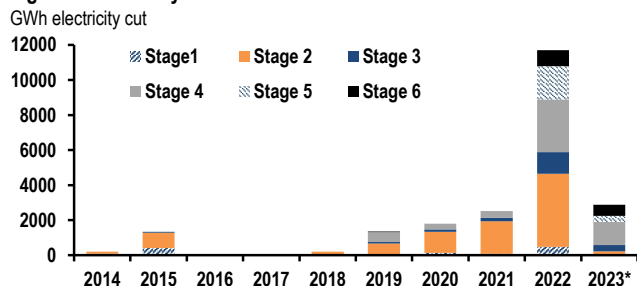
Source: Eurostat, J.P. Morgan estimates

South Africa: Tightrope of fiscal trade-offs

- Budget to reform SOE Eskom and trim fiscal drag, adding R60bn to expenditure
- Yet period of revenue upgrades to fund added spending is ending
- MTBPS projected a narrowing deficit to 3.7% in FY24/25, but we expect a widening to 5.5%
- Commitment to fiscal consolidation remains but progress is incremental

The policy-making authorities will soon set out revised fiscal plans, which we view as a key test of their resolve as they balance pressing policy priorities. While momentum in fiscal receipts has held up in 2H22, the revenue outlook has lost its shine as supply issues on electricity and rail compound the fading tailwind from the terms of trade cycle. We expect the period of tax revenue upgrades to come to a close with a downward bias to revenue revisions and a likely easing in the tax-to-GDP ratio to 24.6% over the next two years. This requires a delicate balancing act by authorities who simultaneously seek to pursue fiscal consolidation, SOE reform and improved social support and service delivery.

Figure 1: Electricity cuts

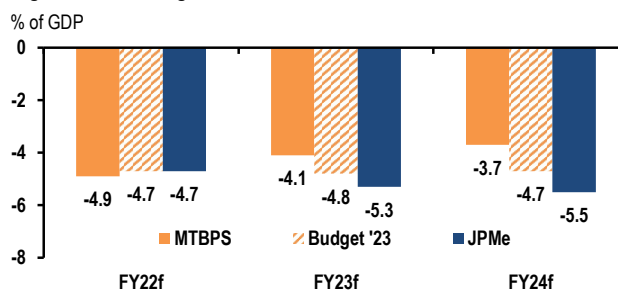


Source: CSIR, SARB, J.P.Morgan calculations, 2023* is an estimate for January based on the number of days of load-shedding

A home-grown energy crisis is escalating, with rotational load shedding having been implemented on most days since September 2022, triggered by a deteriorating performance of coal power plants. Electricity cuts increasingly are frequently classified as stages 3-6, resulting in outages often amounting to 4-8 hours a day (Figure 1). The SARB has estimated that electricity cuts shave around 2%-pts off this year's GDP growth, leaving it to project just a 0.2%/y gain. Significant financial interventions at electricity utility Eskom should therefore not be delayed further, in our view, with the aim to reshape the electricity sector and enable incremental operational improvement at the utility. The fiscal costs will likely be included in the February budget and probably add 3%-pts of GDP to debt at a cost of R40bn to R65bn per annum. At

the same time, risks of a near-term technical recession have also risen and dull the tolerance for a restrictive policy stance, adding to spending pressures beyond Eskom.

Figure 2: Main budget deficit revisions



Source: Treasury, J.P.Morgan forecasts

We expect the budget to downsize the fiscal consolidation trajectory (with the headline deficit hovering around 5% of GDP) and allow a further rise in the debt-to-GDP ratio. We also expect that authorities will continue to aim for a small primary surplus in FY23/24 and FY24/25, an essential first hurdle to clear in order to steady public finances. We see clear risks of fiscal slippage during the course of the year and expect an eventual fiscal outcome of 5.3% in FY23/24 and 5.5% in FY24/25, even as the Budget is initially likely to aim for a narrower 4.8% and 4.7%, respectively. This marks a significant shift in the trajectory from the projected consolidation to a 4.1% deficit in FY23/24 and 3.7% in FY24/25, as set out in the October medium-term budget policy statement (MTBPS). This had envisaged the debt ratio to peak already in FY22/23 and then gently decline.

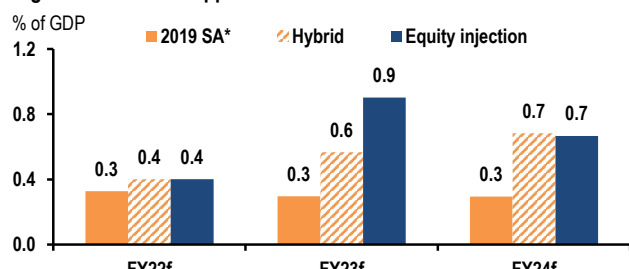
Eskom: Chicken or reform egg

With the energy crisis having prompted a national state of disaster declaration, we believe authorities will now detail a plan to address Eskom's balance sheet issues. The entity has increasingly relied on government guarantees to raise funds and has required equity injections amounting to R159bn (2.5% of GDP) since 2019, as part of a R226bn special appropriation. The October MTBPS postponed details of an intervention to reduce Eskom's debt until the Budget, but guided that debt relief would amount to between one-third and two-thirds of Eskom's c. R390bn debt. Given the substantial tariff hike of 18.6% now granted by the regulator, it might suffice to remove half of the debt (rather than two-thirds).

A central challenge is to provide sufficiently front-loaded support to enable sector-wide structural reform, yet manage the moral hazard of that support. We think authorities will probably set out reform and operational milestones to unlock stages of the support programme. This makes it more likely that the programme takes the shape of either matched equity

injections over five years, or alternatively a hybrid approach (combining debt assumption and equity injections), rather than a one-off debt assumption of the SOE debt by the sovereign. A hybrid plan could consist of a debt assumption of the administratively easier part of the debt stock (about R125bn) combined with conditional equity support for three years. Alternatively, a programme of matched equity injections sees the sovereign tailor equity injections to match the debt service and redemption profile of government-guaranteed debt.

Figure 3: Financial support to SOE Eskom



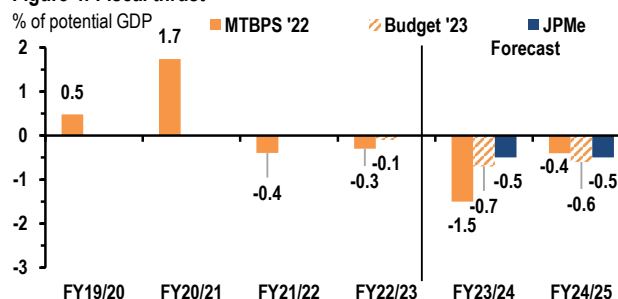
Source: Treasury, J.P.Morgan forecasts, 2019 SA* refers to the special appropriation bill from 2019, hybrid and equity injection estimates include the 2019 SA support

The cash-flow implications for government of the matched equity injections or hybrid programme are similar over the next three years, amounting to R45bn-R60bn (0.6% to 0.9%-pts of GDP) on average per year, including the R21bn in FY23/24 and R22bn in FY24/25 that still from part of the 2019 special appropriation. Specifically, we think the matched equity injection plan would add R40bn in FY23/24 and R25bn in FY24/25 that are not currently provided for in fiscal plans. With the hybrid model, added spending in the near term could amount to R10bn per year (with the first bulky redemptions only in FY27/28), but this probably is supplemented with R20bn in annual equity support and therefore amounts to an additional R30bn spending per year in the near term. It is possible that the first disbursement of support is further delayed, e.g. if performance benchmarks still need to be designed, which could mean only R10bn added spending in FY23/24 before a step up in the years thereafter.

Fiscal impulse guards against recession

In our base case, a technical recession is narrowly avoided yet the outlook is for sub-1% growth this year (JPMe: 0.7%/y). The Treasury will likely cut its growth outlook to c. 0.8%/y (from 1.4% in 2023 and 1.7% in 2024) and the downward revision should curb the appetite for significant expenditure restraint. This is relevant as the ambitious fiscal consolidation path in the MTBPS (compressing the fiscal gap to 4.1% in FY23/24 and 3.7% in FY24/25, from 4.9% in FY22/23) hinged on a large real drop in spending. The assumption for wage bill growth of 1%/y appeared to us unrealistic and stale, perhaps in part to not jeopardise wage negotiations.

Figure 4: Fiscal thrust



Source: J.P. Morgan calculations and forecasts, National Treasury

We expect the fiscal drag to be cut to -0.7% this year, from the implied -1.5% in the MTBPS, with a R60bn (0.9%-pts of GDP) upward revision in spending for FY23/24 and R40bn increase in FY24/25 (Figure 4). The MTBPS made allowance for expenditure growth of just 1.2%/y against projected inflation of 4.7%, which seemed improbable to begin with. It was therefore unsurprising that the state of the nation address referenced an inflation adjustment for social grants. We also expect tax relief for consumers and businesses via tax rebates and VAT exemptions for solar panel installations (potentially costing R6bn-R10bn per year in foregone revenue), an upward revision in debt service costs and marginal additional allocation for the wage bill and other SOEs. Historically, the Treasury partly funded added spending from re-prioritisation yet we gauge that only R10bn-R15bn could be re-allocated from the current fiscal envelope in FY23/24. Consequently, the expenditure to GDP ratio is now likely to ease to a more moderate 0.6%-pts over the next two years compared to the 1.8%-pts projected in the MTBPS.

Revenue: Back-loaded downside risk

Fiscal revenue momentum has held up well through to December, which should prompt authorities to broadly leave the revenue outlook unchanged, although risks are skewed to the downside. Our own projection is more cautious as the recent easing in the terms of trade combined with the rail and electricity challenges will make it difficult to sustain the recent highs in the tax-to-GDP ratio (Figures 5 and 6). The additional direct fiscal revenue from the mining sector (relative to 2019) probably peaked at 1.1%-pts of GDP in 1H22 and eased to 0.9% in 2H22, which we expect to drift lower to 0.6%-pts by 2H24. We earlier estimated that the total terms of trade impact on government finances was bigger than the direct contribution in corporate taxes and mining royalties, reaching 2.2%-pts of GDP in FY21/22.

The combination of a gentle downward drift in the revenue-to-GDP ratio, combined with the upward revision in spending and SOE reform, probably will almost pause fiscal consolidation if revenue targets are pragmatic. We expect the Treasury

to outline a fiscal deficit target of 4.8% in FY23/24 (previously 4.1%) and 4.7% in FY24/25 (3.7%), after an estimated 4.7% in FY22/23 (4.9%). That said, The realised fiscal deficit probably will be wider on incremental spending pressures on the wage bill (with wage negotiations yet to begin) and back-loaded downside risks to revenue projections. As a consequence, the debt ratio is unlikely to have peaked in the current FY22/23 fiscal year at 70.8%, but rather could rise further to 72.7% in FY24/25 (JPMc: 76%).

Figure 5: Commodity prices in US\$

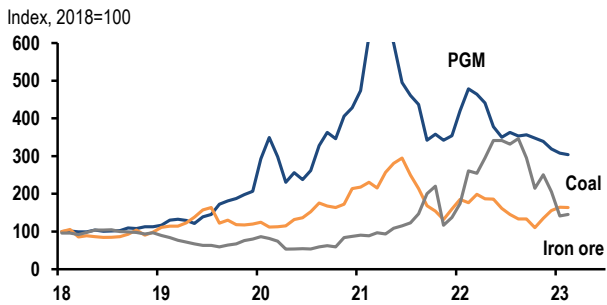
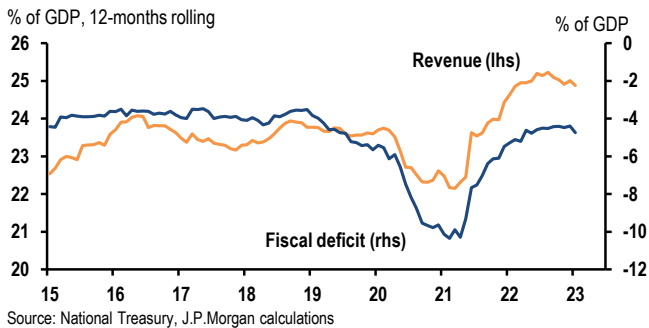


Figure 6: Revenue ratio and rolling fiscal deficit



Turkey: The economic implications of the earthquake

We convey our sympathies and best wishes to those who were affected by the earthquakes in Turkey and Syria. We know it is early and unpleasant at this stage, but we briefly touch upon the possible effects of the disaster on the Turkish economy in this note.

- **10 provinces affected by the earthquake make up 9.3% of Turkey’s GDP, 8.5% of exports, 5% of tax revenues and 11.1% of active employees.**
- **The three worst-affected provinces account for only 2.6% of Turkey’s GDP, 2.2% of exports, and 2.3% of tax revenues.**
- **Direct costs from the destruction of physical structures may reach 2.5% of GDP (or \$25bn), with risks on the upside.**
- **We revise up our year-end inflation forecast from 43% to 45% due to expected higher food prices and increased fiscal stimulus.**
- **We expect 1Q23 growth to be weaker, but reconstruction should lead a rebound in 2Q23 and into 2H23.**
- **We expect a government budget deficit of 4.5% of GDP (previously 3.5% of GDP) this year**
- **We anticipate a wider current account deficit of 3% of GDP, but international aid should compensate the pressure on the currency.**
- **Expansionary fiscal and credit policies should mitigate the impact of the earthquake in the near term**

The earthquake in Turkey has led to a tragic loss of life and carries meaningful economic implications. Comparing it with [the one in 1999](#), the impact on growth could be less pronounced as affected areas are less industry-intensive. The affected 10 cities make up 9.3% of Turkey’s GDP, 8.5% of Turkey’s exports and 11.1% of employees in Turkey. That said, the destruction was more pronounced in Hatay, Kahramanmaras, and Adiyaman, while Gaziantep and Adana - the richest cities in the affected region (4% of Turkey’s GDP) were less damaged. Hatay, Kahramanmaras, and Adiyaman only make up 2.6% of Turkey’s GDP and 2.2% of Turkey’s exports (Table 1).

Given the low economic size of the worst-affected provinces, we estimate the impact of the earthquake on economic activity to be modest relative to geographic scale. We expect 1Q23 growth to be weaker than previously anticipated, as is already evident in daily electricity consumption and exports last

week. That said, reconstruction should lead to a rebound in 2Q23 and into 2H23. We changed our outlook for economic growth on a quarterly basis to reflect the relative weakness in 1Q23 and a rebound in 2Q23, while keeping our conservative growth forecast of 2.1% unchanged for this year.

[An IMF paper](#) suggests that a country with debt at 30% of GDP is likely to experience growth of 0.5 pp higher than a country with debt of 60% of GDP in the year of a large natural disaster. It also shows that the impact on growth and investment in the following year is positive due to reconstruction efforts. All in all, we think that the overall impact of the earthquake on the GDP growth will be negligible this time since Turkey has fiscal space to support the economy.

The inflation impact is less clear, and none was visible back in 1999 (Figure 2). Since the seasonal importance of the region in crop production is low, we do not expect a significant inflationary impact on vegetables, fruits and grain prices due to the earthquake. That said, we may see higher meat prices since the region is important for the livestock sector. With higher food prices and increased fiscal stimulus, we revise up our year-end inflation forecast from 43% to 45%.

Table 1. The economic size of the affected region

	GDP Share	Exports Share	Employees Share
Gaziantep	2.0%	4.4%	2.3%
Adana	2.0%	1.2%	2.2%
Hatay	1.4%	1.6%	1.3%
Kahramanmaras	0.9%	0.6%	1.1%
Diyarbakir	0.9%	0.2%	1.2%
Saniurfa	0.8%	0.1%	1.2%
Malatya	0.5%	0.2%	0.7%
Osmaniye	0.4%	0.1%	0.4%
Adiyaman	0.3%	0.0%	0.4%
Kilis	0.1%	0.0%	0.3%
Total	9.3%	8.5%	11.1%
Hatay, Kahramanmaras & Adiyaman	2.6%	2.2%	2.8%

Source: TurkStat, J.P. Morgan

Table 2. The financial size of the affected region

	Credit Share	Deposit Share	Tax Revenues Share
Gaziantep	2.6%	1.2%	0.7%
Adana	1.8%	1.5%	1.3%
Hatay	1.1%	0.9%	1.9%
Kahramanmaras	0.7%	0.4%	0.3%
Diyarbakir	0.5%	0.4%	0.3%
Saniurfa	0.5%	0.3%	0.2%
Malatya	0.3%	0.3%	0.2%
Osmaniye	0.2%	0.1%	0.1%
Adiyaman	0.2%	0.2%	0.1%
Kilis	0.0%	0.0%	0.0%
Total	7.9%	5.4%	5.0%
Hatay, Kahramanmaras & Adiyaman	2.0%	1.4%	2.3%

Source: BRSA, MinFin, J.P. Morgan

On export revenues, the share of the worst-affected three cities is only 2.2%. We may see a pick-up in imports due to imported construction materials, but Turkey temporarily suspended some gold imports and we expect consumer spending to be lower in 1Q23. We expect a wider current account deficit of \$30bn (3% of GDP) for 2023 versus \$25bn previously,

but international aid should offset the additional pressure on the currency due to the earthquake.

Direct costs from the destruction of physical structures may reach 2.5% of GDP (or \$25bn), with risks to the upside. Administered price hikes and tax hikes in alcohol and tobacco in 2H23 should compensate the impact of increased fiscal spending on the government budget. On the revenue side, the worst-affected three cities only make up 2.3% of Turkey’s tax revenues (Table 2). A lower-than-expected government budget deficit last year, coupled with low government debt to GDP, should provide enough fiscal room to support the reconstruction efforts and transfers to affected provinces in the near term. We expect a government budget deficit of 4.5% of GDP (previously 3.5% of GDP) this year, from 0.9% of GDP in 2022.

The economic impact of the 1999 earthquake

The economic impact of the August 1999 earthquake was short-lived. Turkey’s GDP sharply rebounded and returned to its pre-earthquake levels in 4Q99 after a decline in 3Q99. Recovery in industrial production took longer as the August earthquake took place in the industrial-intensive Kocaeli and Sakarya region (Figure 1). Consumer inflation was at 65% in July 1999, which is not much different from today’s levels. No significant change in consumer inflation was observed after the August 1999 earthquake (Figure 2).

Figure 1: Economic Activity

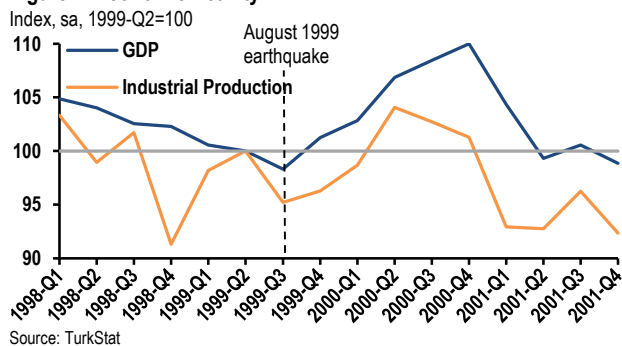
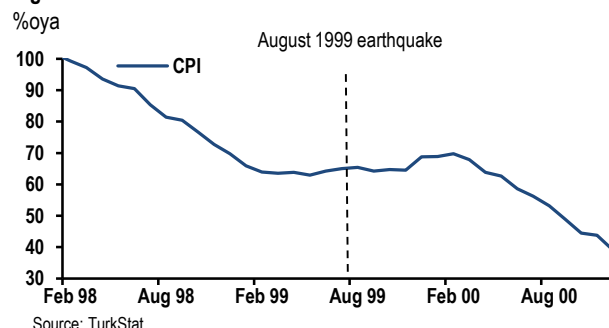


Figure 2: Consumer Prices



Economic policy implications

The CBRT exempted the securities-maintenance and reserve requirement obligations on delayed loans due on Feb 6 or within the next six months to residents in the 10 earthquake-hit cities. The loans in the affected provinces account for 7.9% of total credits (Figure 2). The Turkish government announced measures to incentivise share buybacks, private pension funds to increase their holdings of Turkish stocks and steps by the stock exchange to contain volatility to support the stock exchange. Finally, the CBRT is likely to buy up to TRY 8bn worth of government bonds and sukuks from banks.

We now expect the CBRT to cut its policy rate by 100bp to 8% in its February MPC meeting next week. The political leadership signalled further rate cuts even [before the earthquake](#). We do not rule out more rate cuts ahead of the elections originally scheduled for June 18. Yet, we believe that the policy rate is less relevant now as the monetary policy transmission mechanism is broken in Turkey. Lending and savings rates are in the 20% to 30% range and the removal of the cap on the deposit rates for FX-protected lira deposit accounts is tightening financial conditions further.

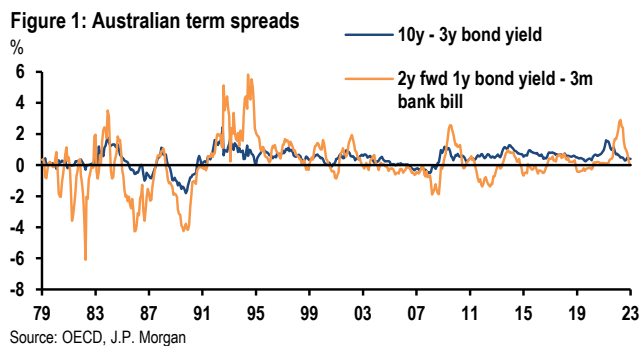
On the fiscal side, the Turkish government announced TRY 100 bn (0.5% of GDP) in earthquake-relief spending. We expect that the fiscal spending related to the earthquake may reach 2% of GDP, half of it will likely be financed through administered price hikes and tax hikes to be implemented in 2H23.

Australia: The writing on the wall

- **Parts of the Australian yield curve have inverted, while leading economic indicators have declined**
- **We test the ability of the metrics to predict recessions**
- **The indicators perform reasonably, but most are not yet signalling an impending recession**

As global central banks increased policy rates sharply last year, sovereign yield curves flattened and, in some cases, inverted. Australia has remained somewhat of an exception, with the slope between 10 and 3 year bond yields remaining steep relative to global curves, but, as Figure 1 shows, some parts of the Australian yield curve are close to inverting. Historically, curve inversion has been an accurate predictor of recessions globally. In the sixty years prior to the pandemic, inversion of the US yield curve preceded every recession.

In this note, we evaluate the ability of different portions of the Australian yield curve and leading macroeconomic indicators to predict downturns. To do so, we trade off the number of accurately predicted recessions against the number of predicted recessions which did not eventuate. The exercise is repeated across different forecast horizons. In absolute terms, the macroeconomic indicators outperform the term spreads in forecasting downturns, although yield curve indicators give a much better signal at longer forecast horizons. Looking ahead, while curves have flattened and the leading indicators have deteriorated, most of the indicators are not yet at levels which imply a coming recession.



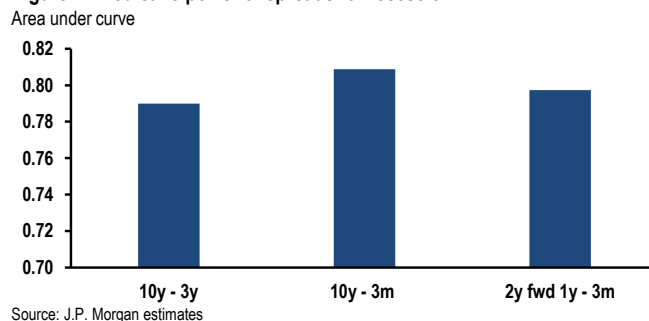
Diagnostic testing

To assess the forecasting accuracy of our suite of indicators, we use a simple model-free method, which predicts a future recession depending on whether a metric is above or below a certain threshold, i.e. a given level of a term spread or macroeconomic indicator. Implicit in the selection of a threshold is a trade-off between maximizing the number of recessions

accurately identified (the true positive rate) and minimizing the number of predictions of recessions which did not eventuate (the false positive rate). Say the threshold is set at an implausibly high term spread (any value below the threshold is read to imply a coming recession). Then, the spread will perpetually forecast a future recession. In doing so, the spread will always identify actual recessions but at the cost of many false positive predictions. This is not a very useful predictor - even a broken clock is right twice a day.

Rather than selecting a specific threshold on an ad hoc basis, we instead construct a curve (often called a ROC curve) for each of our indicators by plotting the true positive rate against the false positive rate for a range of threshold values. Comparing the area under the curves (AUC) allows us to compare the forecasting accuracy of the different indicators across potential threshold values. An area equal to 1 means an indicator perfectly distinguishes between recessions and expansions while an area equal to 0.5 implies an indicator does no better than a coin flip. For each indicator, we calculate a separate AUC value for monthly forecast horizons out to 12 months. Figure 1 displays the highest AUC for each of the term spread indicators¹.

Figure 2: Predictive power of spreads for recession



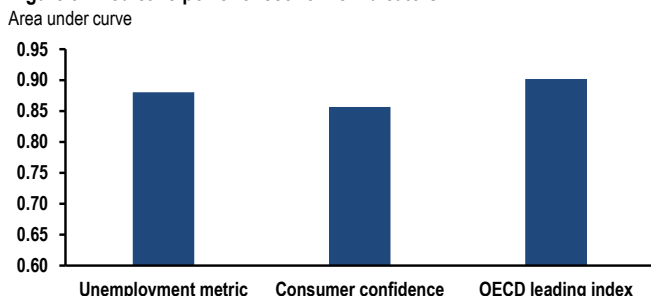
Overall, the predictive ability of the term spreads is reasonable. An AUC of 0.7-0.8 is generally considered acceptable in the literature and implies using the term spreads to forecast a recession is significantly better than relying on random chance. The AUC of the 10y - 3m spread, for instance, suggests there is an 81% chance of distinguishing a recession from an expansion based on the level of the spread. Relative to other economies, the predictive power of the spreads is weaker, with similar studies finding US term spreads have AUC values in the mid to high 80s. The poorer performance may be because Australian recessions are usually a product of shocks to the global economy rather than purely local factors.

1. We compute the spreads on a monthly basis since 1979. Yields/rates are the average of daily rates over the month. Instruments used to compute spreads: 10y bond yield - 3y bond yield, 10y bond yield - 3m bank bill, 2y forward 1y bond yield - 3m bank bill.

If curve flattening (and inversion) merely reflects a deteriorating outlook for domestic growth, term spreads should do better at forecasting downturns when they arise from local factors (especially central bank overtightening), rather than when an otherwise stable domestic economy is tipped into recession by exogenous offshore shocks.

We also test the predictive power of leading macroeconomic indicators, using monthly data since 1979. Specifically, we test the difference between the three month moving average of the unemployment rate and the trailing twelve month minimum (a spread greater than 0.5 is a very reliable predictor of US recessions), Westpac Consumer Confidence and the OECD composite leading indicator (which includes variables like the 10y bond rate, dwelling permits and employment). Figure 3 presents the highest AUC value for the macroeconomic indicators across the different forecast horizons.

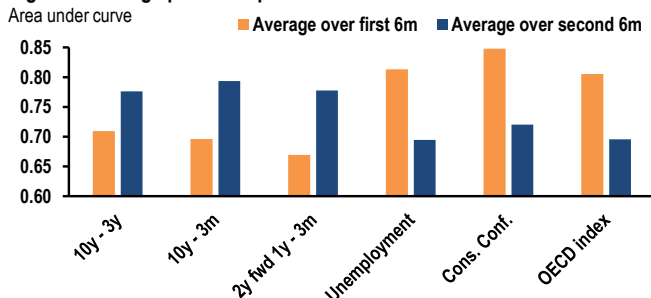
Figure 3: Predictive power of economic indicators



Source: J.P. Morgan estimates

Compared to the term spreads, the macroeconomic indicators all display a higher maximum AUC, the OECD leading index has over a 90% probability of correctly distinguishing a period of recession and a period of positive growth. However, the forecast horizon at which the maximum AUC value achieved is only one to two months ahead, so is not particularly useful for longer-term forecasting. Figure 4 displays the average AUC for the first six forecast months (i.e. the average AUC when forecasting one month ahead, two months ahead, etc.) and the second six forecast months across all the indicators.

Figure 4: Average predictive power



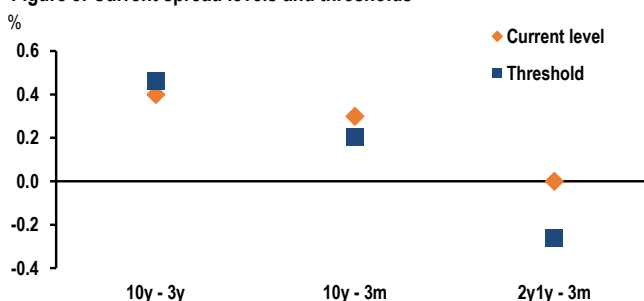
Source: J.P. Morgan estimates

The predictive power of the macroeconomic indicators declines substantially with the forecast horizon, and the term spreads dominate at longer horizons. As we have defined recessions as two quarters of negative growth, the macroeconomic indicators only really do a good job of identifying a recession once it is in motion, limiting their usefulness as leading indicators, given broader macroeconomic data also have likely deteriorated by that point. [This is consistent with previous research](#) in which we found that consumer confidence tends to reflect broader macroeconomic dynamics rather than possess unique predictive power.

Passing the threshold

So, over longer horizons, the term spreads are fairly good predictors of recessions. Recent curve flattening may be a signal that recession risks are rising, even if the curve is not inverted. The 10 year point of the Australian yield curve has often traded higher (in yield terms) than the US, perhaps because investors demand compensation for holding debt of a country that is particularly levered to commodities and global growth. As a result, risk neutral policy rate expectations may be for future easing, even though the curve has not optically inverted. Given this, to find the value of a term spread which implies a recession, we use our earlier analysis to identify the threshold which best trade off true positives and false positives.

Figure 5: Current spread levels and thresholds



Source: J.P. Morgan estimates

Figure 5 shows these thresholds for each of the term spread measures as well as the latest level of the spread (based on the average daily January 2023 yield), if the current level of the spread is below the threshold this is a signal of a recession twelve months ahead. Thus far, only the 10y - 3y spread is at a level that signals a recession. However, as our Treasury Strategists have noted, signals from longer-term spreads are noisier, as QE has reduced term premia. So, on this data, we don't believe the spreads are yet signalling a recession, although curves have flattened after the RBA's latest hike so should strengthen recessionary signals. This is fair, cyclical risks are more elevated now the Board is intent on mitigating the tail risks of a wage price spiral.

China: The scale and impact of excess saving

- Rmb4.5tn of household excess saving since 2020, with large urban-rural discrepancies
- Consumption recovery with saving rate to go below 30% in 2023
- Rmb9.9tn household excess deposit, and difference between saving and new deposit reverted in 2022
- Property market possibly takes a weak-form stabilization in 2023...
- ...but still implies significant household funding available for financial markets

[The saving rate](#) in China peaked during the pandemic, and the household sector has accumulated ~Rmb4.5tn excess saving over the past three years. However, the difference between urban and rural households is large, with excess saving per capita for rural households only 15% of the urban households. This implies divergent consumption recovery paths across income groups. Meanwhile, excess deposit reached ~Rmb9.9tn since 2020. How do we interpret the difference? We analyze the household balance sheet, and attribute the difference to investment into housing market and financial market.

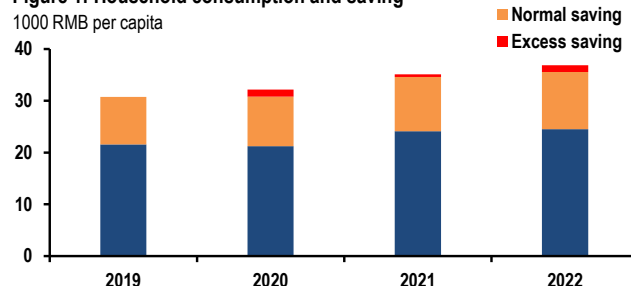
Rmb4.5tn of household excess saving

The household sector in China accumulated Rmb4.5tn (or Rmb3,247 per capita, Figure 1) of excess saving since the beginning of the pandemic. We estimate saving from disposable income and consumption expenditure data, and found that, average saving rate has been on an upward trend before the pandemic, reaching 29.9% in 2019. From 2020 to 2022, precautionary behavior of the households led to higher saving rate, recorded at 34.1%, 31.4% and 33.5%, respectively. Using the 2019 rate as benchmark, the excess saving can be found at Rmb1.93tn, Rmb0.76tn, and Rmb1.89tn in the past three years, adding up to Rmb4.5tn in total. This is equivalent to about 1.1 months of household income in 2022.

It is worth mentioning that the distribution of excess saving is quite uneven (Figure 2): excess saving in urban households averaged 5,397 yuan (1.3 months of 2022 income), while excess saving in rural households only averaged 488 yuan (0.3 months of 2022 income). Due to a lack of data, the urban-rural discrepancy serves as a proxy for differences across the income groups. Our overall forecasts expect consumption to be the primary driver of economic growth in 2023, driven by China's reopening and excess saving. However, it appears likely that the consumption recovery will be divergent across income groups: the consumption recovery in

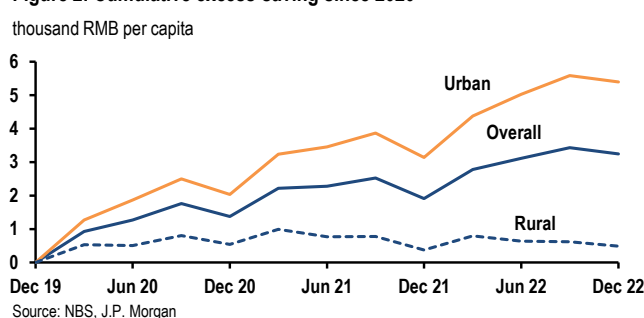
high-income families tends to be earlier and stronger, while the consumption recovery for low and middle-income families tends to improve along with labor market conditions and macroeconomic outlook.

Figure 1: Household consumption and saving



Source: NBS, J.P. Morgan. Note: assuming normal saving rate = level in 2019 (29.9%).

Figure 2: Cumulative excess saving since 2020



Source: NBS, J.P. Morgan

How much will consumption recover?

The Ministry of Commerce reported that the LNY holiday consumption rose 6.8%oya (based on monitored retail and catering enterprises). By products, sales in food, clothes, jewelry and auto rose 9%, 6%, 4.4% and 3.6%oya, respectively. The State Taxation Administration reported that consumer goods consumption rose 10%oya and services goods consumption rose 13.5%oya during the LNY break. The questions are, will this momentum continue, and by how much can consumption recover in 2023?

Our baseline scenario considers the following factors: income growth, marginal propensity to consume, proportion of excess saving to consume, and the recovery in overseas spending. Firstly, the nominal growth rate of household disposable income has been less volatile than the growth of nominal GDP (Figure 3). We expect nominal GDP to increase by 7.06% in 2023, and assume the growth rate of household disposable income to be the same.

Secondly, the effect of Rmb1 of extra annual income on consumption has been relatively stable before the pandemic, averaging at 0.673 from 2014 to 2019, reaching 0.681 in 2019

(Figure 4). The relationship between household consumption and income broke after pandemic outbreak, turning negative in 2020. Here we assume the ratio to be 0.7 in 2023.

Figure 3: Nominal GDP and household disposable income

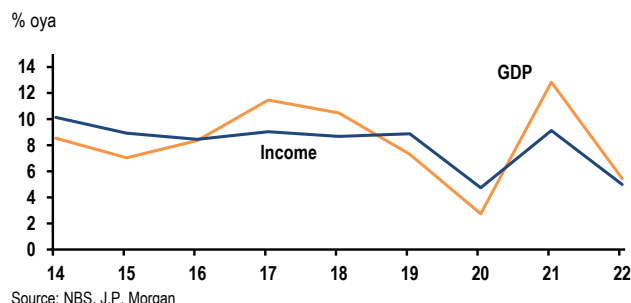
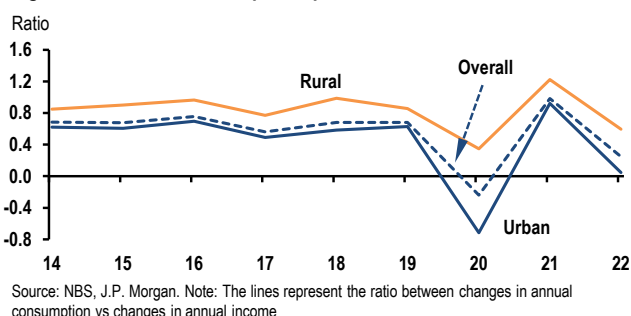


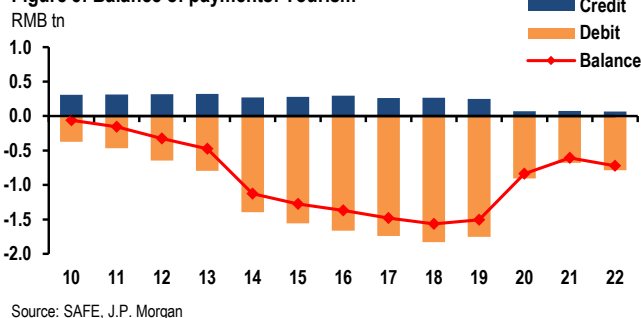
Figure 4: Broken relationship after pandemic outbreak



Thirdly, as the economy recovers, households will increase their spending, but not necessarily spend all the excess saving within one year. The scar effect, which changed the mentality of household spending behavior, could make them more cautious about potential downside risk in the future. Here we assume households will spend the Rmb4.5 trillion excess saving over the next two years.

Last, since the border reopens and international travel normalizes as indicated by our high-frequency trackers, Chinese tourists will spend more overseas. If 2023 overseas tourism spending, measured by balance of payments data (Figure 5), returns to 70% of the 2019 level, implied overseas spending will reach Rmb1,229tn. Putting all these factors together, household consumption will increase by 14.0% oya in 2023, with domestic spending increasing by 13.0% oya, and saving rate dropping to 29.1%.

Figure 5: Balance of payments: Tourism

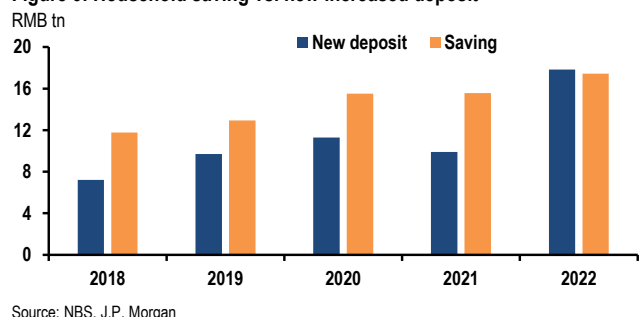


Excess deposit: an alternative perspective

Household deposit also increased a lot during the past three years, especially in 2022. Newly increased household deposit in 2019 was Rmb9.7tn, then rose to Rmb11.3tn in 2020, Rmb9.9tn in 2021, and jumped to Rmb17.8tn in 2022. Using 2019 level as benchmark, the total excess deposit during the pandemic was ~Rmb9.9tn, more than two times the excess saving estimated above.

How do we interpret the difference between Rmb4.5tn excess saving and Rmb9.9tn excess deposit? First of all, the two numbers are not directly comparable. The Rmb4.5tn excess saving was based on the 2019 saving rate, not the saving level. Total saving above the 2019 level amounts to Rmb9.7tn, which is of equivalent size of excess deposit. What's more, a direct comparison between annual saving and new deposit (Figure 6) implies that only a fraction of household saving becomes new deposit. Household saving may go to the housing market and the financial market. The abnormality happened in 2022, with deposit rising by more than the level of saving.

Figure 6: Household saving vs. new increased deposit

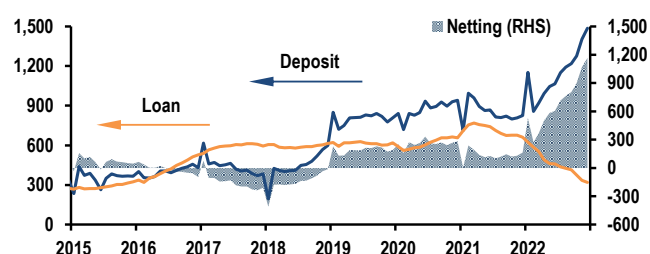


We need to look at the changes in the household balance sheet. In each year, disposable income plus household loans minus consumption expenditure gives the total available funding for investment. Meanwhile, household investment may take the form of deposit, housing, and financial assets. In other words, the difference between household saving and new deposit should imply the funding flow from loans and

into the housing market and the financial market. In 2022, the Chinese economy was sharply hit by the recurring outbreak of Omicron waves, and the overall sentiment was low. Lack of confidence in spending and cautiousness in saving resulted in the larger difference between household deposit and loan growth (Figure 7).

Figure 7: New increased household deposit and loan

RMB bn, 12mma, both scales



Source: PBOC, J.P.Morgan

However, given the differences in statistical caliber across the data sources, a precise decomposition of household balance sheet and cash flow is not feasible. Thus, we look at directional changes in data from housing and financial markets. The housing market weakened sharply in 2021. Residential building sales increased only 5.3% y/y in 2021, and dropped 28.3% y/y in 2022. This is in sharp comparison with the increase of 10.3% and 10.9% for 2019 and 2020. Residential floor space sold contracted 26.8% y/y in 2022, compared with 1.5%, 3.2%, and 1.1% growth in the previous three years.

As for the financial market, our strategy team estimated Chinese household asset allocation (Table 1), which indicated the monetary value changes across asset classes in household balance sheet. Households asset value in stocks, wealth management products and fund products increased by Rmb13.5tn and Rmb10.7tn in 2020 and 2021, respectively, but contracted Rmb3.6tn in 2022. Though the changes in value include the price effect, the relocation of household wealth out of the financial market in 2022 is clear. Overall, the housing market and financial market data are consistent with the household balance sheet analysis.

Table 1: Chinese household asset allocation: monetary value

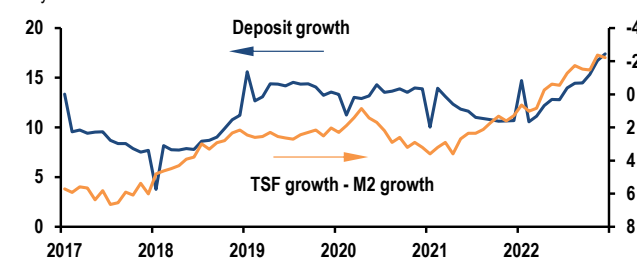
RMB trillion	Cash	Deposit	Wealth mgmt	Stocks	Fund products	Insurance	Bonds	Loans
2010	3.7	31.2	2.8	14.4	2.9	3.2	1.2	0.2
2011	4.2	35.2	4.6	12.6	2.8	3.8	1.1	0.4
2012	4.5	41.0	7.1	13.5	3.9	4.6	1.4	0.6
2013	4.9	46.5	10.2	13.8	4.7	5.4	1.8	0.8
2014	5.0	50.7	15.0	21.1	7.1	6.5	1.9	1.0
2015	5.2	55.2	23.5	27.1	12.1	7.8	2.4	1.3
2016	5.6	60.7	29.1	26.1	14.1	9.4	2.5	1.6
2017	5.8	65.2	29.5	30.9	17.2	10.4	2.5	2.0
2018	6.1	72.4	22.0	25.7	17.9	11.5	2.6	1.7
2019	6.4	82.1	23.4	34.7	19.2	13.0	2.7	1.4
2020	6.4	93.4	25.9	45.1	19.9	11.8	2.8	0.7
2021	6.9	103.3	29.0	50.3	22.3	13.3	2.9	0.4
2022	7.5	121.2	29.2	47.0	21.8	14.0	3.0	0.0

Source: Wind, J.P. Morgan estimates

Historical data suggest negative relationship between deposit growth and the difference between TSF growth and M2 growth (Figure 8). TSF growth represents the change in financing demand, while M2 growth represents the change in funding supply. When financing demand is stronger than supply, the supply-demand imbalance will push up investment return from other assets, squeezing out deposit. The average gap between TSF and M2 growth in 2022 is -2.0%-pt, and we expect this number to narrow to -0.4%-pt. This implies a decrease in new household deposit in 2023, which is highly likely considering the usually large amount of new household deposit in 2022.

Figure 8: Household deposit, TSF and M2 growth

% oya



Source: NBS, PBOC, J.P.Morgan

A weak-form stabilization is still our baseline 2023 housing market outlook, with recovery momentum back-loaded. As the house price expectations and household income expectations remain weak, households' willingness and ability to invest in housing market are low. Meanwhile, the household sector's ability to take on leverage seems to be limited. As household debt amounted to ~60% of GDP in 2020, and stabilized at the level until now, it seems that there is lack of momentum to take on leverage and support housing purchase.

More broadly speaking, with properties serving as collateral in many financial products, the shrinking prices may lead to an eventual balance sheet shrinkage. We expect housing mar-

JPMorgan Chase Bank, N.A., Hong Kong Branch

Ji Yan (852) 2800-7673

ji.yan@jpmorgan.com

Haibin Zhu (852) 2800-7039

haibin.zhu@jpmorgan.com

Grace Ng (852) 2800-7002

grace.h.ng@jpmorgan.com

Tingting Ge (852) 2800-0143

tingting.ge@jpmorgan.com

Global Economic Research

Global Data Watch

16 February 2023

J.P.Morgan

ket activity may start to bottom out in 2Q, with more signs of growth recovery from 3Q.

Implication for financial markets

Putting all the factors together, household consumption recovers, leading to lower saving. If new household deposit drops to the pre-pandemic level, and household loans do not recover meaningfully, the implied available total funding for investment in housing and financial market may be as large as Rmb6tn to Rmb10tn. As we expect a weak-form stabilization in the housing market, households' funding for housing investment will be limited, and the available funding for financial market from the household sector is significant.

However, the key issue here is the expected return from the financial market. If the expected return is lower than the mortgage loan rate, it is more reasonable for the households to repay mortgages early, as observed in 2H22 when residential mortgage loans for individuals dropped in quarter over quarter terms for the first time in a decade.

Expected turn in Singapore's core CPI places MAS on hold

- We expect core CPI to average between 3.0-3.5%oya ex. GST adjustment this year
- Easing global commodity prices and increase in non-resident labor to slow core CPI over course of 2023
- Core CPI path, if realized, suggests that monetary policy should remain unchanged
- Commodity prices remain the wild card

We have penciled in an over-year-ago deceleration in Singapore's core CPI that should be most evident in 2H23, reflecting the combination of easing commodity prices and also a normalization of labor market conditions. We expect commodity prices to remain broadly stable which should impact Singapore's Domestic Supply Price Index with a lag. Similarly, the recent rise in the non-resident labor force provides some offset to the prior tightness in labor markets, which should be evident in a slowing of labor earnings.

We expect these developments to slow core inflation in the coming quarters, to average 3.0-3.5%oya in 2023 without the GST hike and to 4.0-4.5% with the GST hike. In our view, the GST hike reflects a one-off rise in the price level rather than a change in the inflation process per se. Given that monetary policy works with long and variable lags, we do not believe that a monetary policy response would be necessary unless the GST hike changes the underlying inflation process, which is not our baseline view. Subsequently, given the MAS's primary mandate of ensuring price stability, we continue to expect no change in the S\$ NEER from its current settings.

Breaking down core CPI

Core CPI in Singapore, unlike other countries, includes both food and fuel but excludes accommodation and private road transport due to the administered nature of such prices. Consequently, commodity prices play a material role in shaping the contours of Singapore's core CPI. Mechanistically, we think of core inflation in Singapore as a two-stage process, the first reflecting the trend in input prices, or upstream prices, as captured in the domestic supply price index (DSPI). Upstream price pressures then pass through into final prices via a time-varying mark-up, which reflects, among other things, labor market slack and the cost of domestic retail and industrial rents (Table 1). This characterization allows for a more granular analysis of core CPI, which we broadly segregate into commodity-sensitive components and components that are more sensitive to domestic slack, which we proxy in this instance via the labor market, and should be more evident in services prices.

Table 1: Estimates of Singapore core CPI

%oya, local currency terms, 2006-2022				
Independent variable	Lag	Coefficient	P-val	
Constant	None	0.21	0.21	0.05
Core	1-qtr	0.51	0.00	
DSPI	1-qtr	0.05	0.00	
Employment income	1-qtr	0.09	0.00	
R-squared	0.91			
SER	0.47			

Dependent variable: Core CPI. Source: J.P. Morgan estimates

Mapping the inflationary pressure points

This stylized representation of core CPI provides a useful indication of where the pressure points might lie. Our core CPI forecast pencils in a gradual easing of the DSPI and also of labor cost pressures over the course of this year (Figure 1). The net impact should see a material slowing in over-year-ago core CPI in 2H23 (Figure 2).

Figure 1: Singapore DSPI and employment income

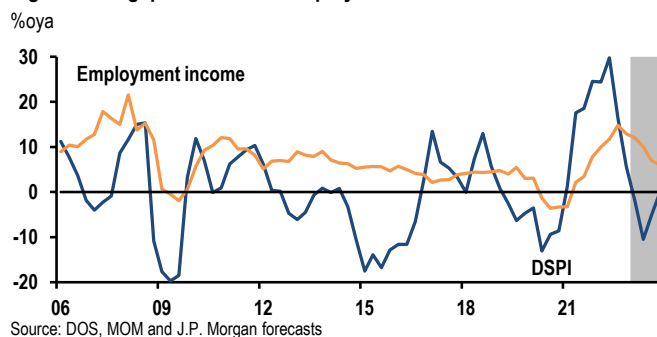
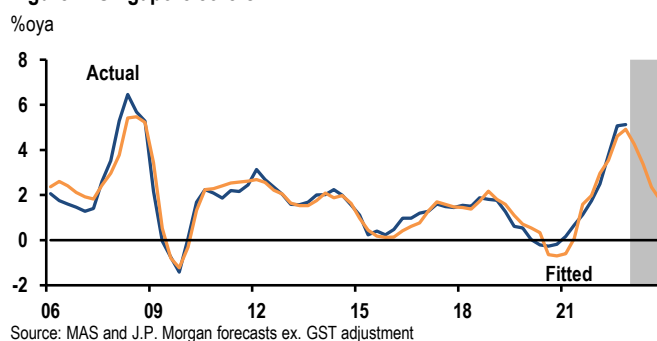


Figure 2: Singapore core CPI



On the supply side, the recent easing in the DSPI, which leads core CPI by around four months, mirrors the anticipated contours of commodity prices (Figures 3 and 4). With our commodity price forecasts broadly up for energy but stable to lower for base metals and soft commodities, the net impact should be neutral through the year. Suffice to add that any material disruptions to the commodity complex will feed through into Singapore's core CPI.

Figure 3: Commodity prices and Singapore DSPI

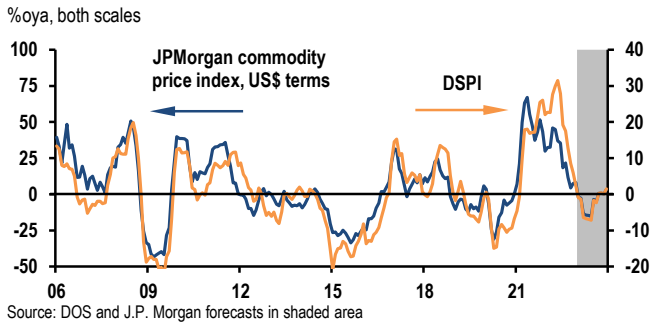
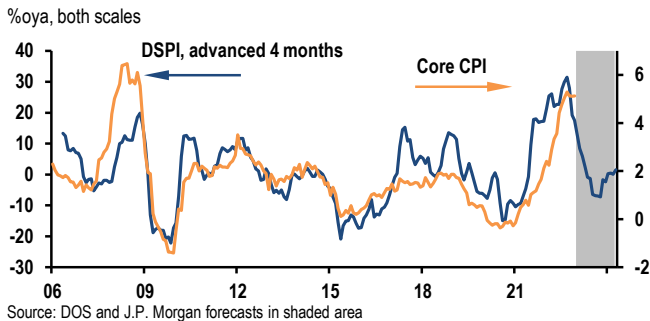


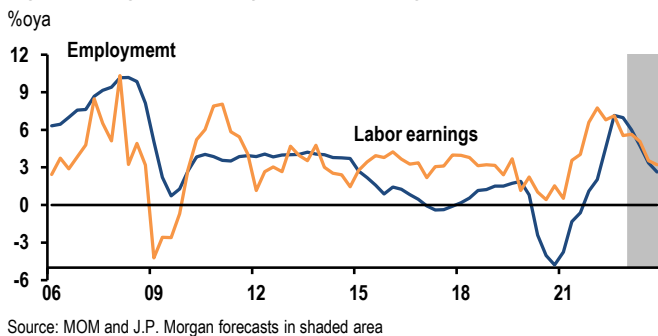
Figure 4: Singapore DSPI and core CPI



Flexible labor supply provides offset

These input cost developments will act in concert with what we believe will be an easing in labor cost pressures. The labor earnings data in 4Q22 suggest that an inflection could be underway even as employment continues to rise (Figure 5).

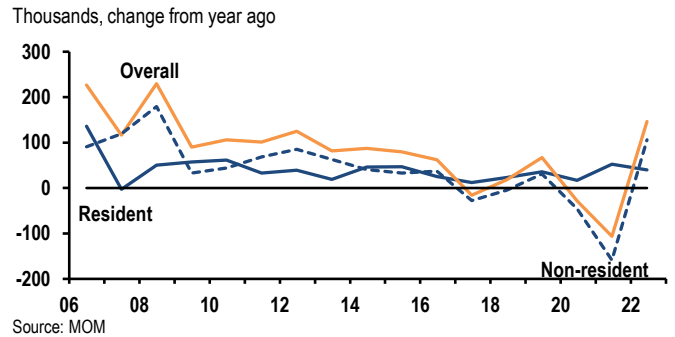
Figure 5: Singapore employment and earnings



This dynamic in our view owes to Singapore's flexible labor force, which has seen a rise in non-resident labor force participation amid a relatively less flexible resident labor force (Figure 6). Indeed, in 2022, of the 146k rise in the labor force, 106k came from non-resident sources. Thus, resident labor tightness has been offset through non-resident labor supply. This also implies that the domestic NAIRU is likely to be less binding, especially in sectors that tend to be more reliant on non-resident labor: retail, logistics, lodging, food and beverage

service, and facilities maintenance. Moreover, these same sectors also tend to have higher representation in the CPI basket compared to higher-end services.

Figure 6: Singapore labor force



Recent core CPI trend is encouraging

The incoming core CPI data is supportive of the view that a sequential inflection, if not already upon us, is coming soon. Both goods and services CPI have turned lower in trend sequential terms and suggest that price setting behavior is progressing as expected (Figure 7).

Figure 7: Singapore core CPI

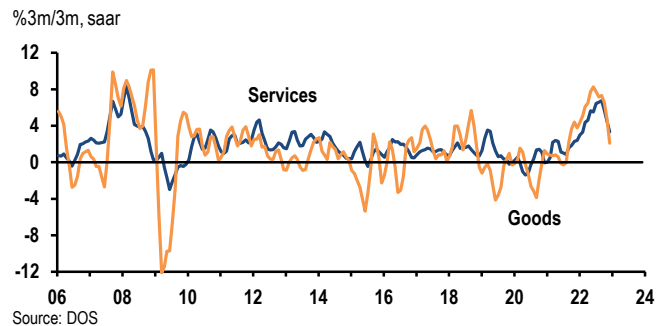
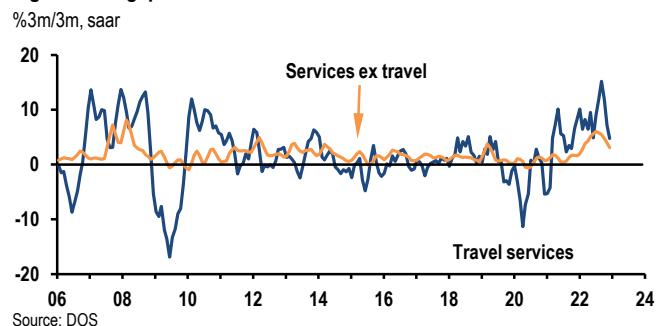


Figure 8: Singapore services CPI

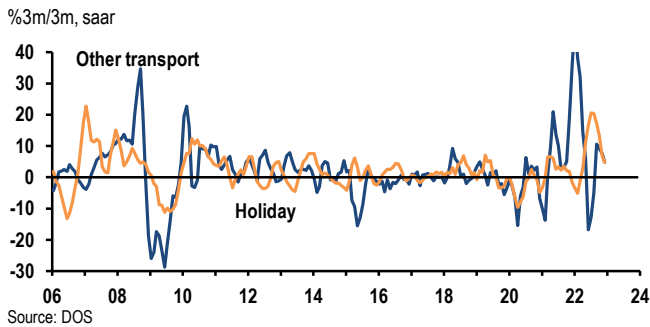


The correlated turn in services CPI is slightly surprising given the expectation that the recent lift in services demand, following reopening in April, should have been more evident in service prices. That said, this seems to have been the case at a

more granular level, with travel-related services rising in 3Q22 before easing in January even as the rise in services cost ex-travel has been more benign (Figure 8).

Within travel-related services, both holiday expenses and other transport services inflation look to be easing and this bodes well for the prospects of inflation – not price - normalization (Figure 9).

Figure 9: Singapore travel services

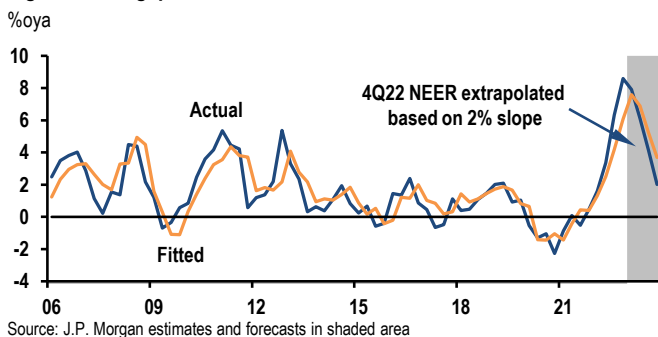


forecasts lightly and humbly, being mindful of John Kenneth Galbraith’s observation that “The only function of economic forecasting is to make astrology look respectable.”

We look for MAS to remain on hold

In terms of the implications for monetary policy, our NEER framework embeds three variables, the lagged NEER, core CPI, and the output gap and this would be the same as model M3 as presented on page 64 of the [October 2018 MAS Macro review](#). The regression estimates suggest a markedly higher significance of core inflation than for the output gap, affirming the view that the MAS’s reaction function is focused squarely on price stability rather than growth. Thus, given our macroeconomic forecasts, especially for core inflation, the model signals a slowing in the NEER as the year progresses (Figure 10).

Figure 10: Singapore NEER



However, there remain risks to the inflation outlook, especially if geopolitical tensions or weather-related shocks lead to material supply side disruptions to commodity prices. Given the nature of these shocks, these are particularly challenging to anticipate or forecast in the near term. Thus, we hold these

India: Inflation convergence

- **RBI’s inflation target is headline yet they have worried about core...**
- **Why should one worry about core?**
- **Because we find that headline eventually converges to core ...**
- **Creating future inflation risks if core does not soften**

Unlike recent RBI meetings, analysts and markets were divided going into last week’s monetary policy review. The “pause” argument was premised upon two factors. First, that headline inflation has already dipped below 6% and is likely to stay below that upper tolerance band for much of 2022. Second, that slowing global growth in 2023 is likely to spill over into India and that, in conjunction with domestic policy normalization, creates downside risks to India’s growth. On the other hand, those arguing for the 25 bp hike, such as us, remained concerned that even as headline inflation had come off, underlying inflation remains very sticky. Core-core inflation has averaged 5.6% for 33 months since the start of the pandemic and accelerated to average 6.1% in 2022. The monthly momentum of core has not budged from a 0.5% average the last few months.

In the event the MPC delivered a 25 bp hike maintaining a cautious tone, and worried about core inflation, with the Governor noting that “*Headline inflation has moderated with negative momentum in November and December 2022, but the stickiness of core or underlying inflation is a matter of concern. We need to see a decisive moderation in inflation.*” The MPC was right to worry with January CPI unexpectedly jumping to 6.5% oya a few days after the meeting, and core inflation remaining very sticky (Figure 1). To be sure, food prices are volatile and could easily reverse and pull headline down in the coming months. The real worry is the stubbornness of core inflation. But why should we worry about core when the inflation target is headline?

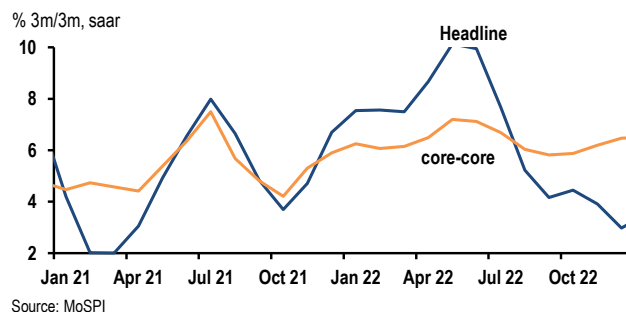
RBI’s target is headline - why watch core?

Whether the RBI should pay heed to core inflation comes down to the direction of convergence. When headline and core diverge meaningfully, which converges to which? Does core eventually converge to headline? Or does headline eventually converge to core?

The answer to this question should have meaningful implications on monetary policy. If it’s the former, the RBI can breathe easy and look through the stickiness of core. But if it’s the latter – headline eventually converges to core – then (i) core becomes a good predictor of where headline will eventually end up, and (ii) whether core softens in the coming

months becomes absolutely crucial to determining the future inflation look.

Figure 1: Headline and core-core inflation



Intuition behind convergence

Inflation expectations are likely to drive convergence from core to headline. In India, food prices have a large weight in the consumer basket (46%) and are believed to have a large bearing on household inflation expectations. If that is true, drops in food prices should result in a downshift of inflation expectations. Lower expectations through a Phillips curve framework should reduce core inflation, and, holding output gaps constant, drive it down toward headline inflation.

On the other hand, convergence of headline to core would likely work through anchored inflation expectations. If inflation expectations are anchored by monetary policy consistently following an inflation targeting regime, the near-term gyrations in the headline inflation from volatile components like food and fuel would be looked through, and as a consequence headline eventually reverts back to underlying inflation. In the rest of the note we therefore analyze the direction of convergence.

Direction of convergence

To determine the direction of convergence, we update our analysis of [2019](#) and [2021](#) when we undertook a more formal econometric test, of the kind used by [Cecchetti and Moessner \(2008\)](#) and [Anand, Ding, and Tulin \(2014\)](#), to test the direction of convergence.

Empirically, convergence can be tested by estimating the following regression:

$$\pi_t^{headline} - \pi_{t-12}^{headline} = \alpha + \beta(\pi_{t-12}^{headline} - \pi_{t-12}^{core}) + \varepsilon_t$$

where $\pi_t^{headline}$ = Headline CPI inflation in month t, and π_t^{core} = Core CPI in month t

If headline reverts to core, then coefficient β should be negative. The closer β is to -1 and α to 0, the more complete is the convergence from headline to core. By contrast, an inability to reject the null hypothesis of $\beta = 0$, would suggest headline does not converge to core at all.

The symmetrically opposite approach can be applied to check whether core converges to headline:

$$\pi_t^{core} - \pi_{t-12}^{core} = \delta + \gamma(\pi_{t-12}^{core} - \pi_{t-12}^{headline}) + \varepsilon_t$$

Here the closer γ is to -1 and δ to 0, the greater is the convergence of core to headline. We use the new CPI series that starts in 2011 and test convergence using both the standard core (which the RBI refers to) and core-core (JPM's preferred measure). Table 1 captures the results. We find very strong convergence of headline to core.

Table 1: Regressions (2013-22)

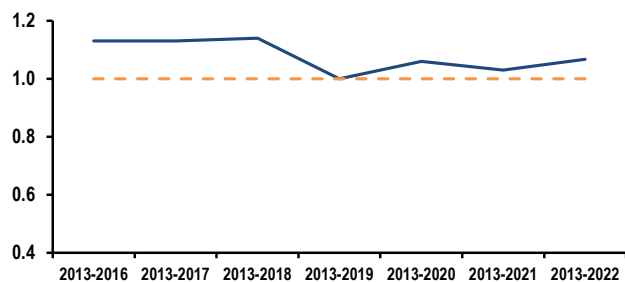
	Core		Core-core	
	H-C	C-H	H-C	C-H
Constant	-0.21	-0.33*	-0.15	0.20
β	-1.06**		-1.05**	
γ		-0.09		-0.2**

** and * indicates statistical significance at 1% and 5%

Source: J.P. Morgan

β is estimated almost equal to -1 and statistically significant. α is statistically insignificant. All told, this is evidence of strong convergence from headline to core. By contrast, there is no convergence from core to headline, with γ statistically insignificant with core inflation and much below -1 in the case of core-core inflation. For conciseness both α and δ have been stated as constant in table. Furthermore, rolling regressions through the eight-year sample period suggest beta has always been close to 1 (Figure 2).

Figure 2: Rolling co-eff (headline to core)



Source: J.P. Morgan

These results confirm and reinforce our earlier findings which yielded a similar convergence. What the latest analysis does is confirm that the pandemic did not change the direction of convergence.

Implications

What all this suggests is that if core inflation remains elevated, headline will eventually gravitate there. Which is why the MPC will need to remain focused on bringing down core inflation, and why the risks of another rate hike have increased in April if core inflation does not begin to soften.

(Note: In this note core refers to JPM's "core-core" calculation, netting out gasoline and diesel prices from the standard definition of core.)

United States

- **CPI increased 0.5% in January, core up 0.4%**
- **Retail sales surged in January and labor market remains strong**
- **1Q real GDP forecast revised up to 2.0%**
- **Expect solid PCE inflation, strong consumer spending gain next week**

Data releases from the past week generally had hawkish implications for the Fed. Monthly changes in the main consumer price index (CPI) aggregates were firm in January, with the headline rising 0.5% and the core index up 0.4%. And retail sales jumped by more than was anticipated, with a 3.0% headline gain. There also continue to be signs of labor market strength, including low levels of jobless claims filings through the latest weekly update. The latest prints are probably not indicative of the underlying trends for the future, and a variety of economic indicators posted strong January results following an earlier period of weakening. We still look for softening ahead, but it appears that GDP growth, the labor market, and inflation are staying firmer than we had been anticipating through the latest reports. We revised our 1Q real GDP growth forecast up from 1.0% to 2.0% saar to better balance the risks as we track the data for early in the quarter.

It already had been looking clear that the FOMC planned to tighten policy more at upcoming meetings and we continue to look for 25bp hikes at the next two meetings (March and May) before a pause. The latest data have increased risks that the Fed will need to tighten even more. In our view, more tightening would mean additional 25bp hikes over time, but some Fed officials have raised the possibility that the FOMC might shift back to 50bp increments for tightening.

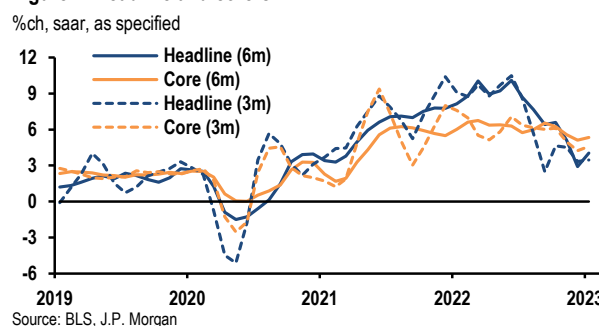
In next week's reports, we look for a strong gain in January real consumer spending (0.8%), supported by a 1.2% surge in nominal income that benefited from a cost of living adjustment to social security payments. For the January PCE price data, we think the headline rose 0.5% in the month (5.2% oya) while the core increased 0.5% (4.6% oya). The flash PMI reports are expected to move up in February, but remain weak, behaving similarly to some regional surveys that already have reported data for that month.

Solid CPI gains

The main CPI aggregates were pretty close to expectations in January, with the headline rising 0.5% and the core index moving up 0.4% (0.41% to two decimals). This headline gain was the firmest monthly change reported for this index since last June, and the January increase in the core was the strongest monthly change in four months. And combined with

upward revisions to recent earlier figures (coming from updated seasonal factors), the recent trends for the main CPI aggregates remain strong, even if there has been some moderation relative to an even more robust run (Figure 1).

Figure 1: Headline and core CPI



Solid increases in rental prices helped push the January CPI higher and we still think that shelter inflation is due to moderate later this year given signals in related industry figures on new leases. Used vehicle prices continued their recent downward trend into January, and we look for more declines in vehicle prices to come as related inventories normalize. But we likely need to see inflation for a variety of other components ease for the Fed to feel comfortable that inflation is heading back toward target in a sustainable way. Weakening in the labor market (and wage inflation) would probably go a long way in terms of easing inflation pressures.

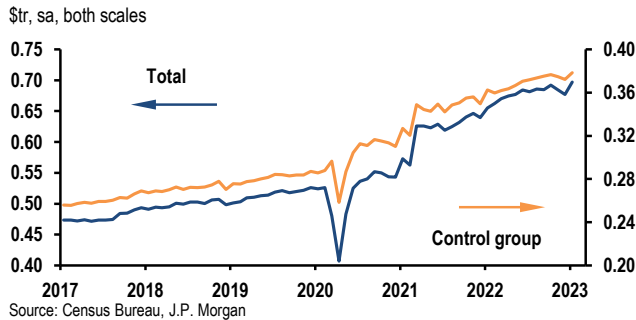
The producer price index (PPI) showed firm price changes in January that were above expectations, with the headline jumping 0.7% and the core index rising 0.5%. While the headline import price index came out a little bit below expectations, declining 0.2% in January, the nonfuel price index posted its second straight monthly increase (up 0.3%) after a run of monthly declines. Earlier dollar appreciation likely was a drag on import prices but the depreciation from the past few months probably is boosting import prices (and could be passing through into goods pricing more generally).

Consumers come back

The January retail sales data beat expectations that were already anticipating a strong report, with the headline jumping 3.0% and strength throughout many of the main underlying details (Figure 2). The strong January change is unlikely to be the new underlying trend, and retail spending had been weakening late last year before the significant pickup in January. Furthermore, households received a big boost to income from the cost of living adjustment on social security payments in January, but this pace of income growth should be not sustained. Additionally, over the past few years we have seen a pattern in the (seasonally adjusted) data in which we

get above-trend gains in Januarys following weak Decembers, and this pattern may be playing out again now. While there clearly are reasons to discount the January increase, the pop in retail sales that month showed more strength in consumer spending than we were anticipating and prompted an upward revision to our 1Q GDP forecast.

Figure 2: Retail sales and food services



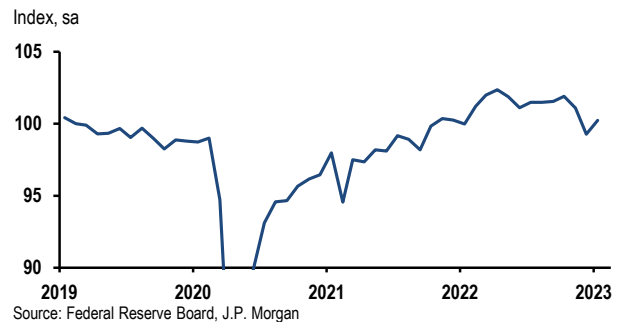
Consumers likely are benefiting from a strong labor market and the signs of the strength continued through the latest weekly jobless claims report. Filings have remained low, with the initial claims data looking particularly upbeat. In the latest weekly figures, initial claims edged down from 195,000 to 194,000 during the week ending February 11 while continuing claims increased from 1.680mn to 1.696mn during the week ending February 4.

While more lagging, the New York Fed’s Quarterly Report on Household Debt and Credit showed signs of consumer health, albeit with some mixed details. Consumers were current on about 98% of outstanding loans, the highest share on record for this survey back to 1991 (although just slightly above the share current from recent quarters).

A better month on manufacturing

Like the retail sales data, manufacturing output weakened late last year before picking up in January. But unlike the retail sales data, the broad trend for manufacturing still looks pretty weak (Figure 3). Even with a 1.0% gain to start the year, output was down 6.4% saar over the latest three months. Manufacturing surveys also have remained weak lately, although monthly changes have varied. The Empire State survey picked up significantly in February from a depressed January level while the Philadelphia Fed manufacturing survey weakened between these months.

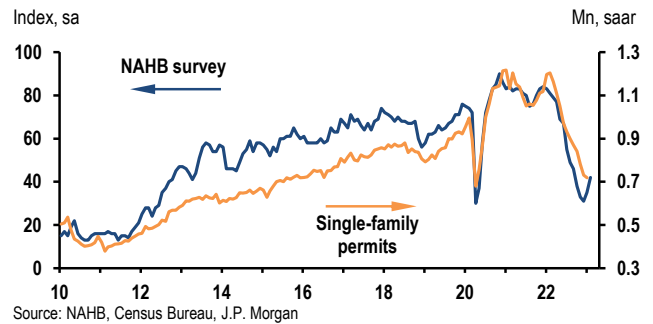
Figure 3: Manufacturing output



Housing more mixed

Last year provided clear evidence that the housing market responds to changes in mortgage rates and the changes from the past few months have been mixed. Rates are lower than they were a few months ago but in recent weeks they have moved up. Several housing indicators have firmed lately, generally moving up from depressed levels. And the NAHB survey’s gauge of homebuilder sentiment beat expectations in February, jumping 11pts since December. The latest starts and permits data showed mixed changes, but single-family permits—perhaps the most important forward-looking measure for construction activity—continued its recent clear downward trend, with now 11 straight monthly declines reported into January (Figure 4).

Figure 4: NAHB survey and single-family housing starts



A wider deficit

With more than a third of the current fiscal year behind us, the CBO released updated budget projections for this year (and beyond). The CBO now anticipates a deficit this fiscal year of around \$1.4 trillion and we revise our forecast to match this estimate. And we follow the CBO’s projections that the deficit will widen over time beyond the current fiscal year.

Data releases and forecasts

Sources for all: ADP/Moody's Analytics, BEA, BLS, Census Bureau, Conference Board, Department of Labor, Federal Reserve Board, ISM, J.P. Morgan forecasts, NAHB, NAR, NFIB, NY Fed, Philadelphia Fed, S&P Global, Standard & Poor's, University of Michigan, US Treasury

S&P Global manufacturing PMI (US flash)					
Index, sa					
9:45am					
	Nov	Dec	Jan	Feb	
Composite ¹	47.7	46.2	46.9	<u>48.5</u>	
New orders (30%)	45.2	42.7	44.1		
Output (25%)	47.4	46.2	46.9		
Employment (20%)	51.1	50.6	50.3		
Sup. del. (15%, inv.)	50.5	49.9	50.2		
Stks of purch (10%)	46.5	42.1	44.2		
New export orders	45.7	46.7	48.6		
Backlogs of work	45.3	44.4	45.2		
Output prices	61.2	56.5	57.3		
Input prices	63.4	55.6	58.8		
Stocks of finished goods	52.3	49.9	46.1		
Quantity of purchases	40.6	38.7	38.8		
ISM-weighted composite ²	47.9	46.4	47.0		

1. Weights in parentheses
2. Attributes ISM-comp. weights (equal weights) to corresponding PMI series

We look for the manufacturing PMI's headline composite to increase 1.6pts to 48.5 in the flash February report. We have seen mixed changes in the regional manufacturing survey data reported to far between January and February. But on net it looks like things picked up in February relative to January even if many key indicators remained weak. We look for similar firming in the PMI data, with the expected February print still weak.

S&P Global services PMI (US flash)					
Index, sa					
9:45am					
	Nov	Dec	Jan	Feb	
Business activity	46.2	44.7	46.8	<u>48.5</u>	
Incoming new business	46.4	45.7	48.6		
Employment	51.2	51.0	50.8		
Business expectations	63.6	62.9	65.7		
Input prices	66.1	58.9	63.7		
Prices charged	54.6	54.5	54.0		
Backlogs of work	45.5	47.5	47.5		

We forecast that the headline business activity index for the services PMI increased 1.7pts to 48.5 in the flash February report. The regional business leaders survey on the services sector showed improvement in its main activity index in February although it remained weak, and we look for similar results in the PMI data.

Existing home sales				
Index, sa				
10:00am				
	Oct	Nov	Dec	Jan
Total (mn, saar)	4.43	4.08	4.02	<u>4.05</u>
%m/m	-5.9	-7.9	-1.5	<u>0.7</u>
%oya, nsa	-29.5	-35.4	-37.1	<u>-37.6</u>
Months' supply (nsa)	3.3	3.3	2.9	
Single-family	3.3	3.3	2.9	
Median price (%oya)	6.5	4.0	3.6	

We estimate that existing home sales edged up 0.7% to 4.05mn saar in January. Several housing indicators have firmed recently following a period of sharp weakening, including the pending home sales index, which typically leads the existing home sales data by one or two months. We expect similar behavior in the existing home sales data, with a modest increase in January following a run of significant declines.

Jobless claims					
Thousands, sa					
8:30am					
	New claims (wr.)		Continuing claims		Insured
	Wkly	4-wk avg	Wkly	4-wk avg	Jobless,%
Dec 10	212	228	1669	1654	1.2
Dec 17 ¹	216	221	1718	1682	1.2
Dec 24	223	221	1697	1688	1.2
Dec 31	206	214	1630	1679	1.1
Jan 7	206	213	1655	1675	1.1
Jan 14 ¹	192	207	1666	1662	1.1
Jan 21	186	198	1650	1650	1.1
Jan 28	183	192	1680	1663	1.2
Feb 4	195	189	1696	1673	1.2
Feb 11	194	190			
Feb 18 ¹	<u>200</u>	<u>193</u>			

1. Payroll survey week

We forecast that initial jobless claims increased 6,000 to 200,000 during the week ending February 18. We think filings will pick up given news about layoffs in recent weeks, but we expect filings to remain at a low level in the upcoming report.

Gross domestic product					
%ch, q/q, saar, real unless noted					
8:30am					
	2Q22	3Q22	4Q22	Adv	Sec
Real GDP	-0.6	3.2	2.9		<u>2.8</u>
Final sales	1.3	4.5	1.4		<u>1.5</u>
Domestic final sales	0.2	1.5	0.8		<u>0.8</u>
Consumption	2.0	2.3	2.1		<u>1.7</u>
Equipment	-2.0	10.6	-3.7		<u>-3.7</u>
Intellectual property	8.9	6.8	5.3		<u>4.6</u>
Nonres. structures	-12.7	-3.6	0.4		<u>7.7</u>
Residential investment	-17.8	-27.1	-26.7		<u>-25.0</u>
Government	-1.6	3.7	3.7		<u>3.9</u>
Exports	13.8	14.6	-1.3		<u>-1.2</u>
Imports	2.2	-7.3	-4.6		<u>-4.6</u>
Inventories (ch, \$bn)	110.2	38.7	129.9		<u>132.9</u>
Net exports (pct.pt.contr.)	1.2	2.9	0.6		<u>0.7</u>
Inventories (pct.pt.contr.)	-1.9	-1.2	1.5		<u>1.3</u>
Core PCE price index	4.7	4.7	3.9		
(%oya)	5.0	4.9	4.7		
GDP chain price index	9.0	4.4	3.5		
(%oya)	7.6	7.1	6.3		
Adj. corporate profits (nominal)	4.6	0.0			
(%oya)	7.7	5.5			

We estimate that the BEA will revise its estimate of 4Q real GDP growth down from 2.9% to 2.8% saar. We expect mixed revisions coming across the main components with a net negative effect on the headline. For most of the main categories, we don't expect these revisions to change the main stories

that played out in 4Q in a meaningful way, although we do expect the increase in real nonresidential structures investment to be revised up from a marginal 0.4% saar to a strong 7.7% gain based on data from the latest construction spending report. We also expect upward revisions to residential spending investment (but for the data to still show a large drop in real investment in 4Q), government spending, and net exports. Offsetting these upward revisions, we estimate that real consumer spending growth in 4Q will be revised down from 2.1% to 1.7% saar and also anticipate downward revisions for intellectual property products investment and business inventories.

With annual revisions to the CPI and PPI data signaling stronger inflation late last year we expect to see upward revisions to the main PCE price indexes in 4Q. We think the PCE price index will be up 3.5% saar in 4Q (revised up from 3.2%) and look for a 4.2% saar move up in the core PCE deflator (revised up from 3.9%). The revisions to the quarterly data on February 23 will give us a signal about how the corresponding monthly figures will be revised on February 24 in the January personal income report.

Fri		Personal income			
Feb 24	%m/m, sa, unless noted				
8:30am		Oct	Nov	Dec	Jan
Personal income		0.8	0.3	0.2	<u>1.2</u>
Wages & salaries		0.4	0.3	0.3	<u>1.5</u>
Consumption		0.8	-0.1	-0.2	<u>1.3</u>
Real consumption		0.4	-0.2	-0.3	<u>0.8</u>
PCE price index		0.4	0.1	0.1	<u>0.5</u>
Core		0.26	0.16	0.30	<u>0.49</u>
Mkt-Based Core		0.3	0.1	0.4	
Core (%oya)		5.1	4.7	4.4	<u>4.6</u>
Mkt-Based Core (%oya)		5.3	4.9	4.8	
Saving rate		2.5	2.9	3.4	<u>3.4</u>

We forecast that real consumer spending increased 0.8% in January while nominal spending jumped 1.3%. The January retail sales report signaled a strong increase in spending that month and more broadly a number of economic indicators have firmed in January following a period of softening late last year. We expect this strong January turnaround to also be evident in the BEA's consumer spending data.

We also see conditions in place for a strong nominal income gain in January and we estimate that income rose 1.2% that month. With strong employment data for January, we think that wages and salaries surged 1.5% that month. We also see strong income support coming from the cost of living adjustment to social security payments, which will add about \$100bn to aggregate income over the course of the year (we think this jump in social security payments will add about 0.5%-pt to the monthly change in total income for January). With similarly strong gains expected for disposable income

and consumer spending in January, we think the saving rate will hold steady between December and January.

With the January CPI and PPI data reported, we look for solid monthly changes in the main PCE price aggregates, with the headline rising 0.54% and the core increasing 0.49%. We think upward revisions to earlier figures will raise year-ago inflation rates for December. We estimate that the PCE price index will be up 5.2% in December (revised from 5.0%) and that it will hold at this 5.2% rate in January. We look for the core pce price index to be up 4.5% in December (revised from 4.4%) with this measure edging up to 4.6% in January.

Fri		New home sales			
Feb 24					
10:00am		Oct	Nov	Dec	Jan
Total (000s,saar)		598	602	616	<u>630</u>
%m/m		8.7	0.7	2.3	<u>2.3</u>
%oya, nsa		-11.8	-20.4	-23.0	<u>-24.2</u>
Months' supply		9.4	9.2	9.0	
Median price (%oya)		15.0	6.7	7.8	

We look for new single-family home sales to rise 2.3% to 630,000 saar in January. A variety of economic indicators have firmed in January and we look for new home sales to pick up somewhat in January relative to December. Some housing indicators also have been moving higher in recent months following a period of sharp declines throughout much of 2022.

Fri		Consumer sentiment			
Feb 24					
10:00am				Pre	Fin
Univ. of Mich. Index (nsa)		Dec	Jan	Feb	Feb
Current conditions		59.7	64.9	66.4	<u>66.5</u>
Expectations		59.4	68.4	72.6	
Inflation expectations		59.9	62.7	62.3	
Short-term		4.4	3.9	4.2	
Long-term		2.9	2.9	2.9	

We forecast that the University of Michigan consumer sentiment index will be revised up from 66.4 to 66.5 between the preliminary and final February reports, showing a 1.6pt increase over the final January reading. This sentiment gauge has been trending higher in recent months and we think this upward trajectory may continue over time (coming off of a very low level), although we don't see a reason to expect a particularly large revision in the upcoming report.

Review of past week's data

Sources for all: ADP/Moody's Analytics, BEA, BLS, Census Bureau, Conference Board, Department of Labor, Federal Reserve Board, ISM, J.P. Morgan forecasts, NAHB, NAR, NFIB, NY Fed, Philadelphia Fed, S&P Global, Standard & Poor's, University of Michigan, US Treasury

CPI (Feb 14)

%m/m, sa, unless noted

	Nov	Dec	Jan	
Total	0.2	0.1	0.5	
%oya (nsa)	7.1	6.5	6.4	
Core	0.31	0.40	<u>-0.46</u>	0.41
%oya (nsa)	6.0	5.7	5.6	
Core services	0.5	0.6		0.5
Core goods	-0.2	-0.1		0.1
Food	0.6	0.4	<u>-0.4</u>	0.5
Energy	-1.4	-3.1	<u>-1.9</u>	2.0
Housing	0.5	0.7		0.8
Owners' eq.rent	0.65	0.79	<u>-0.64</u>	0.67
Rent	0.77	0.79	<u>-0.68</u>	0.74
Lodging away from home	-0.5	1.1	<u>-0.8</u>	1.2
Apparel	0.1	0.2	<u>-0.4</u>	0.8
New vehicles	0.5	0.6	<u>-0.1</u>	0.2
Used vehicles	-2.0	-2.0	<u>-0.5</u>	-1.9
Public transportation	0.2	-0.5	<u>-0.8</u>	-1.8
Communication	0.9	0.0	<u>-0.1</u>	0.4
Medical care	-0.4	0.3	<u>-0.3</u>	-0.4

The main consumer price index (CPI) aggregates were pretty close to expectations in January, with the headline rising 0.5% and the core index moving up 0.4% (0.41% to two decimals). This headline gain was the firmest monthly change reported for this index since last June, and the January increase in the core was the strongest monthly change in four months. Even so, we think that the broad trends for inflation are moderating even if they remain firm. In terms of year-ago inflation rates, the headline moved down from 6.5% in December to 6.4% in January while the core eased from 5.7% to 5.6%.

In terms of some of the CPI report's main details, the 2.0% increase in energy prices in January and the 0.5% increase in the food price index were pretty close to, but marginally above, our forecasts. Excluding food and energy, the core index came out a little below our forecast, in part because used vehicle prices fell another 1.9% in January (we had looked for a modest increase as industry data show recent firming in prices). Meanwhile, apparel prices increased 0.8% in January, the firmest monthly change in about a year, and prices for medical care commodities jumped 1.1%, the biggest increase in about three years (as reported in nsa terms). On the whole, core goods prices rose 0.1% in January, a fairly soft monthly change, but the firmest monthly gain since last August.

Elsewhere in the CPI, core services prices rose 0.5% in January, with this gain in line with the average rate of inflation for this aggregate from the past few months. Shelter inflation continued to look strong in January, including a 0.74%

increase for tenants' rent and a 0.67% increase in owners' equivalent rent. Changes to the other main components within the core services aggregate were mixed, with a 0.7% drop in medical care services prices standing out on the downside.

This weakness in medical care services prices reflected another drop in health insurance prices (continuing the recent very weak trend) and also a 0.1% move down in prices for related professional services, which marked the first monthly decline for this series in almost a year.

Retail sales (Feb 15)

%m/m, sa

	Nov	Dec	Jan	
Total	-1.0	-1.1	<u>-2.2</u>	3.0
Ex autos	-0.6	-0.8	-1.1	-0.9
Ex autos and gas	-0.5	-0.7	-0.7	-0.4
Building materials	-3.1	-3.3	-0.3	1.1
Control group ¹	-0.2	-0.5	-0.7	<u>-0.5</u>
Ex. autos and building mat.	-0.4	-0.6	-1.2	-1.1

1. Total ex. gasoline, automotive dealers, building materials, and food serv.

The January retail sales data beat expectations that were already anticipating a strong report, with the headline jumping 3.0% and strength throughout many of the main underlying details. The retail sales data have behaved similarly to some other key economic indicators in recent months, with weakening late last year before a significant pickup in activity early on in 2023. It remains very early in terms of tracking GDP source data for 1Q, but with the figures in hand, we are raising our forecast for real GDP growth in the current quarter from 1.0% to 2.0% saar. The strong January changes are unlikely to be the new underlying trend, particularly on the consumer side, because households received a big boost to income coming from the cost of living adjustment on social security payments that month. Furthermore, over the past few years we have seen a pattern in the (seasonally adjusted) data in which we get above-trend gains in Januarys following weak Decembers, and this pattern may be playing out again now.

Given the strength in the retail sales headline, it is not too surprising that strong gains were reported throughout much of the report. Food services and drinking places stood out on the upside, with a 7.2% surge in sales in January (the strongest monthly gain on record compared to pre-pandemic years). Perhaps the flip side of more dining out was a fairly soft gain for sales at food and beverage stores (0.1%). Some other categories with strong monthly changes in January included motor vehicle and parts dealers (5.9%), furniture stores (4.4%), and electronics and appliance stores (3.5%). Our reading of the data in hand point to real consumer spending jumping 0.8% in January. We think real spending is on track for about a 3% saar gain overall in 1Q.

Empire State survey (Feb 15)

Diffusion indices, sa

	Dec	Jan	Feb	
General bus. conditions	-11.2	-32.9	<u>-17.0</u>	-5.8
New orders	-3.6	-31.1		-7.8
Shipments	5.3	-22.4		0.1
Unfilled orders	-11.2	-14.3		-9.2
Prices paid	50.5	33.0		45.0
Prices received	25.2	18.8		28.4
Composite	52.1	45.5		48.3

The Empire State manufacturing survey's headline improved significantly in February, although the February print for the headline was still weak, at -5.8, even with a 27.1-pt jump reported relative to January. Changes to key details were mixed, but overall the report still signals weakness in the manufacturing sector in February, even if things improved relative to January. And our ISM-weighted composite for the survey increased from 45.5 in January to 48.3 in February.

Industrial production (Feb 15)

%m/m,sa,unless noted

	Nov	Dec	Jan	
Industrial production	-0.6	<u>-0.7</u>	-1.0	<u>-0.4</u> 0.0
Manufacturing	<u>-4.4</u>	-0.8	<u>-4.3</u>	-1.8 1.0
Motor vehicles & parts	<u>-3.5</u>	-3.7	<u>-4.0</u>	-1.7 <u>-1.7</u> 0.5
High-tech	<u>-0.5</u>	-1.1	<u>-0.2</u>	-1.6 -0.1
Mfg ex motor vehicles	<u>-0.9</u>	-0.6	<u>-4.3</u>	-1.8 1.0
Business equipment	<u>-4.8</u>	-1.3	-2.0	
Capacity utilization (%.sa)	79.4	79.3	78.8	78.4 <u>79.0</u> 78.3
Manufacturing	78.5	<u>77.5</u>	77.1	<u>78.2</u> 77.7

In the IP report, a weather-related 9.9% plunge in utilities output weighed on the headline IP figure, which disappointed and came in flat in January. Meanwhile, manufacturing output jumped 1.0% in January, a solid gain that was in line with our forecast but above the consensus expectations. This series has behaved like a few other key economic indicators lately, showing declines late last year and then a pickup in activity early on in 2023. But even with the January increase, manufacturing output fell 6.4% saar over the most recent three months, showing a weak recent trend.

Homebuilders survey (Feb 15)

Sa

	Dec	Jan	Feb	
Housing market	31	35	<u>37</u>	42
Present sales	36	40		46
Prospective buyer traffic	20	23		29

The NAHB survey's headline beat expectations, jumping from 35 in January to 42 in February. The gauge of homebuilder sentiment has remained weak lately, but there has been solid improvement in recent months, with an 11-pt cumulative gain since December and this firming likely a response to recent declines in mortgage rates.

Business inventories (Feb 15)

%m/m, sa, unless noted

	Oct	Nov	Dec	
Inventories	0.2	<u>-0.4</u>	0.3	0.3
Manufacturing	0.4	0.0		0.4
Wholesale	0.6	0.9		0.1
Retail inventories	-0.4	0.0		0.7
Ex autos	-0.6	-0.4		0.4
Autos	0.4	1.1		1.4

Producer price index (Feb 16)

%m/m, sa, unless noted

	Nov	Dec	Jan	
Final demand	-0.2	0.3	-0.5	-0.2 <u>-0.3</u> 0.7
%oya (nsa)	7.3	-6.2	6.5	<u>-5.7</u> 6.0
Core	-0.2	0.3	-0.4	0.3 <u>-0.3</u> 0.5
%oya (nsa)	6.2	-5.5	5.8	<u>-5.2</u> 5.4
Energy	-3.2	-2.2	-7.9	-6.7 <u>-0.1</u> 5.0
Core goods	0.3	-0.2	0.1	<u>-0.2</u> 0.6
Services	-0.2	0.3	-0.1	0.4 <u>-0.3</u> 0.4
Construction	0.1	0.0		<u>-1.5</u> 1.6
Intermed. processed gds	-0.8	-0.5	-2.8	-2.6 1.0
Core intermed. processed	-0.2	-0.5	-0.3	-0.2

The January PPI data were firmer than expectations, with the headline rising 0.7% and the core index (ex. food and energy) up 0.5%. While year-ago inflation rates for these aggregates moderated between December and January, the seasonally adjusted monthly changes reported for January were the firmest since about the middle of last year.

Housing starts (Feb 16)

Million units, saar

	Nov	Dec	Jan	
Starts	1.40	1.42	1.38	1.37 <u>1.35</u> 1.31
Single-family starts	0.82	0.81	0.91	0.88 <u>0.81</u> 0.84
Multifamily starts	0.58	0.61	0.47	0.49 <u>0.54</u> 0.47
Permits	1.35	1.34		1.34

Housing starts declined 4.5% to 1.309mn saar in January while related permits edged up 0.1% to 1.696mn saar. The recent starts data disappointed (in part because of downward revisions), but the January permits print was close to expectations. The decline in January starts was spread across both single-family units (-4.3%) and multifamily units (-4.9%). The permits data showed mixed changes across the main sub-categories, with single-family permits down 1.8% in January but multifamily permits rising 2.5%. The trend in the single-family permits data—perhaps the most important leading indicator for construction within the report—has remained pretty weak lately, with now 11 straight monthly declines reported into January.

Philadelphia Fed survey (Feb 16)

Diffusion indices, sa

	Dec	Jan	Feb	
General bus. Conditions	-13.7	-8.9	<u>-3.0</u>	-24.3
New orders	-22.3	-10.9		-13.6
Shipments	-0.9	11.1		8.7
Inventories	-3.0	0.9		15.3
Prices paid	36.3	24.5		26.5
Prices received	28.1	29.9		14.9
Composite	46.6	50.6		50.2

The Philadelphia Fed manufacturing survey disappointed, with the headline falling from -8.9 in January to -24.3 in February. The levels for the first two regional manufacturing indicators for February (Empire State and Philadelphia Fed) both look weak, but the two reports show different changes in momentum, with the Empire State survey improving in February and the Philadelphia Fed survey weakening. Changes to key details within the Philadelphia Fed survey were mixed, and our ISM-weighted composite for the survey edged down from 50.6 to 50.2.

Import prices (Feb 17)

%m/m, nsa, unless noted

	Nov	Dec	Jan			
Import prices	-0.7	-0.8	-0.4	-0.1	<u>-0.0</u>	-0.2
%oya	2.7	-3.5	3.0		<u>-1.5</u>	0.8
Ex-fuel import prices	-0.3	0.4			<u>-0.4</u>	0.3
%oya	2.0	1.9			<u>-0.9</u>	0.8

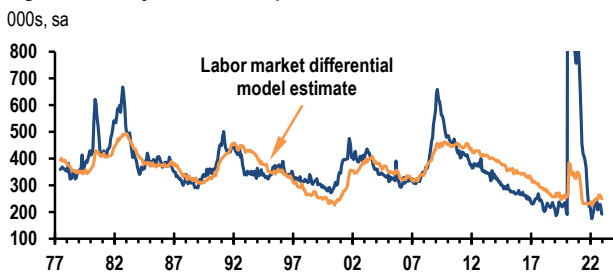
The import price index declined 0.2% in January. This was a little below expectations, although the ex-petroleum index was above the consensus forecast, at +0.2%. Fuel prices fell 4.9% in January, offsetting a 0.3% increase in the nonfuel price aggregate (which was pretty close to our expectation). The nonfuel price index has now increased in two straight months following a run of monthly declines, and we think that this recent pickup in prices could be related to changes in the dollar from recent months. Core goods prices in the CPI also rose (modestly) in January for the first time in several months, and this firming also could be related to recent changes in the dollar/import prices.

Focus: Testing out the severance story

The recent contrast between generally strong labor market reports and news about layoffs has brought attention to severance payments, with the idea severance is delaying some of the weakness in terms of many of the main government statistics. We think this true to some degree, particularly with respect to jobless claims filings and nonfarm employment growth, given both conceptual issues and the signal from the Conference Board’s labor market differential (“LMD”), as discussed below. But even if these indicators are due to weaken once severance payments end, overall we still see signs of strength in the labor market.

While rules vary by state, severance generally would either delay or reduce one’s eligibility for unemployment insurance, so people who were laid off and have been receiving severance may not have filed for unemployment insurance yet. As a crude test of this idea, we use a simple model² that projects the level of initial claims filings based on the LMD, a measure that captures consumer responses on how easy/difficult it is to find a job and presumably should not be distorted by severance payments—severance does not necessarily make it easier or harder to find work. While clearly imperfect, the model suggests that recent levels of initial claims filings are about 50,000 “too low” relative to the signal sent from the LMD (Figure 1), with this gap supporting the idea that severance payments may be delaying/preventing filing. That said, the level of filings signaled by the LMD would still suggest strength in the labor market (which makes sense given the strong level of the LMD).

Figure 1: Initial jobless claims per week



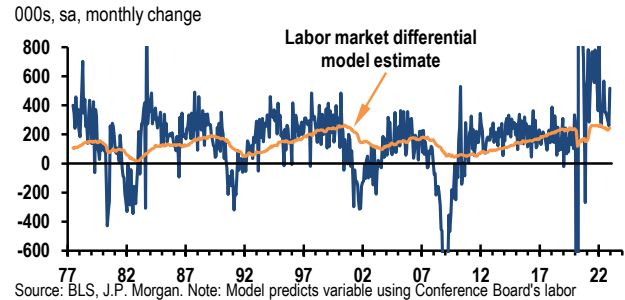
Source: Department of Labor, J.P. Morgan. Note: Model predicts variable using Conference Board’s labor market differential as described in text.

In the establishment survey, people receiving pay for any part of the pay period associated with the relevant reference week should still be counted as being employed, so someone receiving severance may still be considered employed even if

2. The models in this note regress levels of specified labor market variables on a constant and the contemporaneous level of the labor market differential. Model samples start in June 1977 (or first available date) and end in December 2019.

they were laid off. The LMD is a very poor predictor of monthly employment changes, but for what it’s worth it suggests that job growth in the establishment survey has been “too strong” lately and the eventual end of severance payments may lead to weakening ahead (Figure 2).

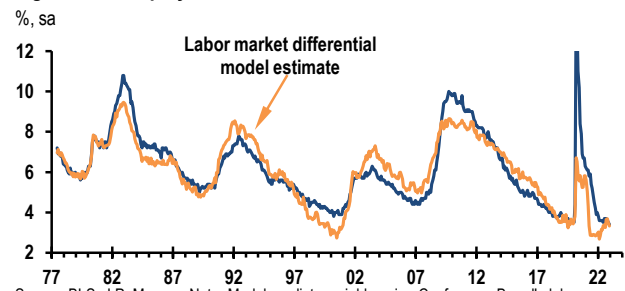
Figure 2: Nonfarm employment



Source: BLS, J.P. Morgan. Note: Model predicts variable using Conference Board’s labor market differential as described in text.

In the household survey, employment is determined in part by whether or not an individual did any work for pay in the specific reference period, so an individual receiving severance should not be counted as employed if they did not work for the entire period (people’s efforts to look for work could determine whether they are considered unemployed or not in the labor force). We therefore don’t think the unemployment rate would be significantly distorted by severance payments, and recent readings on the unemployment rate have been almost spot on with the projected levels based on the LMD (Figure 3). The LMD actually suggests that the level of unemployment (not the rate) should be lower than the official statistics indicate (not shown).

Figure 3: Unemployment rate



Source: BLS, J.P. Morgan. Note: Model predicts variable using Conference Board’s labor market differential as described in text.

In the JOLTS report, a layoff would be counted when regular employment ends, regardless of severance payments, so we don’t think severance payments are preventing weakening in the JOLTS data. The LMD does a poor job predicting the level of layoffs, but it signals that layoffs should be higher than the JOLTS data indicate (not shown).

Euro Area

- **Second GDP estimate confirms marginal 4Q22 growth for the Euro area, as energy drag took its toll**
- **Ex notoriously volatile Ireland, Euro area activity stagnated with mixed country details**
- **Unemployment fell further in 4Q22, but monthly data hint at a shift in labor market towards year end**
- **Energy-intensive output dragged down Euro area IP in December, amid extreme German weakness**

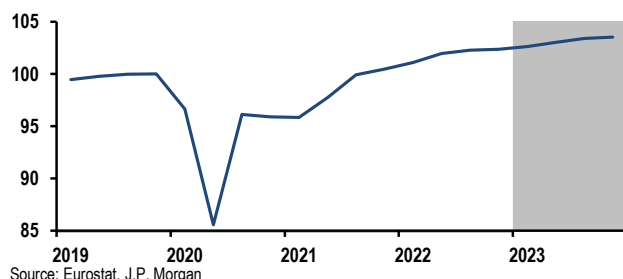
Our forecast has a sharp fall in sequential HICP inflation from a 10% ar in 2022 to a 2% ar throughout 2023 and a step-up in labour income due to the delayed response of pay settlements to last year’s inflation surge. While this would support a recovery in real disposable income after last year’s contraction, we remain cautious on consumer spending through 2023, and project consumption modestly above-trend 1H23 and modestly below trend 2H23.

At the same time, we have become less convinced that the savings rate will move much below the pre-pandemic level. It was still above it in 3Q22 and the substantial excess savings was mostly invested in assets rather than held as liquid deposits and held by higher income households with lower propensities to consume. In addition, the war in Ukraine still keeps some uncertainty in place and the impact of tighter monetary policy is still feeding through.

GDP broadly flat in 4Q22

The second 4Q22 Euro area GDP estimate (Figure 1) came broadly in line with the flash release (+0.4% ar instead of 0.5%).

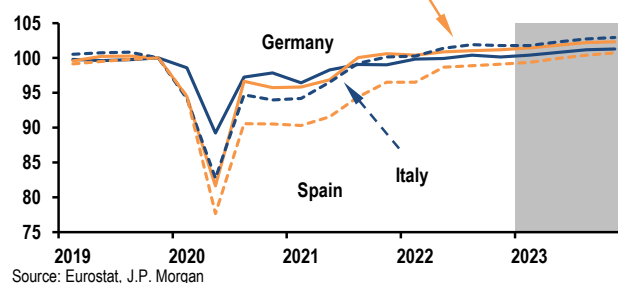
Figure 1: Euro area GDP
 Index, 4Q19=100, shaded area shows forecast



The release did not come with any expenditure or production details but information at the country level hinted at a significant decline in household spending due to high inflation and weak consumer confidence, while the evidence was mixed for fixed investment despite the rebound in business confidence. The country level data also pointed to a significant net trade

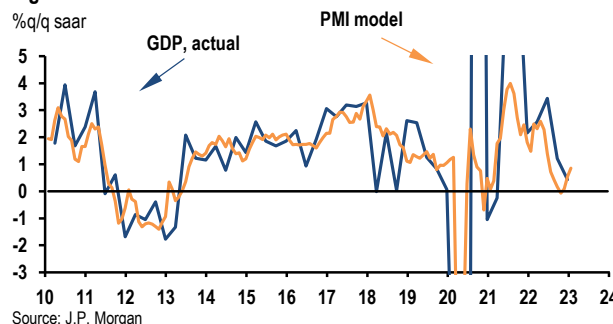
boost in France and Spain. The country split was mixed. Among the main countries of the region (Figure 2), GDP was down in Germany (-1.0% ar) and Italy (-0.5% ar). Meanwhile, GDP was up in France (0.5% ar), Spain (0.9% ar) and the Netherlands (2.5% ar). We also note the huge 14.7% ar gain in Ireland. The Irish data can be volatile due to companies owning production facilities outside Ireland and intellectual property rights. The Irish statistics office mentioned that the 4Q gain was driven by manufacturing, without publishing any further detail. Excluding Ireland, Euro area GDP last quarter would have been broadly flat (-0.1% ar).

Figure 2: Euro area GDP
 4Q19=100



The business and sentiment surveys have increased since the October trough and are signaling a stronger pace of activity at the start of the year. We recently raised our GDP forecast to reflect a sharp fall in actual and expected market gas and electricity prices. The PMI is consistent with our view that GDP will expand 1% ar in 1Q23 (Figure 3). We then expect a 1.5% ar gain in 2Q23.

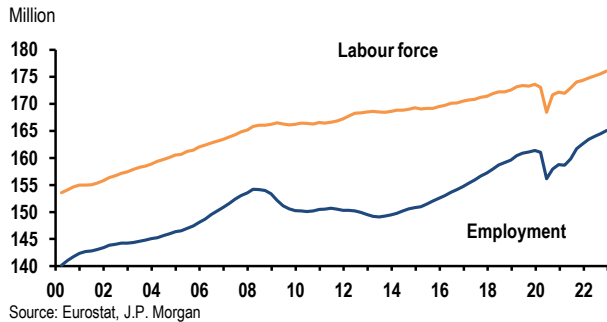
Figure 3: Euro area real GDP



Monthly data signal shift in unemployment

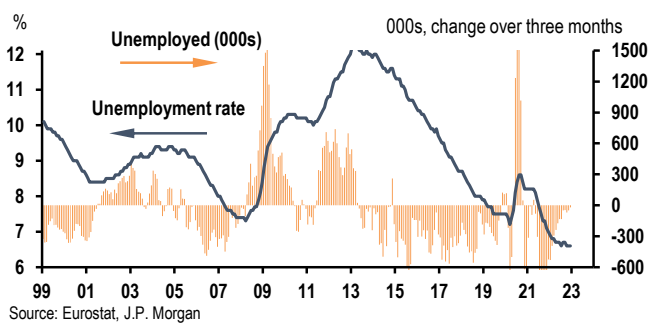
Eurostat also released preliminary quarterly labor market data, showing a further rise in employment (1.4% ar) and a further decline in unemployment in 4Q22. Employment and the labor force have both risen significantly above the pre-pandemic level (Figure 4), showing no signs of the negative labor supply shocks visible elsewhere, most notably in the US and the UK.

Figure 4. Euro area labour force and employment



However, monthly data already showed that a shift is taking place, with the number of unemployed up slightly both in November and December (Figure 5). The Euro area unemployment rate remained stable at 6.6% in December, but we expect it to increase towards 6.8% in the coming quarters.

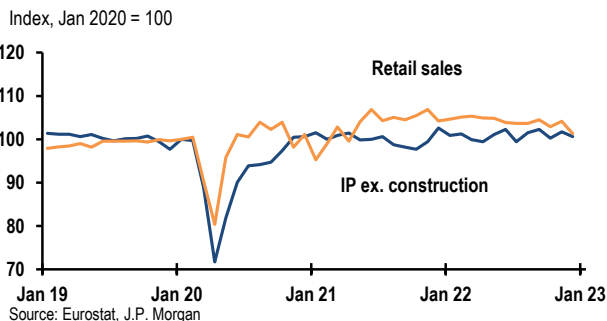
Figure 5. Euro area unemployment



IP drag from energy-intensive sectors

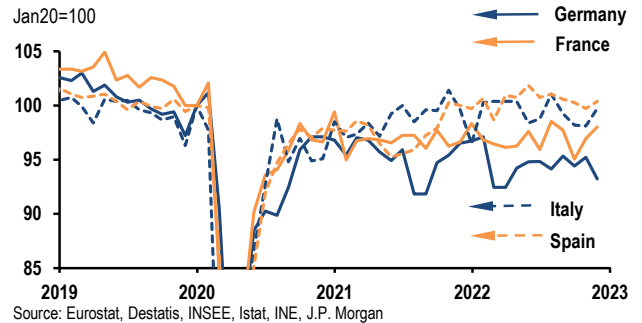
Euro area IP ex. construction was down 1.1%/m sa in December (Figure 6). This decline comes after a 2.0% fall in October and a 1.4%/m gain in November, which overall left IP in 4Q22 0.9% ar below the 3Q22 level. Manufacturing output meanwhile was down 1.4%/m in December but had fallen less earlier, so that manufacturing IP rose 2.0% ar sequentially in 4Q22.

Figure 6: Euro area retail sales and IP



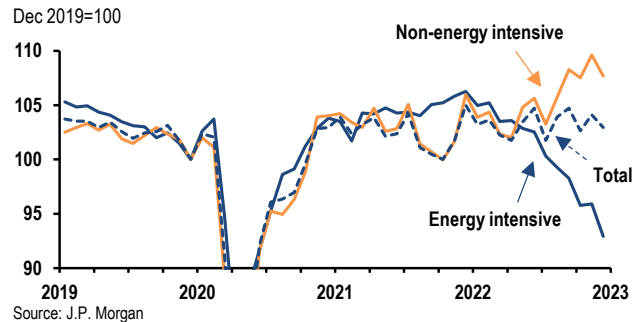
Looking at the details, the IP move down in December was broad based across sectors with notable declines in wood and paper production (-3.3%/m), chemical and pharma production (-2.7%/m), as well as computer and electronic production (-4.3%/m). The outcome was uneven at the country level. Among the main economies of the region (Figure 7), IP was down in Germany (-2.1%/m) but increased in France (1.1%), Italy (1.6%) and Spain (0.7%). We note that IP also was down 8.6% in Ireland, where IP can be volatile due to companies owning production facilities outside Ireland and intellectual property rights.

Figure 7: Euro area IP ex. construction



The drag from the energy-intensive sector intensified, with energy-intensive output down a further 3.1% in December (Figure 8). Energy intensive companies will benefit from the fall in gas and electricity prices, but likely with a lag. Energy intensive companies indeed buy energy in advance (often a-year-ahead) thus these companies will still run with higher energy costs in the coming months.

Figure 8: Euro area industrial production



Data releases and forecasts

Week of January 2 - 6

Output and surveys

Tue Purchasing managers index flash (manufacturing)					
Feb 21		Nov	Dec	Jan	Feb
10:00am	Euro area				
	Overall	47.1	47.8	48.8	<u>49.8</u>
	Output	46.0	47.8	48.9	<u>49.9</u>
9:30am	Germany				
	Overall	46.2	47.1	47.3	<u>48.3</u>
	Output	46.6	48.4	48.4	<u>49.4</u>
9:00am	France				
	Overall	48.3	49.2	50.5	<u>51.5</u>
	Output	45.6	47.7	47.5	<u>48.5</u>
Tue Purchasing managers index flash (services)					
Feb 21		Nov	Dec	Jan	Feb
9:30am	Euro area	48.5	49.8	50.8	<u>51.1</u>
9:30am	Germany	46.1	49.2	50.7	<u>50.9</u>
9:00am	France	49.3	49.5	49.4	<u>49.9</u>
Tue Purchasing managers index flash (composite)					
Feb 21		Nov	Dec	Jan	Feb
10:00am	Euro area	47.8	49.3	50.3	<u>50.8</u>
9:30am	Germany	46.3	49.0	49.9	<u>50.4</u>
9:00am	France	48.7	49.1	49.1	<u>49.8</u>

The Euro area composite PMI reached a trough in October and has since rebounded through January. We expect the trend up in the data to continue in February, leaving the survey consistent with a 1.0% ar activity gain in February. This would be aligned with our 1Q22 1%ar GDP forecast. The rebound in the survey between October and January was broad based at the sector level, and to some extent skewed towards services. High energy prices have weighed significantly on the manufacturing sector in recent months. We expect this drag to ease in the coming months.

Construction output

		Sep	Oct	Nov	Dec
Mon	Euro area				
Feb 20	%m/m, sa	0.4	1.0	-0.8	
11:00am	%oya, sa	1.2	2.1	0.9	

Consumer confidence (prelim)

		Nov	Dec	Jan	Feb
Mon	Euro area (European Commission survey)				
Feb 20	% balance of responses				
11:00am	Consumer confidence	-23.8	-22.1	-20.9	<u>-19.9</u>

Consumer confidence has increased significantly since its September. Nonetheless consumer confidence remains low by

historical standards. We expect a further increase in February. This would leave the survey close to the lows seen in 2009 and 2013, but significantly above the low seen at the beginning of the COVID-19 pandemic. Households are still being impacted by high inflation, but as inflation recedes during the course of the year, we expect consumer confidence to increase in the coming months.

National business surveys

		Nov	Dec	Jan	Feb
Wed	German IFO survey				
Feb 22	2000=100, sa				
10:00am	Business climate	86.4	88.6	90.2	<u>91.3</u>
	Business situation	93.2	94.4	94.1	<u>94.5</u>
	Business expectations	80.1	83.2	86.4	<u>88.5</u>

The German IFO fell much more sharply after the outbreak of war in Ukraine than the PMI. Subsequent outturns on GDP suggest that the more moderate weakness of the PMI has better captured the actual evolution of GDP. As a result, we think that the IFO can improve independently of the PMI. We have pencilled in around a 1pt increase in the IFO, mainly due to improvement in expectations. While we do think that underlying conditions are improving in Germany, the magnitude of the increase we have pencilled in for the IFO is partly technical due to the large falls earlier in 2022.

		Oct	Nov	Dec	Jan
Wed	France (INSEE survey - manufacturing)				
Feb 22	Index				
8:45am	Composite index	102.9	101.0	101.4	
	Index of past production	5.9	0.0	7.9	
	Expected output - personal	11.9	16.6	15.7	
	Expected output - general	-7.6	-9.5	-6.8	
		Oct	Nov	Dec	Jan
Wed	Belgium (BNB survey)				
Feb 22	% balance of responses, sa				
3:00pm	Overall	-15.5	-16.6	-13.6	
	Manufacturing	-19.7	-20.1	-17.1	
	Commerce	-23.5	-24.5	-13.3	
	Construction	-7.4	-4.6	-4.3	

Real GDP

		1Q22	2Q22	3Q22	4Q22
Fri	Germany (final)				
Feb 24	%q/q, sa	0.8	0.1	0.5	<u>-0.2</u>
8:00am	%q/q, saar	3.2	0.4	1.9	<u>-1.0</u>
	%oya	3.5	1.7	1.4	
	GDP components (%q/q, saar)				
	Private consumption	3.5	3.8	4.2	
	Government consumption	2.7	1.9	0.0	
	Mach, equip, other investment	7.6	4.5	11.2	
	Construction investment	13.0	-12.3	-5.6	
	Exports	-1.2	1.8	8.2	
	Imports	-2.0	11.2	9.7	
	Contribution to GDP growth (%q/q, saar)				
	Domestic final sales	4.2	1.3	2.4	
	Inventories	-1.2	3.0	-0.1	
	Net trade	0.3	-3.8	-0.4	

The flash report showed a 1%q/q saar decline in German GDP in 4Q22. This was based on estimates of December data, which subsequently came in on the weak side. It is therefore possible that the GDP estimate will get revised lower. The final report will also reveal all details. On the expenditure side, the German statistics office said at the time of its flash GDP report that consumer spending was the main source of weakness.

Inflation

Consumer prices

		Oct	Nov	Dec	Jan
Thu	Euro area (final)				
Feb 23	HICP (%m/m, nsa)	1.5	-0.1	-0.4	<u>-0.2</u>
11:00am	HICP (%m/m, sa ECB)	1.4	0.2	-0.4	<u>0.6</u>
	HICP (%oya, nsa)	10.6	10.1	9.2	<u>8.5</u>
	HICP core (%m/m, sa ECB)	0.4	0.4	0.4	<u>0.5</u>
	HICP core (%oya, nsa)	5.0	5.0	5.2	<u>5.2</u>
	HICP (%m/m, ex-tob.)	1.5	-0.1	-0.4	<u>-0.2</u>

The German statistics office (Destatis) could not release its preliminary January inflation print due to technical issues. Thus the European statistics office (Eurostat) had to estimate the German number in order to get the Euro area aggregate. This estimate was subject to a lot of uncertainty as January is a noisy month (sales period, administered prices, weights changes) and this year particularly so for Germany due to the impact of government measures (paying of gas and heating bills or energy price brakes).

The flash Euro area report showed a 0.7%-pt decline in Euro area inflation to 8.5%oya (borderline with 8.4%). With most countries available at the time, we inferred that Eurostat assumed a 1%-pt decline in German HICP inflation to 8.6%oya. In the event, the official Destatis release showed that German HICP inflation was actually down by a lesser amount (-0.4%-pt to 9.2%oya). This should prompt, all else equal, an upward revision of the Euro area aggregate to 8.6%oya (or 0.6%m/m sa).

In the flash report, Euro area core inflation was stable at 5.2%oya (0.5%m/m sa), with core goods inflation up 0.5%-pt to 6.9%oya and service price inflation down 0.2%-pt to 4.2%oya. Given uncertainty surrounding the impact of government measures in Germany regarding gas and electricity prices, the Euro area energy basket is a strong candidate for revision in our view. The Euro area final release will be released February 23. The day before this, Destatis will publish details for German inflation.

		Oct	Nov	Dec	Jan
Wed	Germany (final)				
Feb 22	%m/m, nsa	0.9	-0.5	-0.8	<u>1.0</u>
8:00am	%oya, nsa	10.4	10.0	8.6	<u>9.2</u>
	HICP (%oya)	11.6	11.3	9.6	<u>9.2</u>

The flash report for Germany was delayed due to technical problems and this also meant that only an estimate for headline inflation was published at the flash stage. Hence, we have no information from the States or an estimate of energy, food and core inflation. This creates uncertainty for the final report, which will include a large number of effects: new expenditure weights, the reversal of December's gas rebate, the new electricity and gas price brakes. It will be important to see the relative contributions of these factors. That will allow a better assessment of the near-term outlook for German inflation. The only thing we can perhaps say on the basis of the flash estimate for headline CPI and HICP is that the new weights acted to lower core inflation by creating a distortion to package holiday prices. This would be the reverse of the pattern in 2021 when new weights caused an increase in January core inflation (and downward distortions in some other months).

		Oct	Nov	Dec	Jan
Wed	Italy (final)				
Feb 22	%m/m, nsa	3.4	0.5	0.3	<u>0.2</u>
10:00am	%oya, nsa	11.8	11.8	11.6	<u>10.1</u>
	HICP (%oya, nsa)	12.6	12.6	12.3	<u>10.9</u>

Producer prices

		Oct	Nov	Dec	Jan
Mon	Germany				
Feb 20	%m/m, nsa	-4.2	-3.9	-0.4	
8:00am	%m/m, sa	-4.2	-3.9	-0.3	
	%oya, nsa	34.5	28.2	21.6	

Source: European Commission, Eurostat, ECB, FSO, Bundesbank, IFO, INSEE, ISAE, Istat, INE, CBS, BNB, Markit, and J.P. Morgan forecasts

Review of past week's data

Output and surveys

Real GDP

	2Q22	3Q22	4Q22	
Euro area (second estimate)				
%q/q, sa	0.9	0.3	<u>0.1</u>	
%q/q, saar	3.4	1.2	<u>0.5</u>	0.4
%oya	4.3	2.3	<u>1.9</u>	

See Euro area essay for details.

Industrial production

	Oct	Nov	Dec	
Euro area				
Ind production (%m/m, sa)	-1.9	-2.0	1.4	<u>-1.0</u> -1.1
%oya, sa	2.7	2.6	1.9	-2.0
Manuf prod (%m/m, sa)	-1.8	-1.7	1.7	<u>-1.5</u> -1.4

See Euro area essay for details.

Demand and labor market

Unemployment

	2Q22	3Q22	4Q22
France			
%, sa			
ILO unemployment rate	7.4	7.3	7.2
ILO mainland unemp. rate	7.2	7.1	7.0

External trade and payments

Foreign trade

	Oct	Nov	Dec		
Euro area					
€ bn, values, sa					
Trade balance	-28.1	-28.0	-15.2	-14.4	-18.1
year earlier	-2.2	-1.9	-5.7	-5.2	-14.9
Exports	249.0	248.6	251.5	251.2	239.7
%m/m	-0.5	-0.6	1.0	1.1	-4.6
Imports	277.1	276.6	266.7	265.6	257.9
%m/m	-3.3	-3.5	-3.8	-4.0	-2.9

Inflation

Consumer prices

	Nov	Dec	Jan
France (final)			
%m/m, nsa	0.3	-0.1	<u>0.4</u>
Index ex tobacco, nsa	113.53	113.42	113.86
%oya, nsa	6.2	5.9	<u>6.0</u>
HICP (%oya)	7.1	6.7	<u>7.0</u>

Spain (final)

	Nov	Dec	Jan	
%m/m, nsa	-0.1	0.2	<u>-0.3</u>	-0.2
%oya, nsa	6.8	5.7	<u>5.8</u>	5.9
HICP (%oya, nsa)	6.7	5.5	<u>5.8</u>	5.9

Source: European Commission, Eurostat, ECB, FSO, Bundesbank, IFO, INSEE, ISAE, Istat, INE, CBS, BNB, Markit, and J.P. Morgan forecasts

Japan

- Ueda formally nominated as incoming BoJ Governor
- Exports sliding on continued downshift in China-related demand
- But foreign orders for machinery rose smartly, suggesting light at the end of the tunnel
- Japan's January trade balance in record deficit; expect sharp narrowing ahead
- Next week: Core inflation at BoJ target; flash PMI turns up

Markets were scouring past commentary by Professor Kazuo Ueda, formally nominated as Bank of Japan governor this week, for clues of policy biases across prior cycles. Our view is that this risks missing the forest for the trees. That Kishida's administration nominated a comparative outsider to lead the BoJ, breaking with a long-held tradition of rotating between appointments from the Ministry of Finance and from within the ranks of the bank itself, is itself significant.

Our view remains that the BoJ is now on a somewhat pre-determined path toward further policy normalization. Ueda's appointment does not change this expectation, and indeed we remain comfortable in forecasting a further retreat from YCC before mid-year. If anything, we now see the risk to this forecast stemming from an earlier move.

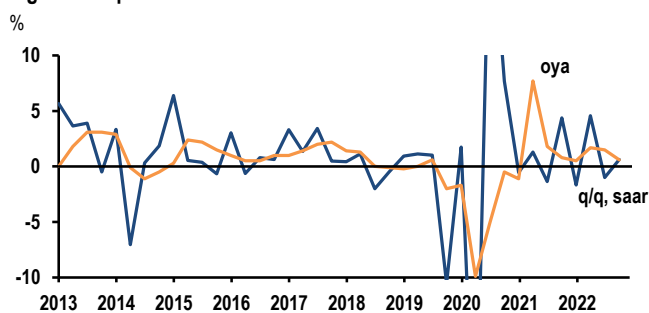
Incoming data this past week did not move the needle on our policy call. But next week's CPI report for January will be important. We expect the data to show sustained pass-through of input costs into consumer prices. This dynamic should be enough to lift the global standard measure of Japan's core inflation rate to the BoJ's target of 2% for the first time in 30 years, excluding consumption tax hikes.

Domestic activity held up reasonably well through year-end, confirmed by a 4Q22 GDP report that was broadly in line with our expectations. While domestic consumption looks to have tracked a little better than we had thought based on the soft monthly data, private sector capex spending is struggling, and we see the risk of a worsening trend ahead given the dual headwinds of higher onshore funding costs and an uncertain external demand outlook. That said, machinery orders turned up through year-end, with a pop in foreign orders. This implies to us that the sharp downshift in exports that extended through January may be turning a corner after a China-led slide in external demand. We look for a modest rise in next week's February flash PMI manufacturing survey.

A moderate year-end demand recovery

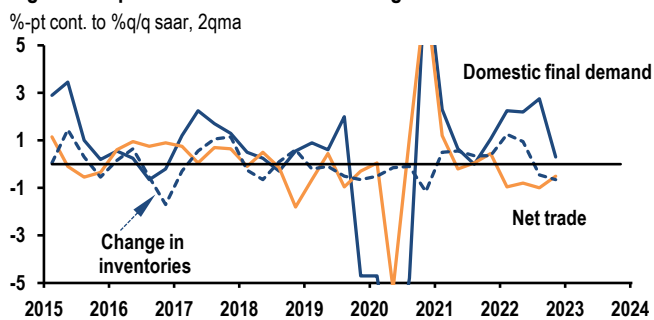
Real GDP rose 0.6%q/q saar in 4Q22, matching our expectations. With the reopening dynamics that had started in October, domestic demand contributed 0.9%-pt to overall growth, while net exports contributed a larger 1.4%-pts. However, these were partially offset by a negative inventory contribution, that dragged growth down 1.7%-pts. Although domestic demand was firm overall, the pace of recovery appears to have been slow through year-end, particularly set against our expectation for a strong lift in demand on the back of Japan's reopening (Figures 1 and 2).

Figure 1: Japan Real GDP



Source: Cabinet Office, J.P. Morgan

Figure 2: Japan Contribution to real GDP growth



Source: Cabinet Office, J.P. Morgan

In the details, private consumption expanded a solid 2.0%q/q, saar. Despite real income drags caused by higher inflation, reopening dynamics combined with the government's travel subsidy program supported consumer spending. However, the major disappointment came from capex, which fell 2.1%, despite strong signals from firms' capex sentiment and an expected rise in domestic demand. While the decline in capex may reflect some payback after strong gains in 3Q, we now see some risks of worsening business sentiment for capex ahead, particularly given the expected trend rise in long-term yields. On the external front, exports rose 5.7%, a stronger gain compared to our expectation of a 1.5% increase. We think this stronger-than-expected gain was largely attributable to services exports, reflecting a recovery in tourism receipts through the quarter.

We continue to expect real GDP growth to remain resilient in 1Q23, rising 1.2%q/q saar. While we expect net exports to drag overall growth, domestic demand, particularly for consumption, likely will post above-potential growth. Households' real income drags likely will fade in coming months, as headline inflation is expected to start declining while wages are likely will continue rising.

Waiting for exports to turn a corner

Nominal exports tumbled 6.3%/m/m sa in January, marking their third consecutive monthly drop and leaving the sequential trend down 15.1%/3m/3m saar. The drop was smaller in real terms; the BoJ's real export index slipped 2.9%/m/m sa. We had expected a sharp drop-off in external demand at the turn of the year—largely reflecting a downshift in China-related activity around the lunar new year holidays. But January data imply a sharper and more broad-based loss of momentum in Japan's export sector, with exports contracting at their sharpest pace since the depths of the pandemic in early 2020.

Whether exports recover through this quarter, as is our baseline forecast, hinges on a stabilization in China-related demand and a recovery in tech exports. Weakness in January was most pronounced in the China-related data; Japan's China-bound real exports slid 14.9%/m/m sa. But exports to other major economies were also puzzlingly soft. US exports fell 9.5%/m/m sa, while those to the EU were down 6.3%/m/m sa. By product, exports were down across the board. Electronics exports fell 11.0%/m/m sa, autos were down 11.3%/m/m sa, and capital goods exports dropped 5.2%/m/m sa. In the tech sector, only a narrow set of semiconductors bound for the US managed to inch up 0.4%/m/m sa (Figures 3, 4, and 5).

Figure 3: Japan real exports by destination

2015=100, deflated and sa by J.P.Morgan

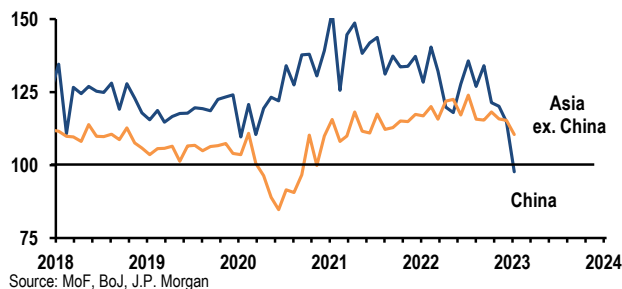


Figure 4: Japan real exports by destination

2015=100, deflated and sa by J.P.Morgan

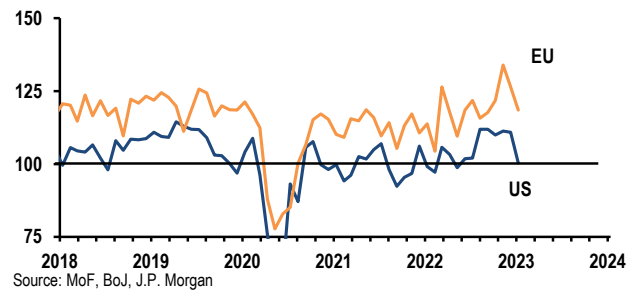
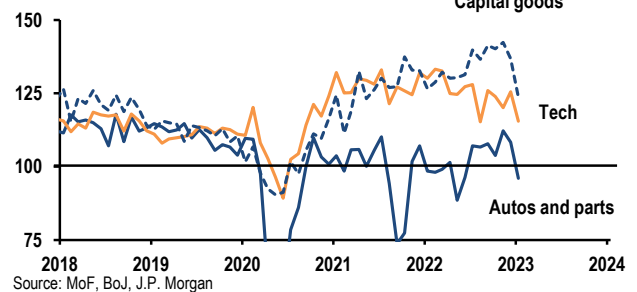


Figure 5: Japan real exports by product

2015=100, deflated and sa by J.P.Morgan



While the January data confirm weakness extended into the New Year, orders data imply some improvement in external demand on the horizon. Survey projections released alongside the December machinery orders turned up, while overall core machinery orders were up 1.6%/m/m sa. Foreign orders in December were particularly encouraging, surging 16.2%/m/m sa, bolstered by a pickup in auto and some electronics orders, hinting at a recovery in external demand following several months of softness (Figure 6).

Figure 6: Japan machinery orders, foreign

JPY bn, sa, dotted line is 3mma

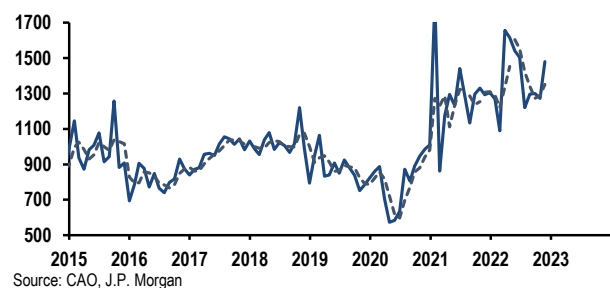
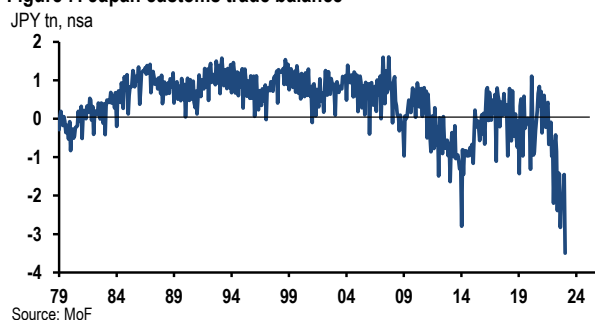


Figure 7: Japan customs trade balance



The drop-off in January exports pulled Japan's customs trade balance into an unadjusted deficit of close to JPY3.5 trillion (Figure 7). This marks the widest deficit on record, exacerbated by still-elevated imports of commodities and fuel. We continue to focus on the trajectory heading through this quarter, which should see a [sharp narrowing in the deficit](#) alongside the lagged impact from stabilizing energy import prices.

Data releases and forecasts

Week of February 20 - 24

Tue	Markit manufacturing/ services PMI				
Feb 21	Diffusion index, sa				
9:30am		Nov	Dec	Jan	Feb
	Manufacturing (headline)	49.0	48.9	48.9	<u>49.5</u>
	Services (business activity)	50.3	51.1	52.3	<u>52.0</u>

We look for a modest recovery in the flash manufacturing PMI in February, on the assumption that external demand is turning a corner through this quarter. Services sector activity likely remained resilient into February, and thus the index should stay at a relatively high level, consistent with the recent trend.

Wed	Reuters Tankan survey				
Feb 22	Diffusion index				
8:00am		Nov	Dec	Jan	Feb
	Manufacturing	2	8	-6	<u>3</u>
	Nonmanufacturing	20	25	20	<u>20</u>

Consistent with the message from the flash PMI, we look for the Reuters Tankan survey to point to a moderate improvement in manufacturing sector sentiment, while nonmanufacturing sentiment should remain at a relatively high level.

Fri	Nationwide consumer prices				
Feb 24	2020-based				
8:30am		Oct	Nov	Dec	Jan
	%oya				
	Overall	3.7	3.8	4.0	<u>4.5</u>
	Core (ex. fresh food)	3.6	3.7	4.0	<u>4.1</u>
	Core (ex. fresh food and energy)	2.5	2.8	3.0	<u>3.3</u>
	Core (ex. food and energy)	1.5	1.5	1.6	<u>2.0</u>
	%m/m, sa				
	Overall	0.6	0.3	0.3	<u>0.6</u>
	Core (ex. fresh food)	0.5	0.3	0.4	<u>0.4</u>
	Core (ex. fresh food and energy)	0.5	0.3	0.2	<u>0.4</u>
	Core (ex. food and energy)	0.2	0.0	0.0	<u>0.5</u>

Based on the strong result in the Tokyo CPI report, the core measures of nationwide CPI should continue to accelerate in January. The strong run of food price inflation will likely push BoJ core CPI (ex. fresh food and energy), the BoJ's key indicator to gauge inflation momentum for monetary policy decisions, to a further high of 3.3%oya. With a further increase in firms' cost pass-through, the global core CPI (ex. all food and energy) likely will reach to the BoJ's target of 2% for the first time in 30 years (excluding consumption tax hikes).

Review of past week's data

GDP - 1st estimate (Feb 14)

%q/q, saar	2Q22	3Q22	4Q22		
Real GDP	4.5	4.6	-0.8	-1.0	0.6
Private consumption	6.8	6.6	0.5	0.1	<u>0.0</u>
Residential investment	-7.6	-7.3	-2.0	-1.7	<u>-0.5</u>
Bus. capital investment	8.2	8.8	6.2	6.3	<u>0.0</u>
Government consumption	3.0	3.1	0.5	0.3	<u>2.0</u>
Public investment	2.8	2.2	3.8	2.6	<u>-0.5</u>
Exports	6.0	6.2	8.6	10.4	<u>4.5</u>
Imports	4.2	3.8	22.7	24.0	<u>2.5</u>
%-pt contrib. to q/q saar GDP growth					
Domestic final sales	5.5	5.4	1.5	1.2	<u>0.4</u>
Net exports	0.3	0.4	-2.4	<u>-0.2</u>	1.4
Inventories	-1.3	0.2		<u>0.4</u>	-1.7
GDP deflator (%oya)	-0.2	-0.3	-0.3	-0.4	<u>0.1</u>

JPMorgan Securities Japan Co., Ltd.

Benjamin Shatil (81-3) 6736-1730

benjamin.shatil@jpmorgan.com

Ayako Fujita (81-3) 6736-1172

ayako.fujita@jpmorgan.com

Global Economic Research**Global Data Watch**

16 February 2023

Machinery orders (Feb 16)

%m/m sa

	Oct	Nov	Dec	
Total	3.3	-1.0	—	6.5
Core private domestic orders ¹	5.4	-8.3	4.5	1.6
Manufacturing	-6.4	-9.3	—	2.1
Core nonmanufacturing	14.0	-3.0	—	-2.5
Public	2.8	-8.8	—	-11.4
Foreign	0.2	-2.0	—	16.2

1. Domestic private sector, ex for ships and from utilities

Customs-cleared international trade (Feb 16)

%m/m, sa, unless noted

	Nov	Dec	Jan	
Balance (lbn sa)	-1779 -1845	-1724 -1820	-1543 -1821	
Exports %m/m	-4.4	-1.6	-3.5 -3.3	-6.3
Imports %m/m	-6.3 -5.6	-3.4 -3.0	-4.6 -5.1	
Balance (lbn nsa)	-2029	-1448	-2971 -3497	
Exports %oya	20.0	11.5	40.3 3.5	
Imports %oya	30.3	20.6	46.7 17.8	
BoJ real exports	0.1	-0.4 -4.5	-3.3 -2.9	
BoJ real imports	-3.6	0.7 -3.8	-4.3 1.0	

Source: BoJ, CAO, EJCS, JADA, JCSA, JDSA, JFA, JLM, VMA, Markit, METI, MHLW, MILT, MoF, Reuters, Statistics Bureau, J.P. Morgan forecast

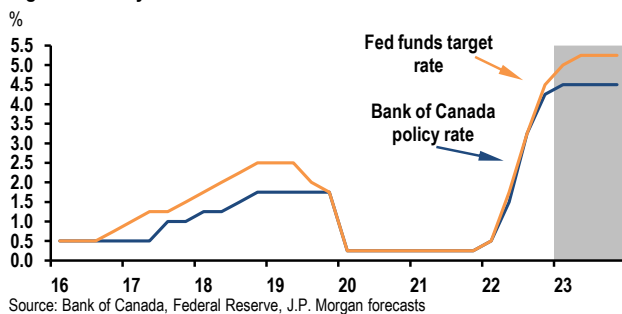
Canada

- Deputy Governor Beaudry made headlines this week with remarks in Alberta
- He signaled a diverging rate path for the Bank of Canada compared with peers
- January CPI expected to downshift to 5.8%oya

Deputy Governor Beaudry made headlines this week when he signaled that the Bank of Canada is not too concerned if its path to normalization strays from the paths of its counterparts (Figure 1). He remarked that while many other countries have faced similar inflation shocks over the past two years, their experiences with high inflation have not been the same as Canada's, so the path back to target might differ as well. A key element of the journey back to the inflation target range is a flexible exchange rate, which the deputy governor said would act as a pressure valve. Letting the dollar float gives the Bank a flexibility that other central banks may not have. Inflation is the Bank's main compass.

While next week's CPI report for January will be an important piece of incremental information before the March 8 meeting, we maintain that the Bank will judge there is not enough evidence suggesting further rate increases are required, and will remain on hold. The last two months of jobs growth has been solid on average but we believe that the Bank will view the performance cautiously when it deliberates next month. A repeat of labor market strength in February and March would point to underlying strength. Building instead of decelerating momentum would put the Bank's "conditional pause" stance in question and open the door to additional monetary policy tightening at the April meeting in our view.

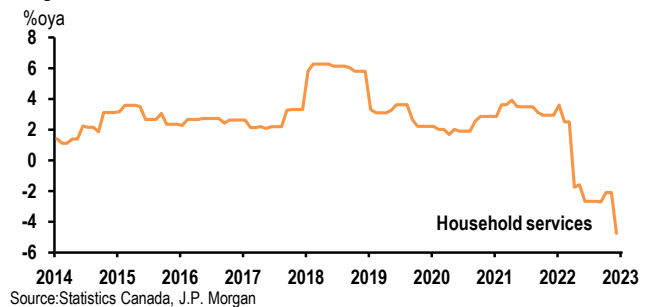
Figure 1: Policy rate forecasts



The Bank expects a powerful deceleration in underlying inflation to around 3.0% in the middle part of this year. We also expect a marked deceleration in inflation in the medium term. We expect the January headline CPI to downshift from 6.3%oya in December to 5.8%oya. Along with a favorable

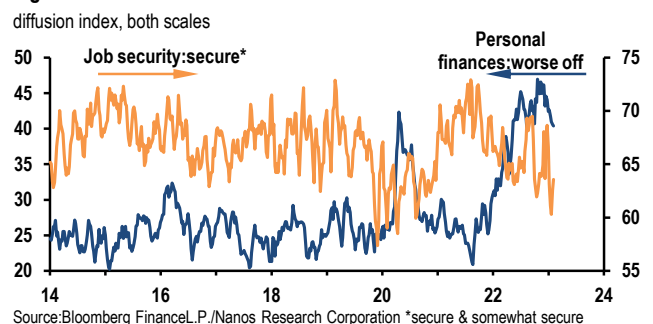
base effect the slowdown in the pace of annual inflation is largely pinned to a strong downdraft in the pace of core inflation. Gasoline prices are expected to be up 5.0% month-over-month in January. One significant category of deflation has been household operations, which includes childcare costs (Figure 2). Provincial authorities have been initiating and expanding childcare subsidies widely; the extra help for families is made possible through a partnership with the Government of Canada. Also, disinflationary pressures have been mounting in categories related to travel and accommodations as spending patterns begin to normalize in a post-pandemic economy. Note that the annual reset of provincial fees and administered prices usual in January suggests a higher level of uncertainty around our forecast.

Figure 2: Core services CPI: Household services



While slowing inflation is set to ease purchasing power pressure for consumers, sentiment on personal finances has turned gloomier recently in an environment of tighter financial conditions (Figure 3). The data in hand show real consumer spending on core goods is tracking a 3.0%q/q, saar decline in 4Q22. We expect services spending to substantially offset the weakness. Auto sales were a bright spot in the fourth quarter, however. Real sales of autos is tracking an increase above 6.0% saar, the first increase since the first quarter of 2022. We expect concerns around personal finances and job stability are likely to put a crimp in consumer spending in 2023.

Figure 3: Economic mood



Data releases and forecasts

Week of February 20 - 24

Tue Feb 21 8:30am	Consumer price index	Oct	Nov	Dec	Jan
	%m/m nsa, unless noted				
	Total CPI	0.7	0.1	-0.6	<u>0.4</u>
	%oya	6.9	6.8	6.3	<u>5.8</u>
	CPI-common (%oya)	6.5	6.8	6.6	
	CPI-median (%oya)*	4.9	5.1	5.0	
	CPI-trim (%oya)*	5.3	5.4	5.3	
	Ex food & energy	0.3	0.1	-0.1	<u>0.1</u>
	%oya	5.3	5.4	5.3	<u>4.8</u>
	*seasonally adjusted				

Tue Feb 21 8:30am	Retail sales	Sep	Oct	Nov	Dec
	%m/m sa, unless noted				
	Total	-0.6	1.3	-0.1	<u>-0.2</u>
	%oya	6.8	5.2	6.0	<u>6.5</u>
	Ex autos	-0.8	1.6	-0.6	<u>-0.1</u>
	%oya	8.3	8.4	6.5	<u>9.5</u>
	Ex autos & gasoline	-0.4	0.7	-1.1	<u>-0.2</u>
	%oya	6.7	5.9	4.0	<u>6.9</u>
	Real retail sales	-0.4	0.1	-0.4	<u>0.2</u>
	%oya	1.3	0.3	-0.2	<u>2.1</u>

Wed Feb 22 8:30am	New house prices	Oct	Nov	Dec	Jan
	Nsa				
	Total, %m/m	-0.2	-0.2	0.0	<u>-0.2</u>
	%oya	5.1	4.1	3.9	<u>2.7</u>

Review of past week's data

Housing starts (Feb 15)

Saar	Nov	Dec	Jan
Total (000)	263.0	262.8	248.6
(%m/m)	-0.4	-5.5	<u>-8.6</u>
(%oya)	-14.1	-14.2	-1.4

Manufacturing report (Feb 15)

%m/m, sa, unless noted	Oct	Nov	Dec
Sales	-2.4	2.6	-0.0
New orders	-4.6	-4.7	-0.3
Unfilled orders	-0.7	-0.8	<u>-3.0</u>
Inventories	-0.3	0.4	-0.5
Inventory-shipments ratio	1.69	1.68	<u>1.68</u>

Wholesale sales (Feb 15)

sa	Oct	Nov	Dec
Total, %m/m	-1.9	2.0	-0.5
%oya	11.1	11.2	8.4

Existing home sales (Feb 15)

Sa	Nov	Dec	Jan
Total, %m/m	-3.5	-3.2	-1.3
%oya	-39.1	-39.0	-39.1

Industrial PPI (Feb 17)

%m/m, nsa, unless noted	Nov	Dec	Jan
Total	-0.5	-1.1	-0.9
%oya	-9.4	9.3	-7.6
Ex energy	0.0	-0.2	0.5
%oya	-5.8	5.7	-4.9

Source: Statistics Canada, Ivey Business School, CMHC, S&P Global, Teranet/National Bank of Canada, CREA, CFIB, Bank of Canada, J.P. Morgan forecasts

Mexico

- **Banxico to confirm in minutes a hawkish bias is here to stay with the board focused on “high-for-long”**
- **Another ugly core CPI print likely in the cards as knock-on effects are now fully in action**
- **4Q GDP likely to be revised slightly higher (2%ar) on Dec data; good news for 1Q23**
- **Private consumption seems to have reaccelerated late last year**

Next Thursday, Banxico will release the minutes related to the February 9 statement in which the board opted for a higher-than-expected 50bp hike, bringing the overnight policy rate to 11%. The tone of the statement suggests the discussion was inflation-centered after the January core CPI delivered nasty upside surprises on services (housing, education, and restaurants, among others) confirming knock-on effects on inflation are pretty evident. Still, with real ex-ante policy rates now flirting with 6% after 700bp of hikes, the board is also expected to elaborate further on “what’s next?” and how to better communicate the belated exit strategy.

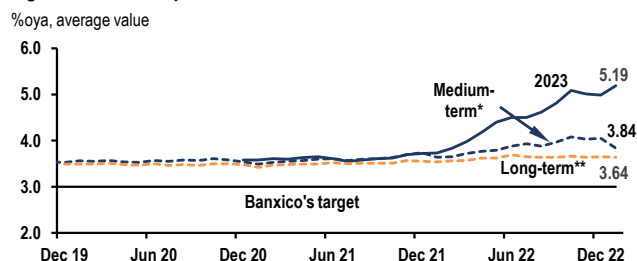
While the message was also clear in terms of “we do not react mechanically to FOMC decisions” we believe the board is well aware that sticking to 50bp one more time gives the Bank a more comfortable position in case the Fed has to extend its hiking cycle further. Tighter global monetary conditions are now expected to extend for a longer period than expected at the beginning of the year, as recession fears abate and cooler demand conditions fail to materialize.

Interestingly the Board was unanimous in its decision after the December statement, in our view, suggested a 25bp hike was in the offing. Of note, while Banxico updated its inflation path considerably (4Q23 now eyed at 4.9% from 4.2% before) it is still below analysts’ expectations (Figure 1). We believe the risk of sticking with 50bp in March is not small—we attach a 40% probability to this event—given that we expect lingering pressures on the core front (see next section) that suggest inflation will continue to exceed the staff’s expectations. We continue to expect headline inflation at 5.3% this year, and core at 5.5%, but we continue to see upside risks, particularly for the latter.

We would not be surprised if at least one member of the board delivers a dissenting bias in the minutes, urging a more hawkish tone to remind the market that Banxico’s commitment is to bring inflation back to its target as soon as possible. A majority of members are expected to confirm they agree with a “high-for-long” stance that should keep rates above 11% until at least mid-2024. While we do not expect a return

to 75bp hikes, the unpleasant inflation surprises at the beginning of the year have pushed the CB to firm the message, which should also continue to support the exchange rate in uncertain times, particularly as USMCA tensions rise.

Figure 1: Inflation expectations



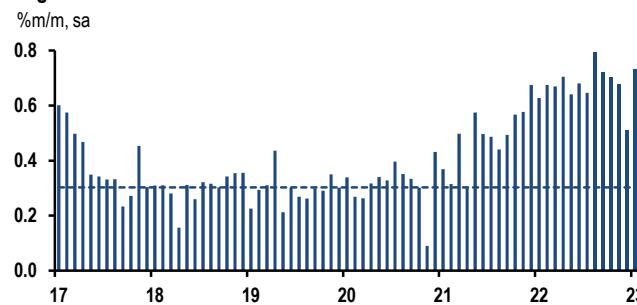
Source: Banxico, last survey January 2023. *4 years and **8 years

Core CPI composition looking worrisome

As said, core inflation will be the variable to watch as a guide to Banxico’s future policy decisions. And the picture is not looking good. We look for next week’s preliminary February CPI data to be a case in point, with headline prices up 0.36%/2w/2w, and core by 0.35% (7.81%oya and 8.38%oya), respectively.

Mapping this onto our full-month estimate would yield an increase in core prices of just over 0.6%/m/m, sa, which is still consistent with core inflation at about 7.4% on an annualized basis (i.e., if core continued to grow at this pace, %oya inflation would stand at 7.4% in February of next year). Furthermore, it is not only the aggregate level of core prices that is concerning, but also the deteriorating composition, as goods prices are indeed seeing smaller gains, but these are being fully offset by rising services prices as stated above—evidence of extended knock-on effects from last year’s shocks and this year’s 20% minimum wage adjustment.

Figure 2: Core CPI



Source: INEGI and J.P. Morgan. Dashed line is 5-year average. February is forecast.

We expect services ex. housing and education, in particular, to continue rising at a worrisome pace of about 0.8%/m/m, sa in February. By contrast, nonfood goods price gains should drop to about 0.3%/m/m, sa, falling back to their pre-pandem-

ic norm for the first time since May 2020. We attribute this drop to easing supply-chain constraints and a strong currency (Figure 2).

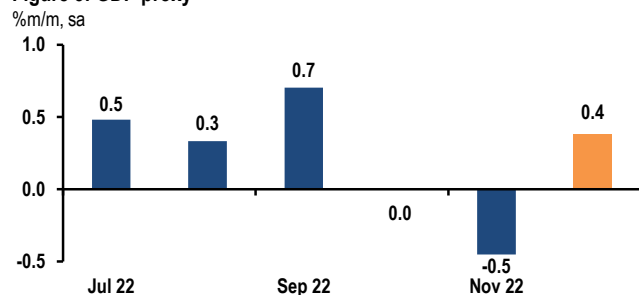
There are a handful of reasons not to expect core inflation to come down rapidly: the economy seems to have held up better into 2023 and early in the year (see below); wages are rising very rapidly; the labor market is very tight; and, related to this, private consumption seems resilient, facilitating pass-through from wage-driven cost increases. Both the minutes and the 1H February print will be paramount to decide on our view regarding the central bank’s next decision. We expect 25bp hikes in March and May.

Growth seemingly more resilient

Next week will also bring fresh economic activity data with the release of the 4Q GDP final print, and, more importantly, the marginal December GDP proxy. We see risks of 4Q GDP growth being revised slightly higher from the 1.8%saar flash release last month—probably by one- or two-tenths. This would be consistent with the December GDP proxy increasing 0.4%/m/m, sa, setting it on a healthy track going into the current year.

We already know IP increased 0.7% in December, and 2.3%ar in 4Q, contrasting with the flash GDP assumption of 1.5%ar. At the same time, most indicators were consistent with a rebound in services output after a dismal, and unexpected, November drop. As said, we look for a 0.4%/m/m, sa gain in the last month of 2022 (Figure 3).

Figure 3: GDP proxy



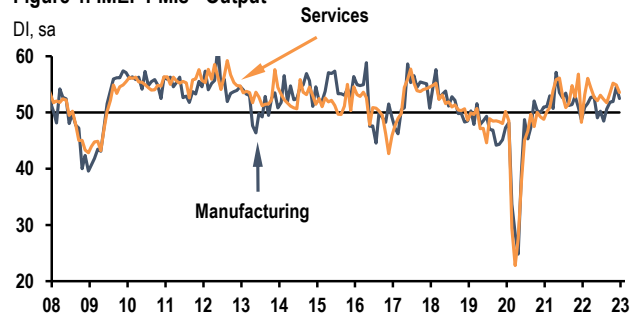
Source: INEGI and J.P. Morgan. December is forecast

Soft data for services were strong across the board in December, with reported income, demand, production, and new orders at very strong levels across different surveys (Figure 4). Moreover, the nowcast for the private consumption index released by INEGI earlier this week points to a 0.5%/m/m, sa gain in December, followed by a 0.1% gain in January (and we expect a 0.3%/m/m gain in December retail sales, also out next week).

To us this is consistent with our long-held narrative that the sources of growth have rotated from external to domestic, and look for this to hold over the next few quarters. That said, the goods-producing industries appear to be holding up better than expected, as suggested not only by December factory output, but also by survey data in January and this week’s strong gain in US manufacturing early in the year.

Going forward, we still expect a significant moderation in economic activity in 1Q23, with our own models pointing to 0.9%saar, and J.P. Morgan’s nowcast to 0.7%, but if December readings come in in line with our updated expectations, there will be material upside risks for 2023 GDP.

Figure 4: IMEF PMIs - Output



Source: IMEF and J.P. Morgan

Data releases and forecasts

Week of February 20-24

Tue	Retail sales				
Feb 21		Sep	Oct	Nov	Dec
7:00am	%oya	3.3	3.8	2.4	<u>3.3</u>
	%m/m, sa	-0.2	0.7	-0.2	<u>0.4</u>
Thu	Consumer prices				
Feb 23		Dec 2H	Jan 1H	Jan 2H	Feb 1H
7:00am	%2w/2w	0.10	0.46	0.35	<u>0.36</u>
	Core	0.19	0.44	0.36	<u>0.35</u>
	%oya	7.86	7.94	7.88	<u>7.81</u>
	Core	8.34	8.45	8.46	<u>8.38</u>
Fri	Economic activity index (IGAE)				
Feb 24	%oya, unless noted				
7:00am		Sep	Oct	Nov	Dec
	%oya	5.1	4.5	3.3	<u>2.2</u>
	%m/m, sa	0.7	0.0	-0.5	<u>0.4</u>

Review of past week’s data

No data releases.

Source: INEGI and J.P. Morgan forecast

Brazil

- **Lula tones down BCB criticism...**
- **...while announcing expected measures with negative fiscal impacts**
- **Economic indicators reinforce activity slowdown**
- **With Carnival, next days set to be less noisy**

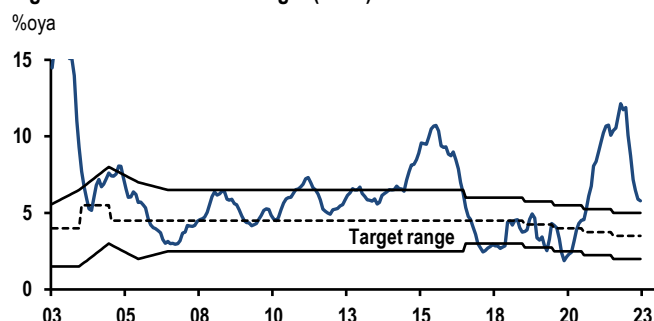
Much ink has been spilled over the relationship between Brazil’s Central Bank (BCB) and the Executive in February. This week was no exception. Efforts to improve the mood, however, were noticeable throughout the week. Both BCB governor Roberto Campos Neto and President Lula gave interviews speaking about the opportunity to work together, focusing on the needs of the Brazilian people. A common theme in these and other interactions was the inflation target debate.

Changes to the target? Not this week

Speculation over the change to targets decreased after Finance Minister Fernando Haddad publicly stated that the topic would not be addressed at the first 2023 Monetary Council Meeting (CMN). Even so, all eyes turned to the meeting on the 16th—at which Haddad, Planning Minister Simone Tebet, and governor Campos chose to maintain the previously set targets (Figure 1).

In our view, this decision does not alter the fact that CMN will probably change the target eventually, although it remains unclear by how much and for what period of time. Still, postponing the decision may allow for a more detailed discussion on the costs and benefits associated with such a decision—a welcome development, in our view.

Figure 1: CPI vs. inflation target (IPCA)



Source: IBGE and J.P. Morgan forecasts

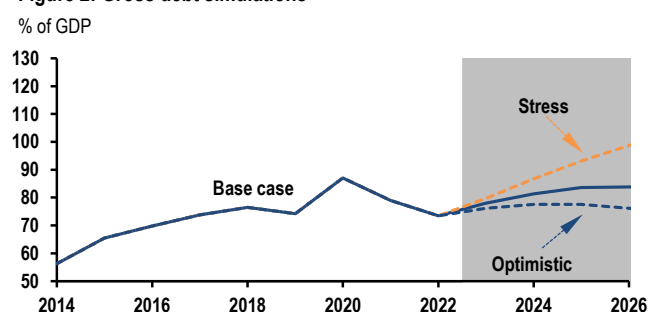
New fiscal framework

Some observers pointed out that it would be best to hold the inflation target discussion only after reducing the uncertainty on another key part of economic policy: the fiscal framework. This week Minister Haddad promised to deliver the govern-

ment’s proposal in March—earlier than his previous commitment, for April, and considerably faster than the August limit set in the Federal Constitution (“Brazil’s new fiscal rules to be presented in March, says Haddad,” *The Brazilian Report*, February 15).

It is still unclear how the framework will be designed, and it may end up being more or less tight depending on what politicians see as the bare minimum to accommodate expenditures. The details around this debate, set to happen at least over the first half of 2023, will determine whether the rule will be enough to stabilize public debt in the long run (Figure 2).

Figure 2: Gross debt simulations



Source: BCB and J.P. Morgan

Minimum wage to increase in May—and trickle down to tax income

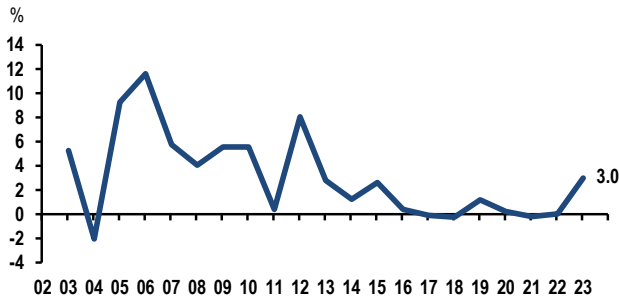
Two items the first 2023 fiscal drafts will already have to account for are the increase in expenditures due to a higher minimum wage (Figure 3), and the revenue loss due to an increase in the tax exemption limits (Figure 4)—both announced by President Lula this week (“*À CNN, Lula anuncia salário mínimo de R\$ 1.320 e isenção de IR a R\$ 2.640*” CNN, February 15).

The decision to increase the monthly minimum wage from BRL1,302 to BRL1,320, effective from Labor Day (May 1), was already incorporated into our base scenario, costing an estimated BRL7bn per year. The increase in exemption, however, was not, and will have a sizable impact—with estimates ranging between 0.1 %and 0.3% of GDP if no other steps are taken to reduce the forgone revenue. This downside risk contrasts with the overall positive balance of risks we highlighted to our own 1.7% of GDP primary deficit forecast after the finance minister announced the measure.

Both steps follow campaign promises, with the tax change falling short of the promise to increase the said limit to as high as BRL5k per month—almost double the announced break, and at least three times more expensive. However, they also highlight preferences that may influence the new fiscal

framework and reinforce our view that, while the balance of risks for 2023's fiscal results is positive, the same cannot be said about the structural outlook.

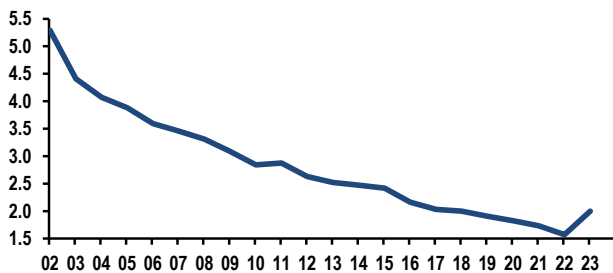
Figure 3: Minimum wage real growth (INPC)



Source: IBGE and J.P. Morgan

Figure 4: Income tax exemption

as % of minimum wage

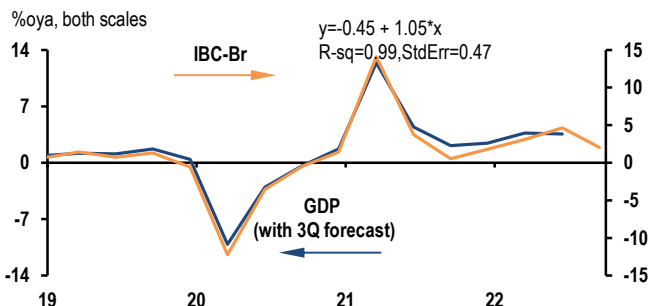


Source: IBGE and J.P. Morgan

Economic activity: up, yet soft

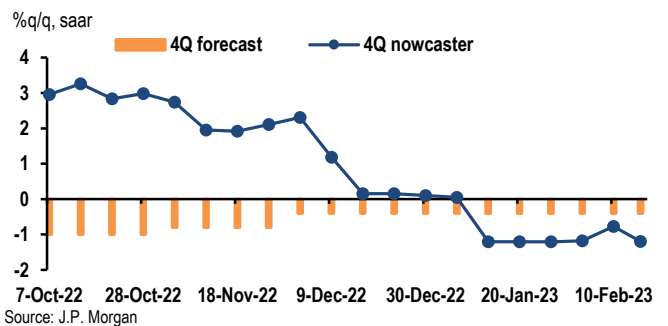
The December IBC-Br (BCB's economic activity index) grew after four months of decline. The 0.3% increase came in four-tenths above our -0.1% call, and two-tenths above the 0.1% consensus (Figure 5). With this result, the fourth-quarter nowcaster dipped back to its prior -1.2% level, below our 4Q GDP call for a 0.4%/q/q, saar drop (Figure 6). We remain of the view that Brazil's growth will surprise to the downside in 2023, and maintain our below-consensus call for a 0.5% expansion.

Figure 5: GDP and monthly activity index (IBC-Br) growth



Source: IBGE, BCB and J.P. Morgan

Figure 6: Brazil 4Q nowcaster



Source: J.P. Morgan

Data releases and forecasts

Week of February 20 - 24

Fri	Consumer prices (IPCA-15)				
Feb 24					
7:00am		Nov	Dec	Jan	Feb
	%m/m	0.53	0.52	0.55	<u>0.72</u>
	%oya	6.18	5.90	5.87	<u>5.58</u>
Fri	Current account balance				
Feb 24					
7:30am		Oct	Nov	Dec	Jan
	Current account (CA)	-5.2	-0.6	-10.9	<u>-5.8</u>
	CA, 12-month sum	-60.4	-52.5	-55.7	<u>-52.2</u>
	CA, 12-month sum, %GDP	-3.2	-2.8	-2.9	<u>-2.7</u>
	Foreign direct investment	5.5	8.3	5.6	<u>7.9</u>

Review of past week's data

Wholesale prices (IGP-10)

	Dec	Jan	Feb	
%m/m	0.36	0.05	<u>-0.12</u>	0.02
%oya	6.08	4.27	<u>2.12</u>	2.26

Economic activity

	Oct	Nov	Dec	
%m/m, sa	-0.28	-0.55	<u>-0.10</u>	0.3
%oya, nsa	3.75	1.65	<u>1.00</u>	1.4

Source: IBGE, FGV, and J.P. Morgan forecasts

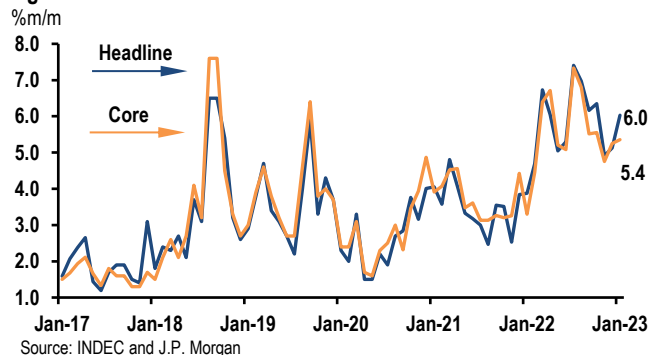
Argentina

- The January CPI printed at 6.0%/m/m, in line with expectations
- The monthly inflation acceleration was spearheaded by seasonal and regulated prices
- Core inflation proved sticky at 5.4%/m/m
- Dec-23 inflation to print above 100%

The headline CPI logged 6.0%/m/m in January, in line with our expectation and above BCRA’s survey consensus (5.6%/m/m). Monthly inflation thus accelerated again after two months of mild disinflation (4.9% in November and 5.1% in December). The over-year-ago print came in at 98.8%, also accelerating from the 94.8% print a month ago.

When breaking down the CPI by category, the monthly acceleration was spearheaded by food prices (+1.9%-pt contribution), followed by housing and basic services, and recreation prices. When adjusting for seasonality (J.P. Morgan adjustment), the national headline CPI gained 6.0%/m/m, sa, above the 4.9% reported in December and relatively in line with the 6.1% monthly average in 2H22. The last-three-month sequential pace again breached the 100% level, at 100.4%, after two consecutive months of deceleration.

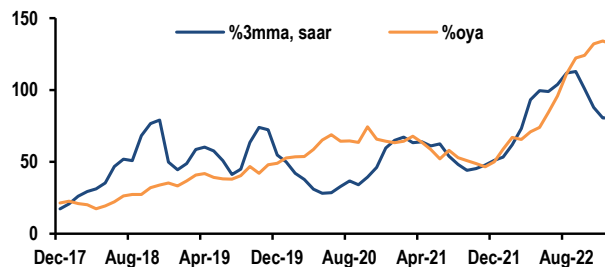
Figure 1: Headline and core National-CPI



Core inflation proved sticky at 5.4%/m/m (+3.7%-pt contribution), slightly above the prior month’s 5.3%. Also, our metric of underlying inflation (adjusting core inflation by excluding food prices) printed at 5.8%/m/m, from the 5.7% reported in December. Worth noting, the seasonal adjustment shows that momentum for ex. food core prices continues to accelerate, with the smoother sequential three-month average at 96.6% in annualized terms, from 91.1% in December. Meanwhile, seasonal prices saw a strong jump in the month at 7.9%/m/m (+1.1%-pt contribution) on the back of sizable increases in fresh fruits and vegetable prices. In a similar vein, regulated prices were impacted by tariff hikes, up by 7.1%/m/m (+1.2%-pt contribution).

Figure 2: Core CPI

%, sa by J.P. Morgan

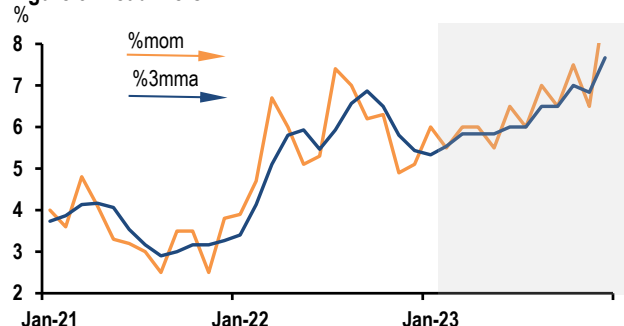


Source: INDEC and J.P. Morgan

The government announced new measures this week to contain meat prices. Aside from the strong rise observed in fresh fruit and vegetable prices, meat prices also showed a strong acceleration on the month. Indeed, while up by a “modest” 4%/m/m in January, this represents a marked increase from the 2% monthly average reported in the prior two months. Moreover, the high frequency data show meat prices up by 5.4%/w for the first two weeks of February. It is against this backdrop that the government announced a 35% reduction in seven cuts of meat, with a price freeze at those levels until March 31. Since then, these prices will follow the “Fair Prices” program framework with monthly increases of 3.2%. Worth noting, this measure applies only to large supermarkets, and assuming that these seven cuts represent 70% of the meat CPI basket, we gauge the monthly CPI impact at 0.7%-pt.

Inflation is poised to accelerate above 100% in 2023. In all, the recent price freezing agreements could provide temporary inflation relief, but as history tells, such arrangements have failed to provide a sustainable disinflation path ahead absent structural policy changes. Amid high (and increasing) repressed inflation, we continue to expect underlying inflation to accelerate further as the government muddles-through until the October election, stretching the current policy framework to the limits (see our recent [note](#)). Our base case scenario assumes monthly headline inflation at 5.9%/m/m, on average, in 1H23, accelerating to 7.1%/m/m in 2H23. This path is consistent with Dec 23 inflation at 112%. We assume a correction of the official exchange rate by end-2023 upon a new administration taking office in December.

Figure 3: Headline CPI



Source: INDEC and J.P. Morgan

The authors wish to thank Juan Goldin, of the Latin America Economics Research team, J.P.Morgan Chase Bank Sucursal Buenos Aires, for his contribution to this report.

Data releases and forecasts

Week of February 20 - 24

Wed	Trade balance				
Feb 22					
			Oct	Nov	Dec
	US\$bn		1.9	1.4	1.1
					<u>1.0</u>
Thu	Economic activity				
Feb 23					
			Sep	Oct	Nov
	%oya		4.9	4.5	2.6
	%m/m, sa		-0.2	-0.5	-0.7
					—

Review of past week's data

CPI				
		Nov	Dec	Jan
%m/m		4.9	5.1	6.0
				6.0

Source: INDEC, BCRA, and J.P. Morgan

Andeans

- **Colombia: 4Q22 GDP confirms a slowdown...**
- **...and we maintain our call for a final 25bp hike to a 13% policy rate at the end-March meeting**
- **Peru: December activity was not as bad as we feared ...**
- **... Pending revisions, the 2023 GDP forecast is maintained at 2.1%/y/y**

Colombia: Growth downshifting

DANE reported full-year 2022 GDP at a lower-than-expected 7.5%/y/y (J.P. Morgan and Bloomberg consensus: 8.0%), a slower and steadier pace for the year than prior reporting had suggested. Most notably, DANE also revised up 2021 to 11%/y/y from 10.7%, a stronger rebound by year-end than had originally been portrayed.

Even the updated series of the monthly activity proxy ISE, also published this week through December, showed more of a softening in activity (running at -3.4%3m/3m, saar) than indicated before. By contrast, the revised GDP showed 4Q expanding (+2.7%q/q, saar), though from a lower overall level of GDP through 3Q given the downward revisions to the first part of the year. This 4Q advance was in line with J.P. Morgan's expectations (mirrored by BanRep's Monetary Policy Report and consensus) for 4Q to fall sequentially but from a higher (originally reported) level of output (Figure 1).

All told, the 4Q report and the backward revisions adjust the narrative a bit, suggesting less torrid activity in 2022, but following a more booming 2021, and already moving to a below-trend pace by 2H22.

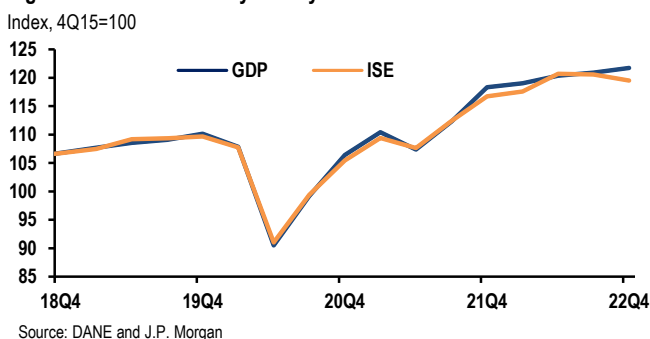
We change very little in our path ahead. We continue to see a contraction in 1Q in sequential terms, with GDP down 3%q/q, saar instead of 2% before. Otherwise we keep the sequential path unchanged, with a modest 2% rebound in 2Q followed by a 1.5% average annualized pace in 2H. All told, 2023 full-year growth stays unchanged at 0.9%/y/y.

On the demand side, the picture looks a bit healthier, considering the degree to which domestic demand had been outpacing domestic supply, in turn aggravating Colombia's external imbalance. DANE's figures show consumption slowing rather notably, led by a contraction in government consumption. Investment had a much better 2022, even if it slowed in 4Q. Meanwhile net exports actually contributed to growth in 4Q as imports contracted rather strongly.

We think the confirmation of the slowdown, and the marginally healthier composition of growth, will reinforce BanRep's apparent intention to wind down its tightening cycle, despite

still accelerating inflation. We maintain our call for a final 25bp hike to a 13% policy rate at the end-March meeting.

Figure 1: GDP and monthly activity indicator ISE



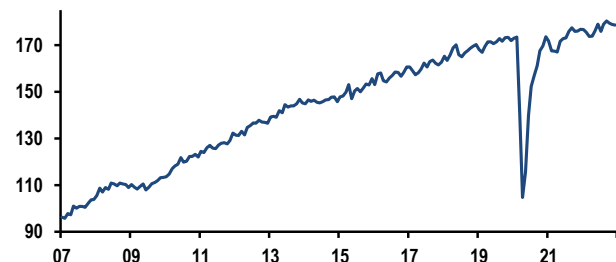
Peru: December activity was not as bad as we feared

While waiting for the quarterly national accounts report, the monthly activity indicator published this week by the INEI showed less of a contraction in December than we had feared. The social unrest triggered by political events indeed impacted some sectors, particularly construction, agriculture, and manufacturing. But mining, favored by Quevalleco output and services, helped to prevent a more pronounced impact on the headline activity index.

Pending series revisions, headline real activity declined by 0.2%_{m/m}, sa, with the smoother sequential momentum printing in the black at +1.3%_{3m/3m}, saar, which compares to +4.8% in 3Q22 (Figure 2). Growth has markedly underperformed its potential since the COVID-recovery phase, as by December-22 headline activity printed at just 2.9% sa above pre-pandemic levels as of February 2020, and has averaged just 1.4% per year in the last three years. Another way to put it is that activity printed about 6.0% below the level consistent with pre-COVID trend growth. In terms of activity growth ahead, our 2023 GDP forecast sits at 2.1%/y/y, though we had discounted a lower statistical carryover than what this week's report suggests. We wait for the 4Q22 national accounts report to fine-tune the annual projection.

Figure 2: Peru real economic activity

Level, sa



Source: INEI and J.P.Morgan

Colombia

Data releases and forecasts

Week of February 20- 24

No data releases.

Review of past week's data

Real GDP

	2Q22	3Q22	4Q22	
%oya	12.3	7.8	3.8	2.9
%q/q, sa	1.1	0.5	-2.0	0.7

Economic activity

	Oct	Nov	Dec	
%oya	4.0	2.3	1.9	1.3

Manufacturing

	Oct	Nov	Dec	
%oya	5.3	4.5	1.2	0.6

Retail sales

	Oct	Nov	Dec	
%oya	1.9	1.5	0.4	-2.4

Trade balance

	Oct	Nov	Dec	
US\$bn	-1.5	-1.1	-0.8	-0.9

Source: DANE and J.P. Morgan estimates

Chile

Data releases and forecasts

Week of February 20 - 24

No data releases.

Review of past week's data

No data released.

Source: INE, BCCh, and J.P. Morgan estimates

Peru

Data releases and forecasts

Week of February 20 - 24

Thu	GDP				
Feb 23					
		1Q22	2Q22	3Q22	4Q22
	%oya	3.9	3.4	2.0	<u>1.7</u>

Review of past week's data

Economic activity

	Oct	Nov	Dec	
%oya	2.0	1.7	1.0	0.9
%m/m, sa	-0.2	-0.2		-0.2

Unemployment

	Nov	Dec	Jan
%	7.60	7.10	8.00

Source: INEI, BCRP, and J.P. Morgan estimates

United Kingdom

- Unexpected weakness in Jan core services prices, the part of the CPI the BoE is most focussed on
- But non-bonus pay growth also surprises to the upside again
- These surprises have mixed implications for the BoE, but we continue to expect a 25bp hike in March

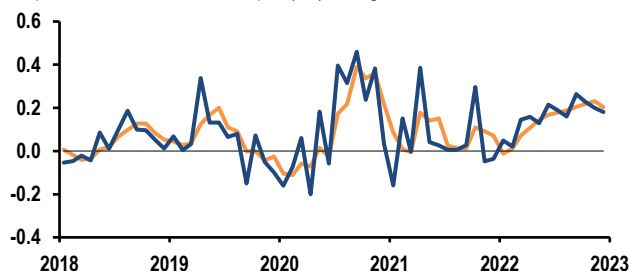
After another upside surprise to wages in Tuesday’s labour market report and concern that the UK will struggle to bring down pay growth over the next year, there had been speculation about whether a 50bp rate hike could be on the cards for March. Sentiment soon flipped following the large downside surprises in core CPI services prices on Wednesday, however, the more persistent component of the basket focussed on by the BoE. In our view, the balance of risks implies a 25bp rate hike is still needed in March given that individual CPI prints can be volatile and influenced by special factors (e.g. transport services), whereas the wage data tend to be stickier and more momentum driven. We expect the services CPI to rebound and for pay to remain strong. Reflecting on this week’s data, BoE Chief Economist Huw Pill this week remarked that the MPC must “see the job through” and that it was “premature to declare victory” over high inflation. This seems to imply he intends to vote for further hikes in March.

Pay growth still surprising to the upside

The timely payrolls based measure of employee jobs showed a strong 102k or 0.3%/m/m gain in January (2.8% on a 3m/3m annualized basis). These data are very revision prone, but with an upward revision in December they paint a more sanguine picture than markets expected. The employment data from the household survey showed a 74k gain in the three months to December (+0.9% annualized). Despite this, the unemployment rate held steady at 3.7% and the single month data for December came out notably above expectations at 4.0%; the participation rate rose 0.1%-pt to 63.2%.

Figure 1: Average earnings (ex. bonus)

%-pt deviation from consensus poll (3sf), orange line is 3mma



Source: Reuters, ONS, J.P. Morgan

However, the immediate concern for the BoE is about underlying pay pressures and the latest data show another very strong outturn. While the headline average weekly earnings data did undershoot expectations by coming in at 5.9%oya in the three months to December, with reflected the bonus component which tends to be very volatile. The non-bonus figures were significantly stronger than expected at 6.7%oya, the twelfth upside surprise (Figure 1). This release offers some clear evidence that the upside risk in the BoE’s most recent forecasts is playing out.

One reason the data keep on surprising has been the pattern of revisions to past months, which push up annually calculated pay in the most recent month. This was again the case, with past revisions adding 0.2%-pt and hence accounting for all of the surprise. Indeed, monthly pay for December showed a comparatively soft gain of 0.17%/m/m following the two 0.7%/m/m gains that preceded it. Serial correlation in forecasting errors is just as much about the pattern of these revisions as it is news on the most recent period. We’d be inclined to down play the soft monthly print for December and start anticipating revisions to next month’s data.

Services inflation came in weak

Headline CPI inflation in January slowed from 10.5% to 10.1%oya (0.2%/m/m, sa by JPM). Core inflation delivered a notable downside surprise with a fall from 6.3% to 5.8%oya (0.1%/m/m). Despite this, significant parts of the goods basket were firmer than expected. Core goods rose 0.6%/m/m with strong gains in clothing, household goods and medical products (Figure 2). A moderation in goods inflation had appeared to be underway, consistent with global indicators pointing in this direction. But the strength in producer and imported prices in the UK is a hindrance to this. PPI core output price gains have slowed, but a 0.5% gain in January left the oya at 10.4%. Food prices gains also accelerated with a 1.1% gain.

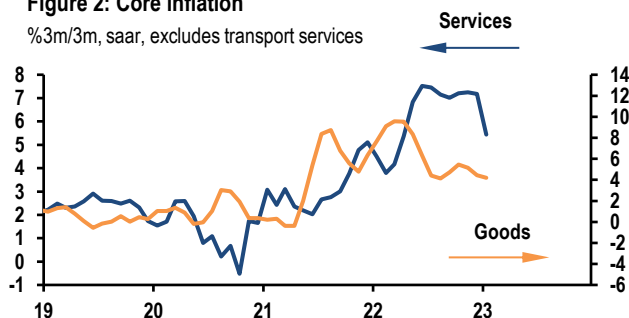
The big surprise came from services prices which fell 0.4%/m/m, sa. Excluding the government-related subsidies that affected August 2020, this is the weakest monthly out-turn since April 2016. Back then, the notorious “transport services” component had delivered a 6.8%, sa drop. There was a similar story this time round, with the same category falling an large 8%/m/m. This decline subtracted almost 0.2%-pts off the CPI. Usually it is a simple story of volatility in airfares around the popular Dec/Jan holiday period. There was also an added downward influence from coach and bus fares (related to a price cap).

The rest of the services basket was also soft, however, accounting for the rest of the surprise (~0.2%-pts). This was a more genuine surprise given the recent run of strong gains in core services. The weakness partly reflected recreation, cater-

ing and accommodation-related services - perhaps coming off the boil from pandemic re-opening related pressures. But the breadth and magnitude of the weakness in the services basket was a surprise.

Figure 2: Core inflation

%3m/3m, saar, excludes transport services



Source: ONS, J.P. Morgan

Our new inflation forecast profile for the CPI is modestly lower than before, reflecting the surprise in this release. Due to strength of wages we have not marked down the services forecast much further, and expect the pace of sequential price gains to rebound from February. We have also marked up some parts of the near-term forecast to reflect the greater momentum shown on the goods side. We continue to see core inflation running above 3% at year-end. Headline inflation at this point is 3.2%, with balanced risks (downside from lower gas prices, upside from wages).

Data releases and forecasts

Week of February 20 - 24

Mon	Rightmove house price index				
Feb 20	Nsa				
12:01am		Nov	Dec	Jan	Feb
	%m/m	-1.1	-2.1	0.9	
Tue	Public sector finance				
Feb 21	£ bn, nsa				
7:00am		Oct	Nov	Dec	Jan
	PSNCR	-10.0	-20.0	-17.2	
	PSNB	12.6	18.8	26.6	
	- ex. pub. banks	13.4	19.6	27.4	
	Current budget (ex. pub. banks)	-9.7	-13.4	-19.5	
	Net debt to GDP (%)	111.6	111.9	112.8	
	- ex. pub. banks	98.2	98.5	99.5	

Tue	PMI survey flash				
Feb 21	% balance, sa				
9:30am		Nov	Dec	Jan	Jan
	Manufacturing				
	Overall index	46.5	45.3	47.0	
	Output	44.7	44.4	47.0	
	Services business activity	48.8	49.9	48.7	
	Composite				
	Output	48.2	49.0	48.5	49.0

Tue	CBI industrial trends				
Feb 21	% balance				
11:00am		Nov	Dec	Jan	Feb
	Total order books	-5	-6	-17	
	Output expectations	-10	-10	19	
	Output prices	47	52	41	

Thu	CBI distributive trades				
Feb 23	% balance				
11:00am		2Q22	3Q22	4Q22	1Q23
	Avg. selling prices expected	81	69	87	
	Total employment expected	5	-3	10	
	Investment intentions (next year)	-34	-31	-38	
	Business situation (next 6 mths)	-13	-22	-22	

Fri	GfK consumer confidence				
Feb 24	Nsa				
12:01am		Nov	Dec	Jan	Feb
	% balance	-44	-42	-45	

Review of past week's data

Labor market statistics

Sa					
	Average weekly earnings (3mma %oya sa)				
		Oct	Nov	Dec	
	Headline	6.2	6.4	6.5	6.1
	Ex bonuses	6.1	6.4	6.5	6.5
	Private sector ex bonuses	6.9	7.0	7.2	7.3
	Labor force survey (all percentage rates, sa)				
	Three months to:	Oct	Nov	Dec	
	Activity rate	63.0	63.1		63.2
	Employment rate	60.7	60.8		60.8
	Unemployment rate	3.7	3.7		3.6
	- single month	3.7	3.5		3.7
	Change over three months to:	Oct	Nov	Dec	
	Employment (000s)	27	27		74

Retail prices

%oya

	Nov	Dec	Jan	
CPI	10.7	10.5	10.2	10.1
Core CPI1	6.3	6.4	6.1	5.8
RPI (1987=100)	358.3	360.4	358.9	360.3
RPI	14.0	13.4	13.0	13.4

1. CPI ex food, energy, alcohol, and tobacco.

House price index

%oya, nsa

	Oct	Nov	Dec	
All dwellings	12.4 12.0	10.3 10.6		9.8

Retail sales

Volumes, sa

	Nov	Dec	Jan	
Including auto fuel (%m/m)	-0.5 -0.6	-1.0 -1.2		0.5
Ex auto fuel (%m/m)	-0.3 -0.4	-1.1 -1.3		0.3
(%oya)	-5.7 -5.8	-6.1 -6.5		-5.4
(%3m/3m saar)	-8.1 -7.9	-4.9		-4.2

Source: Rightmove, CBI, BBA, BCC, GFK, BRC Markit, SMMT, RICS, Land Registry, ONS, BoE, and J.P. Morgan forecasts

Sweden and Norway

- Riksbank raises policy rate 50bp and twists QT plan
- Swedish core inflation fell in January
- Upside surprises to Norwegian data

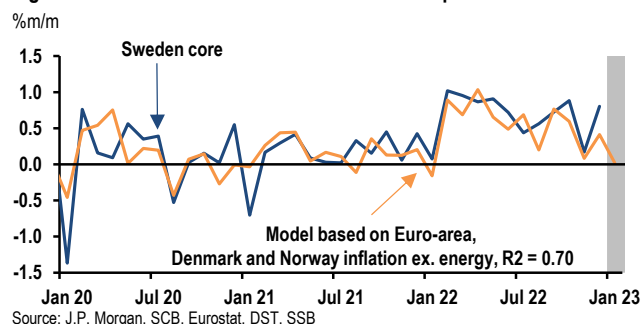
Last week, the [Riksbank raised its policy rate by 50bp to 3%](#), against forward guidance of 25bp. This decision was expected, although a surprise move was undertaken through active government bond sales. Erik Thedéen, the new Governor, addressed difficult trade offs in the press conference between SEK depreciation, foreign policy rates and the interest rate sensitivity of households.

The Riksbank will, until further notice, sell nominal and real government bonds with longer maturities at a pace of SEK 3bn and 0.5bn, respectively. No private bond sales will take place. Greater volumes of Riksbank certificates will also be offered which will lower excess liquidity and tighten financial conditions. The real purpose of this is, however, to strengthen the SEK. So far, the mission has succeeded as the krona appreciated 1.5% against the euro, and has remained stable since. We look for more detail about the views of Thedéen and new Deputy Governor Aino Bunge in next week's minutes.

The rate path and forecasts were also tweaked. The rate path signalled a terminal rate of 3.33%, implying that a 50bp hike in April remains on the table. The rate path is flat thereafter til the end of the forecast horizon, as the Board presumably are against indicating any premature rate cuts in order to avoid risking further currency depreciation. We keep our terminal rate forecast at 3.25% and anticipate rate cuts will begin next year. The Riksbank's core inflation forecast for 2023 was raised 0.3%-pts to 5.8%oya, and growth was revised slightly higher to -1.1%oya. Expected SEK appreciation in 2023 is a moderate ~1%. Lastly, Riksbank expect the housing prices to decline 18.2% peak-to-trough, slightly more optimistic than our forecast of -20%.

January inflation data, which usually are heavily influenced by seasonality and CPI-weight changes, are due next week. We see core inflation at 8.1%oya, 0.1%-pt below the Riksbank's forecast. Risks are balanced. Basket-adjustments usual seasonal patterns point to the downside, while food prices, the weak SEK, and January data from European peers hint to the upside (Figure 1). Otherwise, we get the ETI indicator next week which should slightly improve, albeit stay in contractionary territory. The final 4Q22 GDP number is unlikely to deviate much from the preliminary figure (-2.4%/q, saar). Expenditure details will be released which should point to household consumption as a weak spot.

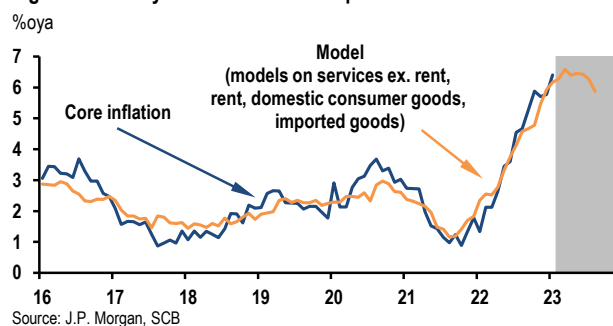
Figure 1: Sweden core inflation vs. Western Europe



Norway: Upside data surprises

Core inflation in Norway [surprised to the upside in January](#), increasing 0.2%/m/m to 6.4%oya (Figure 2). The outsized jump was due to imported consumer goods inflation, which climbed to 7.0%oya, 1.2%-pts above Norges Bank's forecast. In contrast, domestic inflation came in line with Norges Bank's forecast, albeit a firm 0.5%/m/m pace. Core services and rents inflation rose 0.5%-pts to 4.2% and 2.9%oya, respectively. As a result of consumption dynamics last year, weights of transport, recreation and culture and hospitality have increased. In isolation, this creates some upside risk to inflation in 2023.

Figure 2: Norway short-term bottom-up inflation model



[Norway GDP in 4Q rose 3.4%/q, saar](#), (3.8% for 2022) in line with expectations, but above Norges Bank's forecast. The above-potential growth in 4Q was attributed to a surge in car purchases ahead of the unwinding of VAT exemptions for electric cars. This led to a 26%/q, saar, surge in household consumption. The boost from car purchases will, however, be reversed in January, contributing to our expectations of GDP declining -2%/q, saar, in the first quarter of 2023. The [IQ petroleum investments survey](#) indicated that investment in 2023 will increase 6.3% relative to last year.

Sweden

Data releases and forecasts

Weeks of February 20 - March 3

Mon	Consumer prices				
Feb 20	Nsa				
8:00am		Oct	Nov	Dec	Jan
	CPI (%m/m)	0.2	1.0	2.1	<u>-0.7</u>
	CPI (%oya)	10.9	11.5	12.3	<u>12.2</u>
	CPIF (%m/m)	-0.1	0.7	1.9	<u>-1.2</u>
	CPIF (%oya)	9.3	9.5	10.2	<u>9.5</u>
	CPIF ex. energy (%m/m)	0.9	0.2	0.8	<u>-0.2</u>
	CPIF ex. energy (%oya)	7.9	8.0	8.4	<u>8.1</u>
Tue	Production value index				
Feb 21	%m/m, sa				
9:30am		Oct	Nov	Dec	Jan
	Total index	0.5	-1.3	-0.4	
	Industrial production	0.5	-2.4	-2.2	
	Services production	0.7	-1.1	-0.7	
Mon	Retail sales				
Feb 27	Sa				
8:00am		Oct	Nov	Dec	Jan
	%m/m (ex. fuel)	-2.1	1.5	-1.8	
	%oya (ex. fuel)	-7.8	-7.1	-7.5	
Tue	Real GDP				
Feb 28	Cal. adj. and sa				
9:30am		1Q22	2Q22	3Q22	4Q22
	GDP (%q/q saar)	-0.3	2.9	2.4	<u>-2.4</u>
	GDP (%oya)	4.1	4.0	2.6	
Wed	Purchasing managers' index (manufacturing)				
Mar 1	% bal, sa				
8:30am		Nov	Dec	Jan	Feb
	Total manufacturing	46.0	45.9	46.8	
Fri	Purchasing managers' index (services)				
Mar 3	% bal, sa				
8:30am		Nov	Dec	Jan	Feb
	Total services	54.3	52.9	51.0	

Review of past weeks' data

Weeks of February 6 - 17

Riksbank meeting

%	Sep	Nov	Feb
% Repo rate	1.75	2.50	<u>3.00</u>

Unemployment rate (SCB)

%, sa	Nov	Dec	Jan
Total 15-74 years	7.2	7.5 7.4	7.3

Unemployment rate (Swedish Public Employment Service)

%	Nov	Dec	Jan
Statistics Sweden (sa)	6.7	6.7	6.5

Source: SCB, Swedbank, Silf, AMS and J.P. Morgan forecasts

Norway

Data releases and forecasts

Weeks of February 20 - March 3

Mon	Retail sales				
Feb 27	Sa				
8:00am		Oct	Nov	Dec	Jan
	%m/m (ex. petrol)	0.0	0.6	-3.6	
	%oya (ex. petrol)	-5.0	-4.3	-7.7	
Wed	Manufacturing PMI				
Mar 1	DI, sa				
9:00am		Nov	Dec	Jan	Feb
	Total	51.1	50.1	50.0	
Fri	Unemployment rate (Norwegian Welfare and Labor Org.)				
Mar 3	%, sa				
10:00am		Nov	Dec	Jan	Feb
	% of labor force	1.7	1.7	1.6	

Review of past weeks' data

Weeks of February 6 - 17

Consumer prices

Nsa	Nov	Dec	Jan
CPI (%m/m)	-0.2	0.1	<u>-0.2</u> 0.2
CPI (%oya)	6.5	5.9	<u>6.7</u> 7.1
CPI - ATE (%oya)	5.7	5.8	<u>6.1</u> 6.1

Real GDP

	2Q22	3Q22	4Q22
GDP (%q/q, sa)	4.3 1.1	4.5 1.3	0.2
GDP (%q/q, saar)	5.2 4.6	6.3 5.3	<u>1.0</u> 0.8

Mainland

	Nov	Dec	Jan
GDP (%q/q, sa)	1.2	0.8 0.6	0.8
GDP (%q/q, saar)	5.1 4.7	3.3 2.3	3.4

Source: Statistics Norway, LFS and NAV and J.P. Morgan forecasts

Emerging Europe

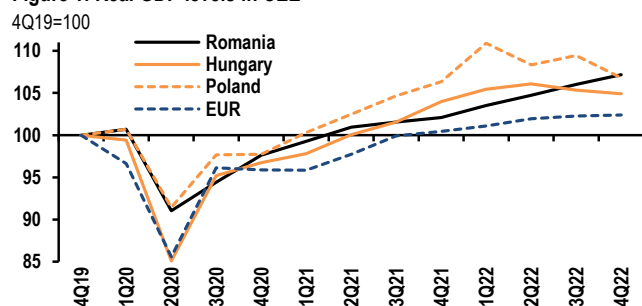
- **Romania: Soft CPI, strong GDP**
- **Poland: January headline hides strong core**
- **Israel: Strong growth and sticky prices mean more hikes**
- **Russia: Upward surprise in January CPI**

Romania’s January CPI surprised to the downside at 15.1%oya, from 16.4% (we and consensus had 15.9%), while 4Q22 flash GDP was strong at 4.5% saar, above the 2.5% saar we had expected. But, looking at the details, the auspicious picture is not entirely accurate.

While headline CPI dropped sharply, the move was driven by non-food goods, particularly energy. Core inflation was strong at 1%/m/m, rising to 14.9%oya from 14.7%. On a sequential seasonally-adjusted basis the core rate was 12.5% saar, from 12.8% in December. More concerning to us is the fact that core services inflation was much stronger than expected at 24% saar, from 8.4% in December. On the positive side, core goods momentum collapsed to just 1.4% saar, from 7.8% in December, while processed food (included in core) slowed to 15.5% saar, from 19.5%, and further slowing is likely here.

On growth, the stronger-than-expected sequential 4Q print is partly due to changes to the historical series. Although the sequential print beat our expectations (4.5%q/q, saar vs 2.5% expected), the over-year-ago print at 4.6% was slightly below the 4.9% that we expected. Consequently, full-year growth was 4.8% last year, somewhat below the 5% we expected. The GDP release is a flash and we do not have details of drivers. However, we know that IP contracted sharply, but retail sales expanded and construction has seen a boom.

Figure 1: Real GDP levels in CEE



It is likely that services which cannot be tracked did well, supported by the consumer and strong investment activity. Despite the revisions to historical data, the Romanian econo-

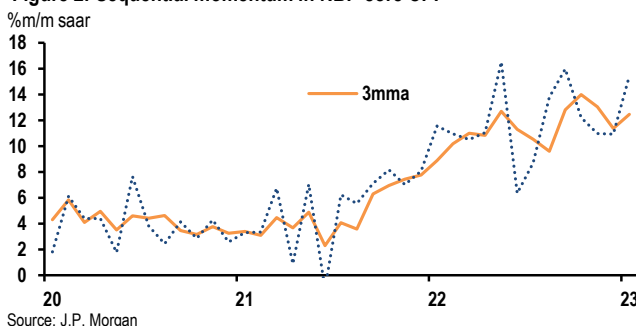
my ends 2022 as the region’s best growth story since the pandemic. As of 4Q22, the level of GDP in Romania was 7.2% above its 4Q19 (pre-COVID) level, considerably ahead of Hungary (4.9%), Eurozone (2.4%) and narrowly outpacing Poland (6.8%) after its weak 4Q print (Figure 1).

After the January CPI print, NBR now has more reasons to remain on hold and chances are growing that the central bank will not hike in August (as our forecast currently embeds). The challenge for the bank now is to balance fast headline disinflation with strength in core and better-than-expected GDP growth, and the preferred course of action could be to leave rates unchanged for a longer period. However, to be able to remain on hold past August, the NBR will need to see a material slowing in core inflation.

Poland: Good news is bad news

According to the preliminary release, inflation reached 17.2%oya in January, from 16.6%, which although elevated is significantly below our estimate for an 18.8% reading. The final release will include new basket weights, which are likely to increase the share of energy components, and hence we see an upward revision as likely. January data was bound to be dominated by moves in energy. The expiry of VAT cuts implemented last year on electricity, gas and other household energy items pushed CPI higher in January, whereas in the opposite direction, the introduction of price caps offset that increase. The net impact was a large increase was a 10.4%/m increase in other energy, which is half what our calculation had suggested (22%). In addition to this, food prices also helped on the downside, with prices increasing only 1.9%/m, versus our estimate for 2.9%.

Figure 2: Sequential momentum in NBP core CPI



Triangulating the available data in the preliminary release, we estimate that core inflation went up around 1.3%/m/m to 11.8%oya, which is stronger than the 1%/m/m we had estimated. Our estimate had already assumed some additional January re-pricing activity. In momentum terms, this implies a re-acceleration in core CPI to around an annualized 15% pace (Figure 2), after a series of months closer to 10%. This makes

Poland the only country in CE3 where core actually surprised to the upside in January (Czech core was weaker than projected, and also marginally so in Hungary).

Given the fiscal expansion foreseen in 2023, together with resilient core inflation momentum, we see no space for NBP to engage in monetary policy easing this year. Yet, it is in Poland where we see hints that monetary policy could turn dovish, both from comments of PM Morawiecki and from members of the MPC. Against this backdrop we expect the MPC to keep rates unchanged all year, but we admit the risk of some small symbolic easing being delivered. More than small symbolic cuts (and clearly communicated as such) would be poorly received by the market in our view, with the impact on the Zloty preventing any further moves.

Israel: Strong growth+sticky inflation = hawkish BoI

Consumer inflation surprised to the upside in January, accelerating to 5.4%*o*ya (JPMe 5.1). Most of the surprise to our expectations was in energy and food parts of the basket. However, momentum in core items firmed as well – to estimated 4.3%*m*/m, *saar*, from 3.0%, as momentum in both core goods (1.9) and core services (5.2) firmed at the start of the year. Our read of the data also suggests that price pressures broadened (again) last month, with median inflation edging higher. January data can be noisy – annual indexations muddy the waters – and Israel's inflation series are notoriously volatile. Yet, smoothing through the noise of recent months, it appears that underlying momentum is still elevated and inflation is somewhat stickier than thought. We therefore lifted our projected inflation trajectory, anticipating inflation to end the year at 3.0%*o*ya instead of 2.6% previously.

In main components, three deserve a mention. First, food ex. volatile fruits and vegetables regained momentum. Our sense is that local prices still have not fully caught up with global agricultural prices, and the closure of this gap will keep food inflation elevated in the next a few months. Second, the heavy-weight housing services continued marching higher, even as house prices stabilized in the past couple of months. As noted previously, the large gap between sharply higher house prices and (lagging) rents will likely take a long time to close, which should keep shelter inflation elevated during much of 2023. Finally, our understanding is that part of the January surge in energy prices should be partly reversed in February.

Turning to growth, GDP surged 5.8%*q*/*q*, *saar*, double the expected pace in 4Q. Domestic demand grew strongly. Private consumption jumped 10.6%, *ar*, following a lull in 3Q. An outsized increase in auto purchases and strong gains in

food and in services were more than enough to offset weakness in other durables and discretionary goods last quarter. Growth in fixed capital investment slowed to 4.8%, *ar*, on slower business spending, while investment in residential buildings remained very strong (14.9%), a good omen for house price stabilization (or even declines) this year. Contribution of inventories was marginally positive. Exports declined 10.4%, *ar*, imports dropped 7.1%.

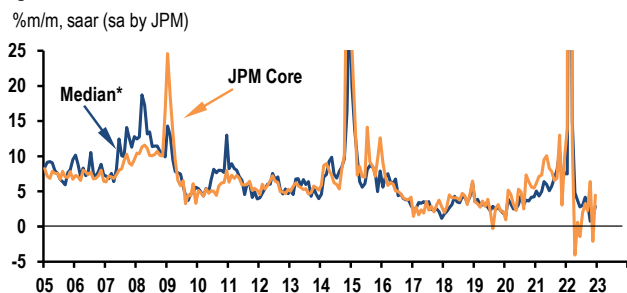
Although strong GDP gain appears somewhat at odds with softer high-frequency activity indicators and rising unemployment into the end of last year, the BoI will likely take notice. A more inertial dynamics in inflation and growth suggest the central bank may need to do more to cool things down. Higher trajectory in DM rates, coupled with domestic political noise and associated currency weakness are additional reasons to tighten. We continue to expect the BoI to hike 25bp next week, slowing the pace and shifting to a fine-tuning mode, but admit that odds of a larger 50bp hike have increased substantially. We lifted our terminal rate forecast to 4.25% from 4.0% previously, to be reached in 2Q, and sense that risks are still skewed to the upside.

Russia: Upside inflation surprise in Jan

Consumer inflation slowed but to a higher-than-expected 11.8%*o*ya from 11.9%. The main source of upside surprise to our expectations was in volatile fruits and vegetables and select services, while core goods remained well-behaved. Our *s.a.* estimates suggest that sequential momentum in headline CPI remained elevated at about 6.4%*m*/*m*, *saar*, last month, while in core CPI (ex. food, energy, regulated prices) increased to 4.5% from -2.1%, with core goods up slightly to 2.2% and core services up sharply to 9.2%.

Start-of-year price increases could have affected dynamics in a few services segments, so we might need to wait for February and March releases to draw conclusions on underlying dynamics. Meanwhile, our measure of median CPI popped up to 2.9%*m*/*m*, *saar*, from 1.3%, pointing to broadening of inflationary pressures at the start of the year. We lifted our end-23 inflation forecast to 5.0% from 4.7% previously, but weaker currency and still tight labor market suggest that near-term risks to our inflation forecast may still be skewed slightly to upside.

Figure 3: Core vs. median inflation - Russia



Source: Rosstat, Haver, J.P. Morgan; Median of 38 CPI components

Source: BOI, National Statistics, J.P. Morgan forecasts

Data releases and forecast

Week of February 20 – 24

Hungary:

Thu	Average gross wages				
Feb 23	%oya				
9:00am		Sep	Oct	Nov	Dec
	Gross wages, nominal	17.8	18.4	16.8	—
	Industry	16.9	18.9	19.7	—
	Public sector	19.5	18.6	10.5	—

Source: NBH, KSH, Eurostat, J.P. Morgan forecasts

Israel:

Mon	BOI rate decision	
Feb 20	%	

25bp hike: 4.0%

Both inflation and growth surprised to upside last week. Combined with political tensions, higher DM rates and weaker ILS this puts additional pressure on BoI to tighten more. We added 25bp in additional hikes to our projected profile and think that at Monday meeting risks are skewed significantly toward a larger hike (50bp).

Wed	State of the economy indicator				
Feb 22	%m/m, sa				
		Oct	Nov	Dec	Jan
	Composite index	0.3	0.1	0.1	<u>0.2</u>

Wed	International trade				
Feb 22	US\$ bn.				
1:00pm		Oct	Nov	Dec	Jan
	Trade balance	-2.8	-1.9	-3.9	—
	Ytd	-34.0	-36.0	-39.8	—
	Ytd a year ago	-28.6	-31.6	-34.6	<u>-3.3</u>
	Exports %oya	0.7	15.8	-9.1	—
	Imports %oya	-3.1	-2.3	3.9	—

Poland:

Mon	Producer prices				
Feb 20	%oya				
10:00am		Oct	Nov	Dec	Jan
	Producer prices	23.1	21.1	20.4	—
	%m/m nsa	0.9	-0.3	0.5	—

Mon	Industrial output				
Feb 20	%oya				
10:00am		Oct	Nov	Dec	Jan
	Industry	6.6	4.4	1.0	—
	%oya, swda by GUS	7.6	4.4	5.6	—
	%m/m, swda by GUS	-0.2	2.7	0.7	—
	Manufacturing	9.2	6.5	3.4	—
	Construction	3.9	4.0	-0.8	—

Mon	Gross wages and employment				
Feb 20	%oya				
10:00am		Oct	Nov	Dec	Jan
	Gross wages, nominal	13.0	13.9	10.3	—
	Real (CPI adj.)	-4.2	-3.2	-5.5	—
	Employment, 000s, nsa	6501	6507	6505	—
	Employment, %oya	2.4	2.2	2.2	—

Tue	Retail sales				
Feb 21	%oya, unless otherwise stated				
10:00am		Oct	Nov	Dec	Jan
	Retail sales (nominal)	18.3	18.4	15.5	—
	Real, CPI-adjusted	0.7	1.6	0.2	—
	%m/m, sa	-3.2	3.7	-2.9	—

Source: NBP, GUS, J.P. Morgan forecasts

Russia:

Wed	Industrial output				
Feb 22	%oya				
7:00pm		Oct	Nov	Dec	Jan
		-2.6	-1.8	-4.3	<u>-1.9</u>

Wed	Industrial producer prices				
Feb 22					
4:00pm		Oct	Nov	Dec	Jan
	%m/m, nsa	-2.5	-0.4	-0.9	<u>-2.5</u>
	%oya	0.8	-1.9	-3.3	<u>-5.8</u>

Source: CBR, Rosstat, J.P. Morgan forecasts

Turkey:

Wed	Capacity utilization				
Feb 22	%				
10:00am		Nov	Dec	Jan	Feb
	Total manufacturing	75.9	76.5	75.3	—
	Durables	72.1	71.7	70.7	—
	Nondurable	74.5	74.5	73.4	—

Thu **CBRT rate decision**

Feb 23	%				
2:00pm		Nov	Dec	Jan	Feb
	CBRT 1-week repo rate	9.00	9.00	9.00	<u>8.00</u>

We now expect the CBRT to cut its policy rate by 100bp to 8% in its February MPC meeting. The political leadership signalled further rate cuts even [before the earthquake](#). We do not rule out more rate cuts ahead of the elections originally scheduled for June 18. Yet, we believe that the policy rate is less relevant now as the monetary policy transmission mechanism is broken in Turkey. Lending and savings rates are in the 20% to 30% range and the removal of the cap on the deposit rates for FX-protected lira deposit accounts is tightening financial conditions further.

Source: CBRT, J.P. Morgan forecasts

Review of past weeks data

Czech Republic:

Balance of payments

CZK bn	Oct	Nov	Dec	
Current account	-34.8	-39.3	—	-7.8
YTD	-333.0	-372.3	—	-380.1
YTD-a year ago	-11.8	-23.8	—	-51.1
Trade balance	-20.3	-18.6	—	1.1
Service balance	8.5	8.0	—	10.3
Primary income	-26.4	-22.7	—	-21.0
Secondary income	3.4	-6.0	—	1.8
Financial account	-26.8	-17.2	—	4.5
FDI, net	-24.4	-3.1	—	-52.1
Portfolio investments	-32.1	11.8	—	-57.2
Other investments	118.9	-3.6	—	43.6

Source: CNB, CZSO, Eurostat, J.P. Morgan forecasts

Hungary:

Real GDP, preliminary

%oya, unless otherwise stated

	2Q2	3Q2	4Q2	
	2	2	2	
Real GDP	6.5	4.0	<u>1.4</u>	0.4
%q/q saar	2.4	-2.8	<u>-2.0</u>	-1.6

Source: NBH, National statistics, J.P. Morgan forecasts

Israel:

Consumer prices

%oya	Nov	Dec	Jan	
%oya	5.3	5.3	<u>5.4</u>	5.4
%m/m nsa	0.1	0.3	<u>0.0</u>	0.3

Real GDP, flash

%oya, unless otherwise stated	2Q2	3Q2	4Q2	
	2	2	2	
Real GDP	5.0 4.9	7.5	<u>2.0</u>	2.9
%q/q saar	6.9 6.2	4.9 2.1	<u>2.8</u>	5.8

Source: BOI, National Statistics, J.P. Morgan forecasts

Poland:

Balance of payments

EUR mn	Oct	Nov	Dec	
CA balance	-597	313	—	-2526
YTD (bn)	-18.1	-17.8	—	-20.3
YTD-a year ago (bn)	-2.9	-4.4	—	-8.3
Trade balance	-228.4	-978	—	-2716
Exports %oya	24.4	25.2	—	11.5
Imports %oya	25.3	20.3	—	12.1
Service balance	3041	3165	—	2721
Primary income	-127.6	-182.5	—	-2438
Secondary income	-78	-49	—	-93
Fin + cap balance	1037	2182	—	-646
FDI, net	-894	-195.1	—	744

Real GDP, preliminary

%oya, unless otherwise stated	2Q22	3Q2	4Q2	
		2	2	
Real GDP, nsa	5.8	3.6	<u>3.4</u>	2.0
%q/q saar	-8.9	4.1	<u>1.0</u>	-9.3

J.P. Morgan Securities plc
 Nicolai Alexandru-Chidesciuc (44 20)
 7742-2466
 nicolaie.alexandru@jpmorgan.com
 Anatoliy A Shal (7-495) 937-7321
 anatoliy.a.shal@jpmorgan.com

Jose Cerveira (44-20) 7742-3556
 jose.a.cerveira@jpmorgan.com
 Fatih Akcelik (44 20) 3493 7285
 fatih.akcelik@jpmorgan.com

Global Economic Research
Global Data Watch
 16 February 2023

J.P.Morgan

Consumer prices

%oya, unless otherwise stated

	Nov	Dec	Jan	
%oya	17.5	16.6	16.8	17.2
%m/m, nsa	0.7	0.1	—	2.4
Food	22.3	21.5	—	20.7
Fuel	15.5	13.5	—	18.7

Source: NBP, GUS, J.P. Morgan forecasts

Capital account	-4.3	-6.3	—	-7.9
Overall balance	-5.1	-3.6	—	-2.4

Source: TUIK, CBRT, J.P. Morgan forecasts

Romania:

Current account balance

EUR bn

	Oct	Nov	Dec	
Current account	-2.6	-1.7	—	-2.2
Ytd	-22.6	-24.4	—	-26.6
Ytd a year ago	-14.3	-15.7	—	-17.5

Consumer prices

%oya

	Nov	Dec	Jan	
%oya	16.8	16.4	15.9	15.1
%m/m nsa	1.2	0.4	1.0	0.3

Real GDP, flash

%oya, unless otherwise stated

	2Q22	3Q22	4Q22	
Real GDP	5.1	3.8	4.9	4.6
%q/q saar	5.1	5.1	2.5	4.5

Industrial output

%oya

	Oct	Nov	Dec	
Industrial output, nsa	0.3	-3.5	—	-10.2
Industrial output, sa	0.6	-3.6	—	-6.3
%m/m sa	-0.5	-1.3	—	-1.6

Source: NBR, Eurostat, J.P. Morgan forecasts

Turkey:

Balance of payments

US\$ bn

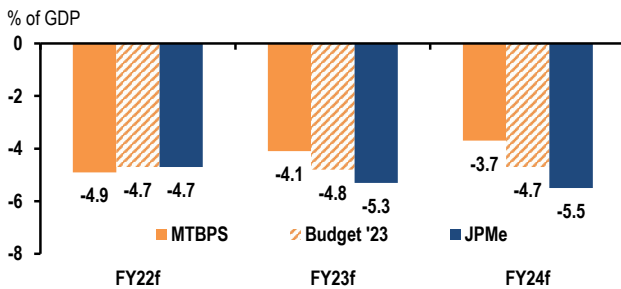
	Oct	Nov	Dec	
Current account	-0.8	-4.0	—	-5.9
Trade balance	-6.5	-7.2	—	-8.1
Exports	21.0	21.7	—	22.9
Imports	27.5	28.9	—	31.0
Net invisibles/transfers	1.6	1.4	—	0.4

South Africa

- Budget to trim fiscal drag and support Eskom
- Fiscal gap seen at 5.3% in FY23/24 (5.5% in FY24/25)
- Inflation eased, but we raise the profile on fuel costs
- We retain our rate call for a hold at 7.25%

We expect the budget to scale back the amount of fiscal consolidation with the fiscal gap remaining near 5% of GDP for the next two years. We also anticipate that authorities will continue to aim for a small primary surplus in FY23/24 and FY24/25, in an effort to steady public finances. We see clear risks of fiscal slippage during the course of the year and expect an eventual fiscal outcome of 5.3% in FY23/24 and 5.5% in FY24/25, even as the Budget is initially likely to aim for a narrower 4.8% and 4.7%, respectively (Figure 1). In contrast, the October medium term budget policy statement had set out fiscal consolidation with the deficit narrowing to 4.1% in FY23/24 and 3.7% in FY24/25. This would have led to a peak in the debt ratio already this year.

Figure 1: Main budget deficit revisions



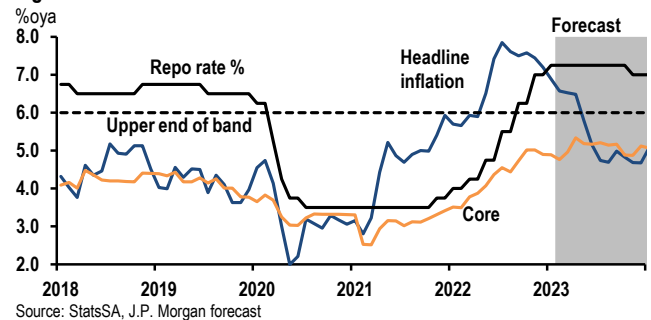
The main reason for the weaker fiscal outlook is spending pressure, including to support electricity utility Eskom. True, the October MTBPS had set likely too ambitious expenditure targets what would have implied a negative fiscal thrust of around 1.5%-pts of GDP this year. This would have been near-impossible to implement, particularly in the run up to elections in 2Q24. The softer growth outlook, in part due to the electricity crisis, further dampens the appetite for a significant fiscal drag on growth and we look for just 0.7%/y/y growth this year. In addition, significant financial support to Eskom can no longer be delayed, and probably will come at a fiscal cost of 0.6%-pts to 0.9%-pts per annum. Therefore we expect policy authorities to project a deficit of just under 5% of GDP, although the eventual outcome probably is closer to 5.5% in our view.

Underlying inflation remains contained

Inflation moderated in January, buttressing our view of a rate hold, but risks remain. In particular, underlying inflation

momentum remains contained, with core inflation flat at 4.9%ooya as expected (Figure 1). Volatile CPI subcomponents continue to dictate headline inflation, with the 6.9%ooya softening in January, from 7.2% in December, explained by higher food prices offsetting easing transportation costs (which reduced on large fuel price cuts and base effects). We expect these forces to remain in play in coming months amid a likely a sharp slowdown in food inflation. Yet, we raise our full-year average inflation forecast from 5.4% to 5.5% on the back of a likely larger fuel price hike in March.

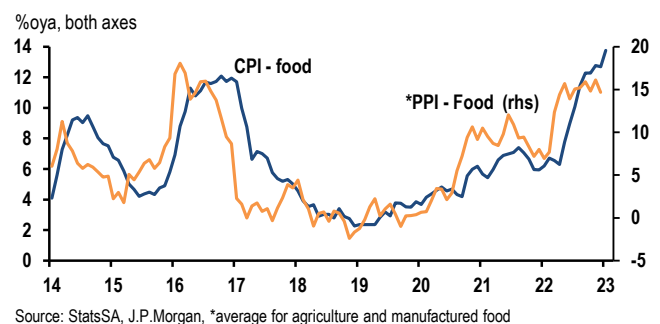
Figure 2: South Africa inflation outlook



One of the details of the report that surprised us was the strong acceleration in food inflation to 13.8%ooya, from 12.7% in December. All food items except oils & fats recorded price increases, with meat inflation rising the most to 11.2%ooya, from 9.7%. Higher meat prices probably reflect the lagged impact of the outbreak of foot-and-mouth disease in late 2022, which weighed on slaughtering.

The slowdown in global food prices probably will start to reflect in domestic prices in coming months. Indeed, PPI for food appears to have begun moderating, dropping to 14.7%ooya in December, from 16.1% in November (Figure 5). Despite the delayed peak, we project food inflation to begin to soften this quarter, likely easing to 11.9% in March. The ongoing power cuts present an upside risk to food inflation on further cost push pressures.

Figure 3: South Africa food PPI and CPI inflation



The recent weakening in the rand (down 4% this year) combined with potential cost-push pressures from persistent electricity cuts adds upside inflation risk. Already, the pressure on the exchange rate is contributing to a likely R1.30/l petrol price increase in March, against our earlier forecast of a smaller increase. This raises our average headline inflation profile to 5.5% (from 5.4%) this year. Crucially, should USD/ZAR rise to above 18 and wage inflation or cost-push pressures increase, a further 25bp rate policy rate hike is possible. We see about a 30% probability of such a scenario, although our base case remains for the policy rate to remain on hold at 7.25%, with a first rate cut in November or 1Q24.

Data releases and forecasts

Week of February 20 - 24

Wed South Africa FY23 Budget presentation

Feb 22

We see clear risks of fiscal slippage during the course of the year and expect an eventual fiscal outcome of 5.3% in FY23/24 and 5.5% in FY24/25, even as the Budget is initially likely to aim for a narrower 4.8% and 4.7%, respectively.

Review of past weeks data

Consumer prices

%oya, except as noted

	Nov	Dec	Jan	
CPI	7.4	7.2	6.8	6.9
%m/m, sa	0.3	0.4	-0.2	-0.1
Core	5.0	4.9	<u>4.9</u>	

Retail sales

%oya

	Oct	Nov	Dec
Real	-0.7	0.8	-0.6
Nominal	6.0	7.7	6.2

Source: Haver Analytics, StatsSA, J.P. Morgan

Australia and New Zealand

- Australian unemployment rate increased to 3.7% in January, two-tenths above the consensus forecast
- RBA minutes should maintain the hawkish tone of the policy statement, indicating further hikes to come
- We forecast Australian wage growth of 1%q/q in next week's 4Q22 release
- We expect the RBNZ to increase the OCR by 50bps in next week's meeting

Australia's labor force survey for January was weaker than forecast. The unemployment rate rose two-tenths to 3.7% (Figure 1) and employment growth declined for the second consecutive month (-11.5K). Labor supply was also marginally weaker than expected, evident in the participation rate falling one-tenth to 66.5% and the employment-to-population ratio declining to 64%.

COVID-related distortions have been particularly large in the January prints (combination of lockdown effects and more workers than usual opting to take leave this time of year) so caution is required when interpreting this result. The ABS flags this dynamic in this week's print, noting that the number of individuals marginally attached to the labor force (i.e. those classified as unemployed or not in the labor force but have some type of attachment to a job) was greater than average. History shows marginal attachment is highly seasonal, peaking in January before moving lower as the year progresses. This pattern alongside other COVID-related seasonal distortions (holiday activity, etc.) increases the possibility that some of January's weakness is unwound in upcoming prints.

Figure 1: Australian unemployment rate



With these caveats in mind, it is still worth noting that a deterioration in labor demand is consistent with the leading labor indicators (job advertisements, business surveys, consumer confidence) which have started to soften in recent quarters. The data may prove volatile in coming quarters, though we retain our view that the combination of higher borrowing costs and slowing real GDP growth will weigh on the labor market through 2023. We expect the jobless rate to drift high-

er in the coming quarters, reaching 4.2% by 4Q23.

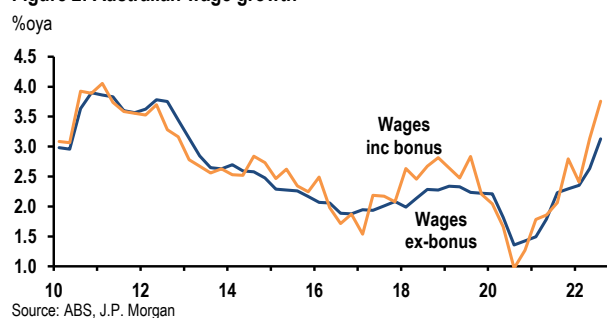
RBA minutes to play it straight

We think the minutes from the RBA's February policy meeting will shed more light on the Bank's decision to tighten policy by a further 25bp. The most recent minutes (December) opened the door to a pause, noting that officials discussed the merits of leaving rates unchanged, hiking 25bp or hiking 50bp. The policy options considered by the Bank will once again be the focus and we expect the minutes will confirm that these same options were on the table. The guidance should be consistent with the Statement, making it clear that policy is not on a pre-set path and, while further rises are expected, future decisions will be determined by the incoming data. Last week's Statement on Monetary Policy delivered a comprehensive overview of the Bank's macro outlook/forecasts, so there is little room for surprise with respect to the broader economy.

Australian wages set for further strength

Australian wage growth has firmed in recent quarters (Figure 2), printing at 1%q/q in 3Q22 on the back of very low unemployment and larger than normal increases to the minimum/award wages. The data flow in late 2022 remained upbeat, with the jobless rate ticking marginally lower in 4Q (quarterly average) and labor supply strengthening. This backdrop coupled with the staggered implementation of the [legislated wage increases in 3Q/4Q](#) means the upcoming print for the December quarter is also likely to be strong. We expect quarterly wage growth to print at 1%q/q, which, if realized, would see the annual rate climb to 3.5%oya. This would mark the strongest growth rate in a decade, but would still, in our view, be consistent with recent labor market outcomes and not an indication of a nascent price-wage spiral.

Figure 2: Australian wage growth



NZ OCR to increase by 50bp

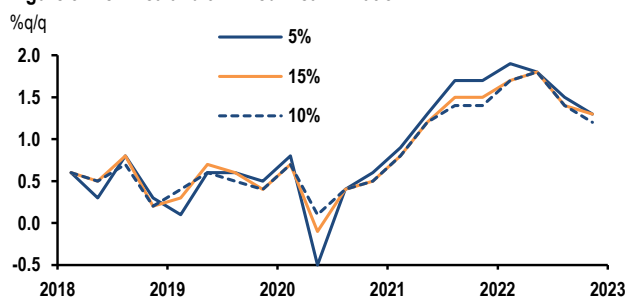
We expect the RBNZ to hike 50bp to 4.75% at next week's meeting. After the labor market and CPI reports, consensus has also changed to assume a 50bp move; markets are pricing the decision as quite balanced between +50 and +75bp. The

November meeting was very hawkish, flagging further hikes into the teeth of a forecast 18 month recession starting in 2Q. RBNZ guidance has mostly acted as a spot signaling and policy device, rather than a forward commitment device, so we don't view the hike into recession path as being locked in.

The message in November seemed at least partly intended to preserve prior tightening over the long break to February, so that mortgage refixings over the summer would crystallize earlier hikes. In recent readings, core inflation (Figure 3) and inflation expectations have come down, housing has weakened further, global inflation is lower and the exchange rate has firmed. Consumption has been slowing consistently since early 2021, but now there are also signs of traction in the data the committee cares about (inflation and the labor market particularly), so the tone can now be more agnostic on how much further work is required.

We expect the guidance that "monetary conditions needed to continue to tighten further" will be tweaked to be more backward-looking, explaining the decision to hike on the day, rather than locking in future moves. Vigilance would be conveyed by maintaining the clause that "the committee remains resolute in achieving the monetary policy remit". The RBNZ was the only central bank to accelerate when others were slowing down, and having started the cycle first, it would be reasonable to also be among the first to take a pause. In striking a more balanced tone and convey conditionality of the reaction function, we suspect the staff's OCR forecasts will maintain some prospect of future hikes. This would signal some ongoing sense of vigilance and willingness to act if inflation isn't moderating further on schedule.

Figure 3: New Zealand trimmed mean inflation



Source: Stats NZ, J.P. Morgan

Australia

Data releases and forecasts

Week of February 20 - 24

Day	Time	Indicator	22Q1	22Q2	22Q3	22Q4
Wed	11:30am	Construction work done %q/q	-0.1	-2.0	2.2	<u>0.8</u>
Wed	11:30am	Wage price index %q/q	0.7	0.8	1.0	1.0
Thu	11:30am	Private capital expenditure %q/q	0.4	0.0	-0.6	1.0

Review of prior week's data

Indicator	Nov	Dec	Jan
Unemployment rate (%)	3.4	3.5	3.6
Employment (ch. 000s)	43.7	-14.6	-11.5
Participation rate (%)	66.8	66.6	66.5

New Zealand

Data releases and forecasts

Week of February 20 - 24

Day	Time	Indicator	Sep	Oct	Nov	Feb
Wed	12:00pm	RBNZ official cash rate decision %m/m	3.0	3.5	4.25	4.75

Review of prior week's data

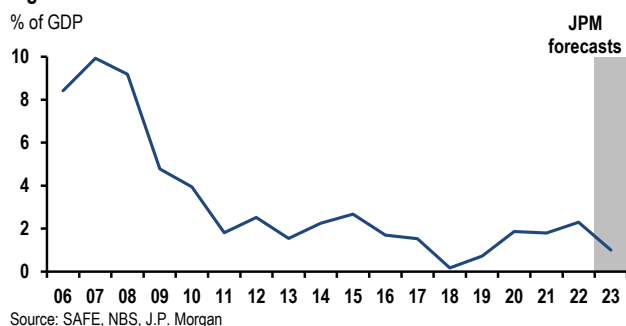
Source: ABS, Stats NZ, J.P. Morgan forecast

Greater China

- **China: 2022 current account surplus at 2.3% of GDP**
- **Early mortgage repayment drags on demand recovery**
- **Hong Kong SAR: unemployment rate eased to 3.4%**
- **Next week: Hong Kong CPI, Taiwan export orders, unemployment rate, IP, GDP final**

China's current account surplus widened to US\$417.5bn in 2022 (2.3% of GDP, Figure 1) vs. US\$317.3bn in 2021 (1.8% of GDP). The widening CA surplus largely reflects external trade performance, as the goods sector surplus expanded to \$685.6bn in 2022 (vs. \$562.7bn in 2021). Total goods exports under the current account grew moderately, by 4.6%yoy (slowing from 28.1%yoy in 2021), while goods imports grew modestly, by 1.0%yoy in 2022 (vs. 32.7%yoy in 2021). China's service account deficit came in relatively steady, at US\$94.3bn in 2022. In particular, as restrictions on international travel remained largely in place through the year, the tourism service deficit came in at \$107.6bn in 2022 (significantly lower than the pre-pandemic level of \$218.8bn in 2019). The primary income component of the current account appears to have shown a widening in the deficit since the pandemic, registering a deficit of \$194.2bn in 2022 (vs. \$162.0bn in 2021 and \$39.1bn in 2019).

Figure 1: China's current account balance

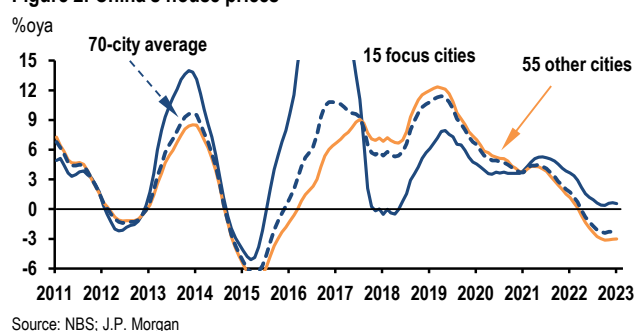


Amid the near-term cyclical dynamics in the global economy, the medium-term regional supply chain adjustments, rising geopolitical tensions and a push for supply chain and technology decoupling with China by the U.S. Administration, we expect China's share of world exports to fall below 14% in 2023 and a mid-single-digit decline in China's merchandise exports for 2023. Regarding the tourism sector, we expect cross-border travel to pick up significantly through the year. A complete recovery of cross-border travel would imply a widening of the monthly current account service trade deficit by about \$10bn-12bn. Overall, we expect net exports' contribution to China's overall GDP growth to turn negative (-0.5%-pt) in 2023 and China's current account surplus to narrow to 1.0% of GDP in 2023.

New home price flat on the month

The NBS 70-city new home price fell another 2.3%ooya in January (Figure 2), but stayed flat in m/m terms after falling in sequential contractionary territory for 11 consecutive months. Compared to the previous month, new home prices declined in 33 cities in January, increased in 36 cities and stayed unchanged in the remaining city. Fewer cities are eligible to further lower their first-home mortgage rates, at 21 out of 70 cities, compared to 35 in December. The sequential stabilization in the NBS 70-city new home price was driven more by LNY seasonality, though policy support since November may have also provided some relief.

Figure 2: China's house prices



Source: NBS; J.P. Morgan

Early mortgage repayment tends to weigh on banks' profitability and drag down near-term post-reopening demand recovery. Our banking analysts estimate 2022 early repayments at about 454bn yuan, around 1.2% of mortgage loans as of 3Q22. With the accumulation of excess savings in the past three years and volatilities in the financial market, they estimate that mortgage prepayments may reach as high as 12% of outstanding mortgage loans. The impact on banks' 2023 NIM and earnings would be -0.9bp and -0.8%, respectively, with the actual impact biased higher, as non-mortgage loans usually have higher credit costs than mortgages. The unwinding of excess savings to prepay mortgage loans, instead of supporting new home purchase or consumption demand, points to a modest drag on a post-reopening domestic demand recovery.

Hong Kong: Unemployment rate eased

Hong Kong's unemployment rate eased by 0.1%-pt, to 3.4% sa (Figure 3), for the three months ending January (J.P. Morgan and consensus: 3.4%), and the underemployment rate also decreased by 0.1%-pt, to 1.4%. Total employment decreased by ~3,100, from 3,665,300 to 3,662,200, and the labour force also decreased by ~10,700, from 3,791,300 to 3,780,600. The unemployment rate decreased across almost all the major economic sectors, with more distinct decreases observed in the construction sector and retail sector. The combined unemployment rate of the consumption- and tourism-

related sectors fell by 0.2%-pt from the preceding three-month period, to 4.5% in Nov 2022-Jan 2023. The unemployment rates of most other sectors also declined, particularly for the construction sector.

Figure 3: Hong Kong unemployment rate



Labor market conditions in the coming months may improve further. The city's unemployment rate has reached the lowest level since the onset of the pandemic, and the pre-pandemic annual average unemployment rate was around 3%. As economic activities gradually return to normal, along with all the pandemic-related travel restrictions between HK and the Mainland officially removed on 6 February, labour market conditions in the coming months should improve further, especially for the employment recovery in retail sales, transport and tourism-related sectors.

China:

Data releases and forecasts

Week of February 20 - 24

No data releases.

Review of past week's data

Current account surplus (12 Feb)

% GDP	2020	2021	2022
Current account surplus	1.9	1.8	<u>2.3</u>

70-city new home price (16 Feb)

% change	Nov	Dec	Jan
%oya	-2.3	-2.3	<u>-2.3</u>

Hong Kong:

Data releases and forecasts

Week of February 20 - 24

Thu	Consumer prices				
Feb 23	% change				
4:30pm		Oct	Nov	Dec	Jan
	%oya	1.8	1.8	2.0	<u>1.8</u>
	%m/m sa	-0.7	0.2	0.2	<u>0.3</u>

Review of past week's data

Labor market survey (16 Feb)

SA, 3mma	Nov	Dec	Jan
Unemployment rate	3.7	3.5	<u>3.4</u>

Taiwan:

Data releases and forecasts

Week of February 20 - 24

Mon	Export orders				
Feb 20	% change				
4:00pm		Oct	Nov	Dec	Jan
	%oya	-6.3	-23.4	-23.2	<u>-26.6</u>
	%m/m, sa	-4.9	-14.9	4.0	<u>-3.5</u>

Wed Real GDP (final)

Feb 22	% change	22Q1	22Q2	22Q3	22Q4
4:00pm					
	%oya	3.9	3.0	4.0	<u>-0.9</u>
	%q/q saar	3.1	-9.2	7.5	<u>-4.2</u>

Wed Labor market survey

Feb 22	%	Oct	Nov	Dec	Jan
4:00pm					
	Unemployment rate, sa	3.64	3.64	3.61	<u>3.61</u>
	Unemployment rate, nsa	3.64	3.61	3.64	<u>3.65</u>

Thu Industrial production

Feb 23	% change	Oct	Nov	Dec	Jan
4:00pm					
	%oya	-4.3	-5.6	-7.9	<u>-13.8</u>
	%m/m sa	-0.5	-0.7	-2.4	<u>-4.6</u>

Review of past week's data

No data released.

Source: NBS, China Customs, Hong Kong Census and Statistics Department, Taiwan Ministry of Economic Affairs, DGBAS, MoF, J.P. Morgan forecasts

The long-form nomenclature for references to China; Hong Kong; and Taiwan within this research material is Mainland China; Hong Kong SAR (China); and Taiwan (China).

Korea

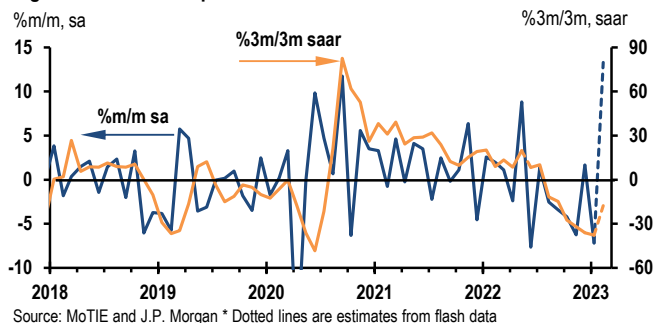
- February 10-day exports turned up strongly after months of weakness
- Employment’s gradual fall continued in January

The high-frequency customs trade data suggested an early hint of the long-awaited rebound of exports along with China’s post-reopening recovery, as Korean exports to China surged in the first 10 days of February. We already incorporate a smart turn up in exports and IP from February in our 1Q23 real GDP projection, so the high-frequency data do not suggest upside risk to our outlook yet. While we expect the manufacturing sector to bottom after 2H22’s weakness, the labor market data suggest a gradual cooling in line with our call for rising headwinds to domestic consumption growth through 2023, a slowdown required to stabilize inflation. As a result, we think the Bank of Korea will not see material changes in its growth and inflation outlook since the January meeting, which should make it to stick to its previous guidance to stand pat at 3.5% for now.

Early hint of post-LNY export rebound

Korea’s real exports have underperformed the growth rate implied by trading partners’ growth conditions recently. But we finally see a silver lining from the first-10-day customs exports data in February. The (nominal) customs exports rose 11.9%oya in the first 10 days of February, and we estimate that full-month exports should fall 5.9%oya if trading days are adjusted. The seasonally adjusted 10-day exports flow rebounded 13.3%/m, sa, in February after falling for six months, suggesting that the three-month trend contraction should narrow in February (Figure 1).

Figure 1: Customs exports



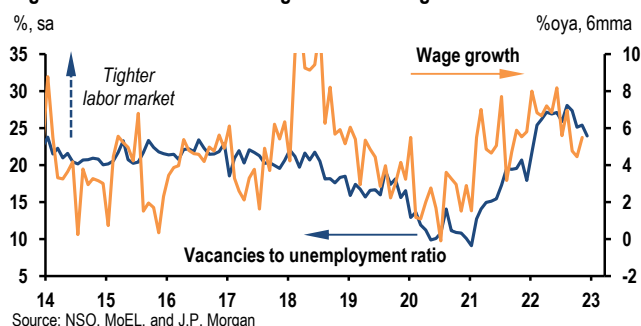
In the destination details, 10-day exports turned up strongly toward China (+27.7%/m, sa), while flows to other major markets also posted strong gains. Given the high volatility in the noisy 10-day data, the February 10-day exports recovery may be due to a technical rebound after Lunar New Year (LNY) holidays, so the final full-month growth may be less

than the 10-day data’s estimate. That said, it is still encouraging to see a rebound, notably in the exports flows to China, likely hinting at a positive spillover to Korea’s exports from China’s post-reopening recovery.

A gradual correction in employment

Korea’s employment continued a gradual correction, falling 0.1%/m, sa, in January for the third monthly fall, and its sequential growth weakened further, to -0.7%3m/3m, saar. Labor force also decreased 0.2%/m, so the jobless rate inched down by 0.2%pt, to 2.9%, sa, in January. The correction to employment and labor force participation is within our expectations, as we have argued that they should gradually fall back to their long-term trends throughout this year as labor utilization normalizes after overshooting on the strong reopening-led demand in 2021/22. The job vacancies to unemployment ratio has also declined in recent months, suggesting that labor demand relative to supply has cooled somewhat (Figure 2). With the easing in labor market tightness, wage inflation has moderated from its mid-2022 peak, suggesting its reduced pressures on final core prices.

Figure 2: Korea labor market tightness and wage inflation



In the details, employment in hospitality rose 0.2%/m in January, more modest than gains of 2.2% in October and 1.4% in November. The consumer-facing services sector had led a job recovery until 3Q22 after April’s full reopening, but its activity has decelerated sharply in recent months as the reopening matures, which should be reflected in employment numbers going forward. Employment fell in transportation and warehousing by 2.0% for the seventh monthly drop as e-commerce and delivery demand has lost some steam after the reopening of the economy. The gig-economy’s temporary job gains were concentrated in this sector during the pandemic, so job losses in this sector likely reflect the normalization in labor utilization. Manufacturing employment fell 1.5% for the fifth consecutive month, contracting by 7.4%3m/3m, saar, in sequential terms, reflecting the sector’s contraction in 2H22.

Data releases and forecasts

Week of February 20 - 24

Tue	Consumer survey				
Feb 21	100=neutral reading, nsa				
6:00am		Nov	Dec	Jan	Feb
	Index	86.7	90.2	90.7	91.0
Tue	Household credit				
Feb 21	% change				
12:00pm		1Q22	2Q22	3Q22	4Q22
	%oya	5.4	3.2	1.4	0.4
Wed	FKI business survey				
Feb 22	Index, sa				
		Nov	Dec	Jan	Feb
	One-month outlook	85.3	89.8	85.7	87.0
	Current conditions	85.1	85.7	85.0	86.0
Thu	Producer prices				
Feb 23	% change				
6:00am		Oct	Nov	Dec	Jan
	%oya	7.3	6.2	6.0	4.8
Thu	Stage of processing price index				
Feb 23	% change				
6:00am		Oct	Nov	Dec	Jan
	%oya	11.4	8.1	6.4	5.5

Review of past week's data

Monetary aggregates (Feb 14)

%oya, monthly average

	Oct	Nov	Dec	
M2	5.9	5.4	5.0	4.5
Lf	5.6	5.0	4.6	4.4

Unemployment rate (Feb 15)

% of labor force

	Nov	Dec	Jan	
Seasonally adjusted	2.9	2.8	3.3	3.1 3.2 2.9
Not seasonally adjusted	2.3	3.0	3.4	3.6

Import and export prices (Feb 15)

%oya, in local currency terms

	Nov	Dec	Jan	
Export prices	8.3	3.0	-0.7	-1.3
Import prices	14.0	8.7	2.6	1.7

Source: BoK, FKI, NSO, and J.P. Morgan forecasts

ASEAN

- **Indonesia’s 4Q22 GDP firms but with soft details**
- **High frequency data remain mixed, expecting softer data as the year progresses**
- **Banking liquidity rises in December, likely due to public sector payment flows**
- **Expecting front-loaded fiscal issuance amid elevated global uncertainty**

Although Indonesia’s 4Q22 headline growth came in stronger than expected, the details of the GDP report were soft, especially private consumption and investment. While some of the slowing likely owes to the energy price adjustment in September, some of the weakness – construction in particular – has been persistent over the course of last year. Moreover, the rise in net exports owed more to import compression than export strength.

Despite the uncertain macro environment, domestic banking liquidity improved late last year, led by state banks. This rise in liquidity likely owes to the payment of accounts payable to publicly-linked companies. The net impact has been to increase local currency bond purchases by banks, complementing rising foreign participation in local bond markets.

For this year, we expect that the tailwinds that had been supportive of growth will turn and this informs our forecast of slower growth and a [shift to a current account deficit](#). Subsequently, given this view together with the desire to maintain FX stability, we have not penciled in any rate cuts in 2H23 despite the expected return of headline CPI to the 2-4%oya target range in late 2Q23. We also expect fiscal policy to remain conservative, likely with some front-loading of fiscal financing to prepare the space for counter-cyclical fiscal policy amid elevated macro uncertainty in 2H23. This should be evident in the large stock of fiscal deposits kept with the central bank.

Unexpected weakness in 4Q22 report

The 4Q22 report suggests that private consumption rose by a modest 2.0%/q, saar following a 4.5% sequential contraction in 3Q22, which owed in part to the energy price adjustment in September (Figure 1). The weakness in private consumption continued through 4Q22. Beyond private consumption, fixed investment expanded 2.3%/q, saar and marked an ongoing slowing over the course of the year.

In the details, construction was the main source of weakness, with 4Q22 construction outlays contracting 0.7%/q, saar. The weakness in construction is at odds with the pre-pandemic period, when it had been a steady source of growth. Subsequently, amid soft capex and PCE, net exports drove growth, due largely to softer imports, which contracted 27.8%/q, saar.

The incoming data similarly depict a mixed message of domestic demand, with both truck/bus sales and capital goods imports slowing in January (Figure 2). This slowing we expect to continue through 2023 as the terms of trade tailwind ebbs.

Figure 1: Indonesia real GDP

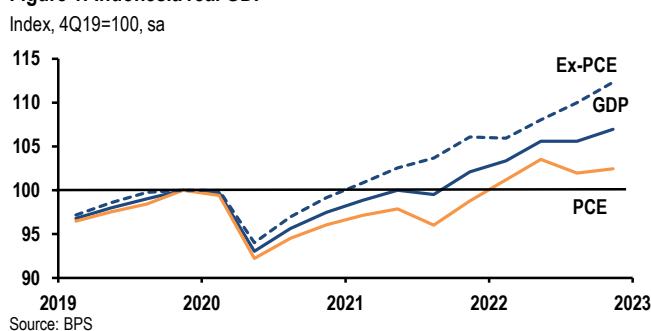
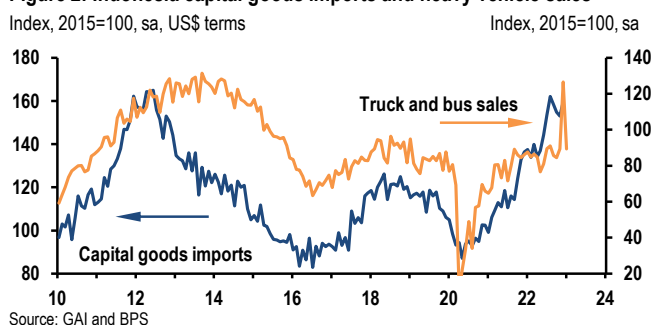


Figure 2: Indonesia capital goods imports and heavy vehicle sales



Liquidity rise supports fiscal issuance

Perhaps reflecting the uncertainty around final demand, domestic banking system liquidity remains ample. This had in 2020 and 2021 been led by the decline in bank loans but more recently in 4Q22 been due to a rise in bank deposits and slower rise in bank loans by IDR385 trillion (1.8% of GDP) and IDR141 trillion (0.7% of GDP) respectively. The net impact has been to increase overall excess liquidity by IDR244 trillion (1.2% of GDP, figure 3).

This feeds into marginal demand for local currency bonds and is likely to be one of the factors that has led to solid demand in late 4Q22 and early 2023 (Figure 4). Indeed, bank bond purchases rose by close to IDR200 trillion (1% of GDP) from September to January against a fiscal deficit forecast of 2.9% of GDP this year and net issuance of 3.4% of GDP.

Figure 3: Indonesia banking sector local currency loans and deposits

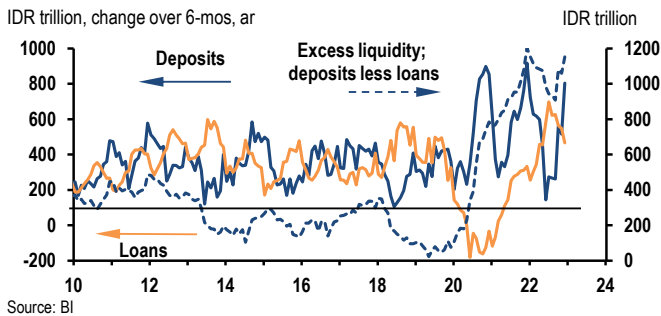
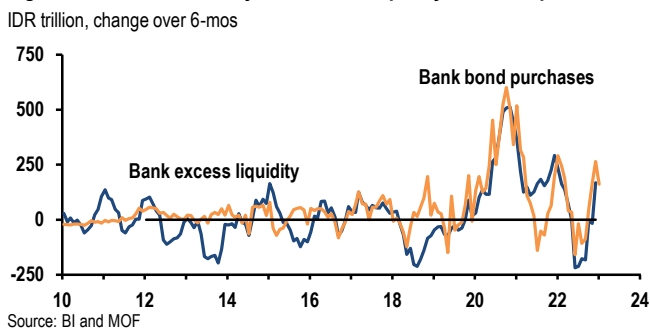


Figure 4: Indonesia bank system excess liquidity and bond purchases



State banks drove deposit rise

The bulk of the rise in excess liquidity since September last year owed to State and regional banks even as private bank liquidity remained broadly stable (Figure 5). In our view, this asymmetry owes in part to the payments of accounts payable to state owned enterprises that had accrued over the course of last year. This explains the IDR318 trillion (1.5% of GDP, US\$20 billion) drawdown in government deposits held with Bank Indonesia and repayment of around US\$2 billion in FX loans by the non-bank State corporations during 4Q22 (Figures 6 and 7).

Figure 5: Indonesia banking sector local currency liquidity

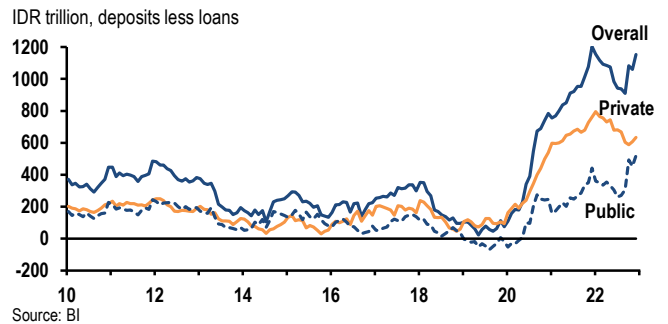


Figure 6: Indonesia government balances at BI

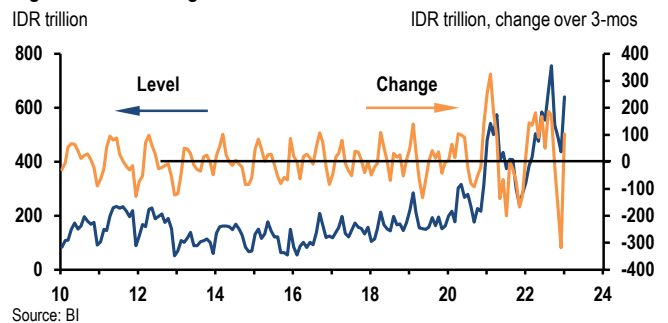
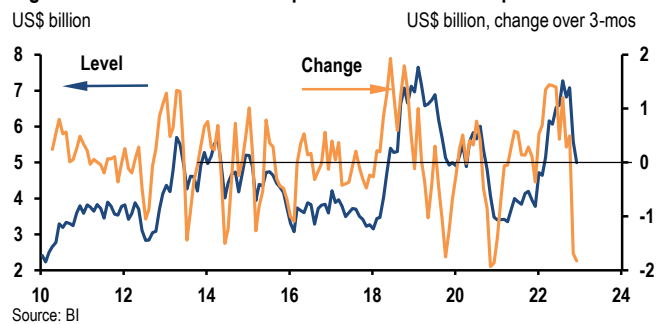


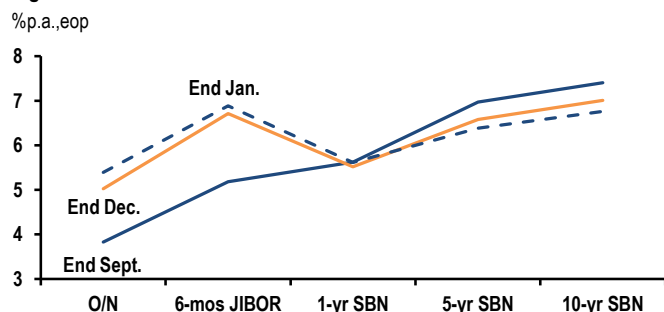
Figure 7: Indonesia FX loans to public non-financial corporates



Fiscal conservatism and its spillovers

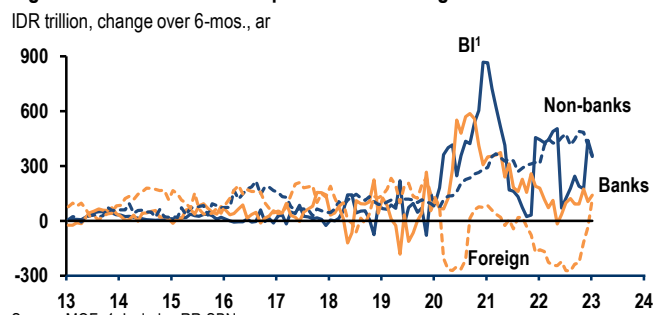
The rise in near-term liquidity also provides a conducive environment for fiscal financing. We thus anticipate that the uncertain macro conditions raise the need to make hay while the sun still shines and should be evident in front-loaded fiscal issuance. Moreover, the recent easing in external conditions is providing a conducive environment for fiscal financing, evident in the rise in foreign participation in local bonds and the flattening of the term structure (Figures 8 and 9).

Figure 8: Indonesia term structure



Source: IBPA

Figure 9: Indonesia ownership of tradeable IDR govt bonds



Source: MOF; 1. Includes RR SBN

ASEAN

Indonesia

Data releases and forecasts

Week of February 20 - 25

Mon 20-Feb	Balance of payments US\$ bn	1Q22	2Q22	3Q22	4Q22
	Current account	0.6	4.0	4.4	<u>4.2</u>
	Capital account	-2.0	-1.2	-6.1	<u>-4.5</u>
	Overall balance	-1.8	2.4	-1.3	<u>-0.3</u>

Review of past week's data

Merchandise trade (Feb 15)

	Nov	Dec	Jan	
Trade balance	5.1	4.0	3.4	3.9
Exports, %oya	5.5	6.6	17.7	16.4
Imports, %oya	-1.9	-7.0	5.2	1.3

Indonesia recorded a US\$3.9 billion trade surplus in January down from US\$4.0 billion in December. In seasonally adjusted terms, the trade surplus widened to US\$5.3 billion from US\$5.1 billion in December.

BI monetary policy meeting (Feb 16)

% pa	Dec	Jan	Feb
BI rate	5.5	5.75	5.75

Bank Indonesia kept its policy rate unchanged at 5.75% as expected. We would further suggest that the [BI rate will remain at 5.75% through this year](#), notwithstanding a global recession.

Malaysia

Data releases and forecasts

Week of February 20 - 25

Mon 20-Feb 12:00pm	Merchandise trade US\$ bn, nsa	Oct	Nov	Dec	Jan
	Trade balance	3.8	4.7	6.3	<u>4.2</u>
	Exports	28.0	28.1	29.9	<u>27.6</u>
	%oya	1.9	4.2	1.2	<u>4.0</u>
	Imports	24.2	23.4	23.6	<u>23.4</u>
	%oya	14.5	4.6	7.0	<u>6.0</u>

Fri 24-Feb 12:00pm	Consumer prices % change	Oct	Nov	Dec	Jan
	Total, %oya	4.0	4.0	3.8	<u>3.6</u>
	%m/m, sa	0.2	0.3	0.2	<u>0.2</u>

Review of past week's data

No data released.

Philippines

Data releases and forecasts

Week of February 20 - 25

No data releases.

Review of past week's data

BSP monetary policy meeting (Feb 16)

% pa	Nov	Dec	Feb
Reverse repo rate	5.5	5.5	6.0

The BSP raised the benchmark policy rate by 50bps to 6.0%. Following the [surprisingly strong January CPI](#) print last week, we revised our policy rate call for today's meeting and expected a bigger policy rate move of 50bp from 25bp previously. As expected, this was a catalyst in today's policy action alongside last quarter's domestic demand resilience as noted in the statement. We now pencil in a further 25bp hike next month, bringing the terminal rate to 6.25%.

Singapore

Data releases and forecasts

Week of February 20 - 25

Fri 23-Feb 1:00pm	Consumer prices % change	Oct	Nov	Dec	Jan
	Total, %oya	6.7	6.7	6.5	<u>7.2</u>
	%m/m, sa	0.1	0.5	0.2	<u>1.0</u>

Fri 24-Feb 1.00pm	Industrial production % change	Oct	Nov	Dec	Jan
	%oya	-1.1	-3.8	-3.1	<u>5.1</u>
	%m/m, sa	0.8	-1.6	3.2	<u>1.9</u>

Review of past week's data

Merchandise trade (Feb 17)

US\$ bn, nsa	Nov	Dec	Jan	
Trade balance	2.5	3.8	3.1	3.9
Exports	39.0	40.7	38.3	37.4
Non-oil domestic (NODX)	10.3	10.5	10.0	10.0
...%m/m, sa, US\$ terms	-6.8	-0.8	-0.1	3.7
...%oya, US\$ terms	-16.5	-19.9	-23.6	-23.6

Singapore's January NODX rose 3.7%/m/m, sa but came in weaker than expected, contracting 23.6%oya in USD terms. Although the headline over-year-ago reading came in below expectations, the level of exports firmed and marked the first sequential expansion since June last year. Despite the ostensible slowing in goods trade, our view remains that the MAS's reaction function is focused squarely on price stability rather than growth and, thus, the latest data does not change [our view of an MAS on hold](#).

Thailand

Data releases and forecasts

Week of February 20 - 25

No data released.

Review of past week's data

Real GDP (Feb 17)

% change	2Q22	3Q22	4Q22	
%oya	2.5	4.5	2.7	1.4
%q/q, saar	2.8	5.0	-1.5	-5.9

Vietnam

Data releases and forecasts

Week of February 20 - 25

No data releases.

Review of past week's data

No data released.

Source: Central Bureau of Statistics, Indonesia; Department of Statistics, Malaysia Coordination Board and National Statistics Office, Philippines, Singapore Statistics Department, Office for Industrial Economics, Thailand; Bank of Thailand; General Statistics Office of Vietnam; J.P. Morgan forecasts

India

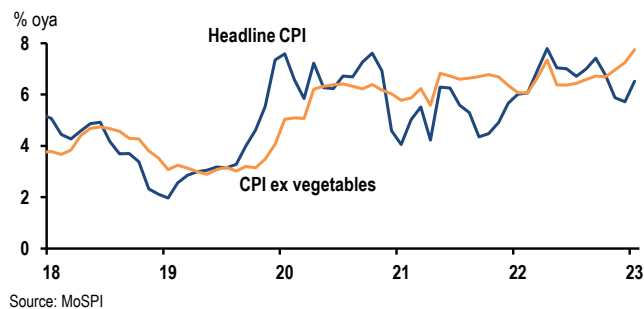
- **January CPI prints far above expectations**
- **Core inflation remains elevated and sticky**
- **January CPI raises likelihood of 25 bps hike in April**
- **Trade deficit narrows to a year low in January**

January headline CPI inflation printed far above expectations this week. The rise was broad-based, led by both food and core inflation. Inflation forecasts for 1Q are tracking much above RBI's expectations, and the rise in core inflation will be a concern for the RBI. This week's inflation report raises the likelihood of another 25 bps hike at the April review. Meanwhile, the trade deficit narrowed to a year low in January. Even adjusting for gold imports, which fell sharply in January, the trade deficit has narrowed significantly in recent months, reflecting both weak growth impulses and falling commodity prices.

CPI surprises to upside sharply

The January CPI surprised adversely on all dimensions, with headline, core and food inflation (both vegetables and others) surprising to the upside. Headline CPI accelerated from 5.7% oya in December to 6.5% in January, above our expectations and much above consensus (J.P. Morgan: 6.2%; Consensus: 6.0%). At last week's MPC meeting, the central bank had clearly not bargained for this, having marked down the current quarter's CPI to 5.7% from 5.9% oya. Instead, after this week's surprise, current quarter CPI is tracking 6.2% oya, with next month's CPI also expected to remain above 6%.

Figure 1: CPI inflation



The main concern for the RBI will be the relentlessness of core inflation. For a fifth consecutive month, the monthly momentum of core-core inflation (our preferred measure of core) rose by 0.5% m/m, sa (an annualized rate of 6%). As a consequence, the year-on-year measure rose back again to 6.5% oya in January from 6.3% in December. The monthly momentum of "standard core" – which includes gasoline and diesel – had been declining from 0.6% to 0.3% m/m, sa in recent months, but also re-accelerated to 0.5% m/m, sa. As a

consequence, the year-on-year measure rose to a nine-month high of 6.2% m/m, sa. In other words, any way one dissects core inflation, it was unedifying. We have long been concerned about the stickiness of core inflation over the last three years across the business cycle and wondered whether India's Phillips Curve is moving up (see [here](#) and [here](#)); prints like these, even as input cost pressures have abated, simply accentuate those concerns.

Figure 2: Core-Core inflation

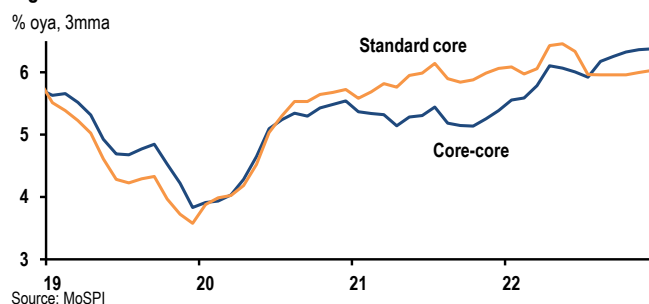
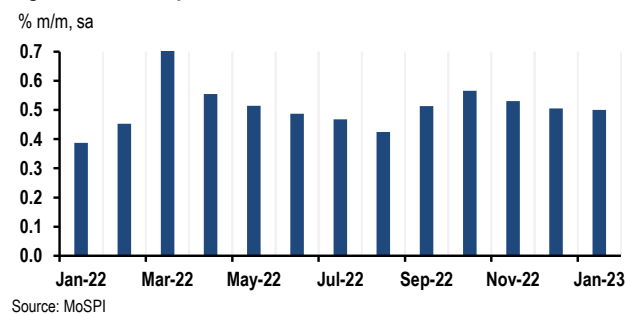


Figure 3: Core-core prices



To be sure, food prices also surprised to the upside in January, and the fact that vegetable prices declined much less than the high-frequency data had suggested was one of the reasons for the upside surprise. But the January print is not just about volatile vegetable prices. Headline CPI ex vegetables – which is much less volatile – rose to 7.7%, the highest since May 2014. To be sure, the January food increase was underpinned by wheat, meat and egg prices, and wheat prices have since stabilized in February as the government has released wheat stocks in anticipation of the new crop. But given the sharp volatility of food prices, much more evidence will be needed that food prices are under control.

April hike comes in play

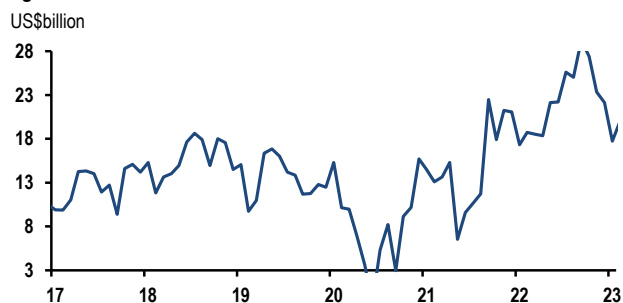
With the RBI having raised rates by 300 bps over the last year and the Governor indicating at last week's review that the latest 25 bps hike gave it "elbow room to weigh all incoming data and forecasts to determine appropriate actions and policy stance, going forward," we had expected it was the last hike in the cycle. However, our expectation was under the

presumption that “core inflation momentum begins to slowly roll-off, the Rupee is not under pressure and there is no fresh inflationary shock” (see [here](#)). However, with core inflation remaining elevated and headline inflation above the RBI’s forecast, the likelihood of another 25 bps hike at the April review has increased, in our view. Much water needs to flow under the bridge between now and April, including a GDP print and February CPI print, so we are not making any changes for now.

Trade deficit falls to year low

The trade deficit fell to a year low of \$17.7bn in January from \$22bn in December. Part of the fall was led by gold imports, which plunged to \$700mn in January vs. the last six months’ average of \$2.7bn. However, even adjusting for the large swing in gold imports, the trade deficit has fallen sharply in the last few months, led by both a weakening in growth impulses and falling commodity prices.

Figure 4: Trade deficit



Source: Ministry of Commerce

Exports ex. oil fell 0.4% m/m, sa in January, which translated into an 8.7% contraction on a % oya basis. Imports ex. oil and gold rose by 1.6% m/m, sa in January, but this was on the back of a 2.3% contraction in December. On a % oya basis, imports ex. oil and gold contracted 6.7% in January.

Data releases and forecasts

Week of February 20 – 24

No data releases

Review of past week’s data

CPI (Feb 13)

% oya

	Oct	Nov	Dec	Jan
CPI	6.8	5.9	5.7	6.5
Core-Core	6.5	6.3	6.3	6.5

Trade balance (Feb 15)

USD bn

	Oct	Nov	Dec	Jan
Trade balance	-27.4	-23.3	-22.1	-17.7

Source: Central Statistical Organization, RBI, Ministry of Commerce, IHS-Markit, and J.P. Morgan forecast

Asia focus: China's reopening spillovers through TiVA

China is delivering a strong economic recovery on its reopening, which should bring positive spillovers to the rest of Asia. One simple way to measure the spillovers is to see the size of their trade with China. But the flows largely consist of intermediate goods linked to final DM demand, so it is misleading this time when China's growth rebound is driven by domestic demand. Our China team expects household consumption to grow by 14%, fixed investment by 6%, and goods exports to decline by a mid-single digit (Figure 1).

Thus, we estimate how much of Asia ex-China's production is induced by China's final demand, using the OECD's Trade in Value-Added (TiVA) database (2018 is the latest available). The estimates suggest that 3% of China's consumption is fulfilled by Asia ex-China's value added. The share is smaller than 5% in investment and 7% in gross exports (Figure 2), implying that the spillover effects should be smaller if China's growth is tilted toward domestic consumption.

The distribution of benefits will also depend on which sectors in China experience the strongest growth. We estimate the impact of a 10% consumption-led increase on China's GDP on Asian economies based on their value added share, and Vietnam should receive the largest gain relative to its own GDP, followed by Singapore and Thailand (Figure 3). That order is broadly consistent with the scale of their exports of final products to China relative to regional peers (Figure 4), while Taiwan is an exception as it mostly exports capital goods used by businesses. If the same 10% increase is led by investment, then Taiwan and Korea should be the largest beneficiaries, as expected from their specialism in capital goods (Figure 5).

Figure 1: China's GDP growth by component

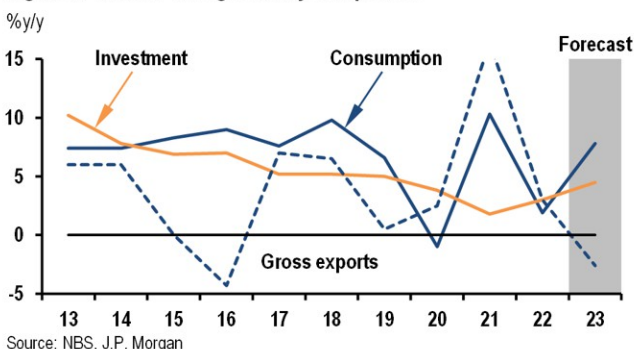


Figure 2: Asia's value added share in expenditures in China

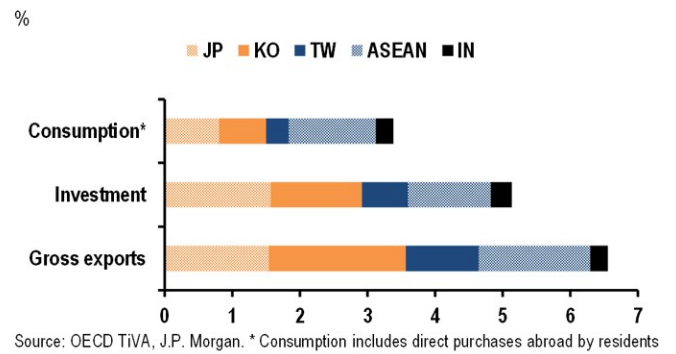


Figure 3: Impact of 10% consumption-led increase in China's GDP

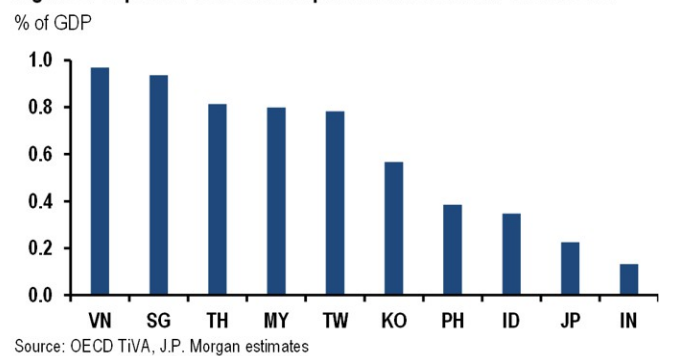


Figure 4: Asia's exports of final goods and services to China

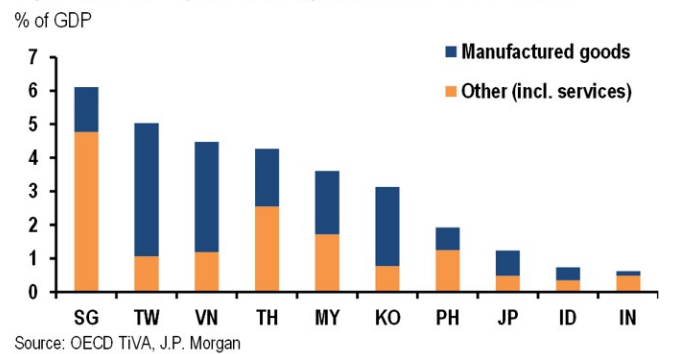
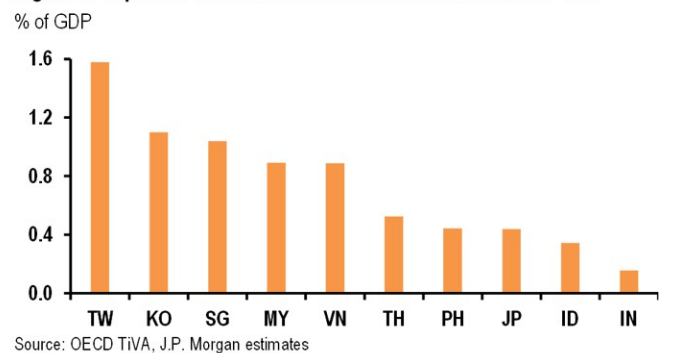


Figure 5: Impact of 10% investment-led increase in China's GDP



US economic calendar

Monday	Tuesday	Wednesday	Thursday	Friday
<p>20 Feb Presidents' Day, markets closed</p>	<p>21 Feb Philadelphia Fed nonmanufacturing (8:30am) Feb Manufacturing PMI (9:45am) Feb flash <u>48.5</u> Services PMI (9:45am) Feb flash <u>48.5</u> Existing home sales (10:00am) Jan <u>4.05mn</u> Auction 2-year note \$42bn</p>	<p>22 Feb Auction 2-year FRN (r) \$22bn Auction 5-year note \$43bn FOMC minutes</p>	<p>23 Feb Initial claims (8:30am) w/e Feb 18 <u>200,000</u> Real GDP (8:30am) 4Q second <u>2.8%</u> KC Fed survey (11:00am) Feb Auction 7-year note \$35bn Atlanta Fed President Bostic speaks (10:50am) San Francisco Fed President Daly speaks (2:00pm)</p>	<p>24 Feb Personal income (8:30am) Jan <u>1.2%</u> Real consumption <u>0.8%</u> Core PCE deflator <u>0.49%</u> (<u>4.6%oya</u>) Consumer sentiment (10:00am) Feb final <u>66.5</u> New home sales (10:00am) Jan <u>630,000</u> Fed Governor Jefferson speaks (10:15am) Fed Governor Waller speaks (1:30pm) Boston Fed President Collins speaks (1:30pm)</p>
<p>27 Feb Durable goods (8:30am) Jan Pending home sales (10:00am) Jan Dallas Fed manufacturing (10:30am) Feb</p>	<p>28 Feb Advance economic indicators (8:30am) Jan FHFA HPI (9:00am) Dec, 4Q S&P/Case-Shiller HPI (9:00am) Dec, 4Q Chicago PMI (9:45am) Feb Richmond Fed survey (10:00am) Feb Consumer confidence (10:00am) Feb Dallas Fed services (10:30am) Feb</p>	<p>1 Mar Manufacturing PMI (9:45am) Feb final Construction spending (10:00am) Jan ISM manufacturing (10:00am) Feb Light vehicle sales Feb</p>	<p>2 Mar Productivity and costs (8:30am) 4Q rev Initial claims (8:30am) w/e Feb 25 Announce 30-year bond (r) <u>\$18bn</u> Announce 10-year note (r) <u>\$32bn</u> Announce 3-year note <u>\$40bn</u></p>	<p>3 Mar Services PMI (9:45am) Feb final ISM services (10:00am) Feb Atlanta Fed President Bostic speaks (12:00pm)</p>
<p>6 Mar Factory orders (10:00am) Jan</p>	<p>7 Mar Wholesale trade (10:00am) Jan Consumer credit (3:00pm) Jan Auction 3-year note <u>\$40bn</u></p>	<p>8 Mar ADP employment (8:15am) Feb International trade (8:30am) Jan JOLTS (10:00am) Jan Beige book (2:00pm) Auction 10-year note (r) <u>\$32bn</u></p>	<p>9 Mar Initial claims (8:30am) w/e Mar 4 Auction 30-year bond (r) <u>\$18bn</u></p>	<p>10 Mar Employment (8:30am) Feb Federal budget (2:00pm) Feb</p>
<p>13 Mar</p>	<p>14 Mar NFIB survey (6:00am) Feb CPI (8:30am) Feb QSS (10:00am) 4Q</p>	<p>15 Mar PPI (8:30am) Feb Retail sales (8:30am) Feb Empire State survey (8:30am) Mar Business inventories (10:00am) Jan NAHB survey (10:00am) Mar TIC data (4:00pm) Jan</p>	<p>16 Mar Import prices (8:30am) Feb Initial claims (8:30am) w/e Mar 11 Housing starts (8:30am) Feb Philadelphia Fed manufacturing (8:30am) Mar Business leaders survey (8:30am) Mar Announce 10-year TIPS (r) <u>\$15bn</u> Announce 20-year bond (r) <u>\$12bn</u></p>	<p>17 Mar Industrial production (9:15am) Feb Consumer sentiment (10:00am) Mar preliminary Leading indicators (10:00am) Feb</p>

Source: Private and public agencies and J.P. Morgan. Further details available upon request.

Euro area economic calendar

Monday	Tuesday	Wednesday	Thursday	Friday
<p>20 Feb</p> <p>Euro area EC cons. conf. prelim (4:00pm) Feb Balance of responses: -19.9 Construction output (11:00am) Dec</p> <p>Germany PPI (8:00am) Jan</p> <p>Belgium BNB cons. conf. (11:00am) Feb</p>	<p>21 Feb</p> <p>Euro area PMI Mfg (10:00am) Feb PMI Serv. & comp (10:00am) Feb <u>Mfg: 49.9</u> <u>Serv: 51.1</u> <u>Comp: 50.8</u></p> <p>Germany PMI Mfg (9:30am) Feb PMI Serv. & comp (9:30am) Feb <u>Mfg: 49.4</u> <u>Serv: 50.9</u> <u>Comp: 50.4</u> ZEW bus. survey (11:00am) Feb</p> <p>France PMI Mfg (9:15am) Feb PMI Serv. & comp (9:15am) Feb <u>Mfg: 48.5</u> <u>Serv: 49.9</u> <u>Comp: 49.8</u></p>	<p>22 Feb</p> <p>Germany HICP & CPI final (8:00am) Jan <u>1.0%/m, nsa (9.2%oya)</u> <u>HICP: 9.2%oya</u> IFO bus. survey (10:00am) Feb Business climate: 91.3 Business situation: 94.5 Business expectations: 88.5</p> <p>France INSEE bus. conf. (8:45am) Feb</p> <p>Italy HICP & CPI final (10:00am) Jan <u>0.2%/m, nsa (10.1%oya)</u> <u>HICP: 10.9%oya</u></p> <p>Belgium BNB bus. conf. (3:00pm) Feb</p>	<p>23 Feb</p> <p>Euro area HICP final (11:00am) Jan <u>-0.2%/m, nsa (8.5%oya)</u></p>	<p>24 Feb</p> <p>Germany GDP final (8:00am) 4Q <u>-1.0%/q, saar</u> GfK cons. conf. (8:00am) Feb</p> <p>France INSEE cons. conf. (8:45am) Feb</p>
<p>27 Feb</p> <p>Euro area EC survey (11:00am) Feb M3 money supply (10:00am) Jan</p> <p>Italy ISAE bus. conf. (10:00am) Feb ISAE cons. conf. (10:00am) Feb</p> <p>Belgium CPI (7:00am) Feb</p> <p>Netherlands CBS bus. conf. (6:30am) Feb</p>	<p>28 Feb</p> <p>France HICP & CPI prelim (8:45am) Feb PPI (8:45am) Jan Cons. of mfg goods (8:45am) Jan GDP final (8:45am) 4Q</p> <p>Spain HICP & CPI prelim (9:00am) Feb</p> <p>Belgium GDP final (11:00am) 4Q</p>	<p>1 Mar</p> <p>Euro area PMI Mfg final (10:00am) Feb</p> <p>Germany Retail sales (8:00am) Jan Import price index (8:00am) Jan Unemployment (9:55am) Feb Employment (9:55am) Jan PMI Mfg (9:55am) Feb HICP & CPI prelim and 6 states (2:00pm) Feb</p> <p>France PMI Mfg (9:50am) Feb</p> <p>Italy PMI Mfg (9:45am) Feb</p> <p>Spain PMI Mfg (9:15am) Feb</p>	<p>2 Mar</p> <p>Euro area HICP flash (11:00am) Feb Unemployment rate (11:00am) Jan ECB monetary policy account (1:30pm) Feb</p> <p>France Monthly budget situation (8:45am) Jan</p> <p>Italy HICP & CPI prelim (11:00am) Feb</p> <p>Netherlands CPI (6:30am) Feb</p>	<p>3 Mar</p> <p>Euro area PMI Serv. & comp final (10:00am) Feb MFI interest rates (10:00am) Jan PPI (11:00am) Jan</p> <p>Germany PMI Serv. & comp (9:55am) Feb Foreign trade (8:00am) Jan</p> <p>France Industrial production (8:45am) Jan PMI Serv. & comp (9:50am) Feb</p> <p>Italy PMI Serv. & comp (9:45am) Feb GDP final (10:00am) 4Q</p> <p>Spain PMI Serv. & comp (9:15am) Feb</p>
<p>6 Mar</p> <p>Euro area Retail sales (11:00am) Jan</p>	<p>7 Mar</p> <p>Germany Mfg orders (8:00am) Jan</p>	<p>8 Mar</p> <p>Euro area GDP final (11:00am) 4Q Employment final (11:00am) 4Q</p> <p>Germany Industrial production (8:00am) Jan</p>	<p>9 Mar</p>	<p>10 Mar</p> <p>Germany HICP & CPI final (8:00am) Feb</p> <p>France Foreign trade (8:45am) Jan</p> <p>Italy PPI (10:00am) Jan</p>
<p>13 Mar</p>	<p>14 Mar</p> <p>Italy Industrial production (10:00am) Jan</p> <p>Spain HICP & CPI final (9:00am) Feb</p> <p>Netherlands CPI (6:30am) Feb</p>	<p>15 Mar</p> <p>Euro area Industrial production (11:00am) Jan</p> <p>France HICP & CPI final (8:45am) Feb</p>	<p>16 Mar</p> <p>Euro area ECB rate announcement (1:45pm) Mar</p> <p>Italy HICP & CPI final (10:00am) Feb</p>	<p>17 Mar</p> <p>Euro area HICP final (11:00am) Feb Labour costs (11:00am) 4Q</p> <p>Italy Foreign trade (10:00am) Jan</p>

Highlighted data are scheduled for release on or after the date shown. Times shown are local. Source: Private and public agencies and J.P. Morgan. Further details available upon request.

Japan economic calendar

Monday	Tuesday	Wednesday	Thursday	Friday
20 Feb	21 Feb PMI manufacturing prelim (9:30am) Feb <u>49.5</u> PMI services prelim (9:30am) Feb <u>52.0</u> Auction 20-year note	22 Feb Reuters Tankan (8:00am) Feb Mfg DI <u>3</u> Non-mfg DI <u>20</u> Corporate service prices (8:50am) Jan BoJ board member Tamura's speech in Gunma	23 Feb <i>Holiday: Japan</i>	24 Feb Nationwide core CPI (8:30am) Jan Ex. fresh food <u>4.1 %</u> o/y Ex. fresh food and energy <u>3.3 %</u> o/y Nationwide department store sales (2:30pm) Jan Auction 3-month bill
27 Feb Coincident CI final (2:00pm) Dec	28 Feb IP prelim (8:50am) Jan Total retail sales (8:50am) Jan Housing starts (2:00pm) Jan Auction 2-year note	1 Mar PMI manufacturing (9:30am) Auto registrations (2:00pm) Feb BoJ board member Nakagawa's speech in Fukushima	2 Mar Corporate survey (8:50am) 4Q Consumer sentiment (2:00pm) Feb BoJ board member Takada's speech in Fukushima Auction 10-year note	3 Mar Tokyo core CPI (8:30am) Feb Job offers to applicants ratio (8:30am) Jan Unemployment rate (8:30am) Jan CAO private consumption index Dec Auction 3-month bill
6 Mar	7 Mar Employers' survey (8:30am) Jan Consumption activity index (2:00pm) Jan Auction 30-year note	8 Mar Bank lending (8:50am) Feb Current account (8:50am) Jan Economy Watchers' survey (2:00pm) Feb Coincident CI (2:00pm) Auction 6-month bill	9 Mar GDP 2nd (8:50am) 4Q M2 (8:50am) BoJ Monetary Policy Meeting	10 Mar All household spending (8:30am) Jan Corporate goods prices (8:50am) BoJ Monetary Policy Meeting BoJ outlook report BoJ Governor Kuroda's press conference Auction 3-month bill
13 Mar Business outlook survey (8:50am) 1Q	14 Mar Auction 5-year note	15 Mar Auction 1-year note Auction 20-year note	16 Mar Private machinery orders (8:50am) Trade balance (8:50am) IP final (1:30pm) Jan	17 Mar Tertiary sector activity index (1:30pm) Jan Auction 3-month bill
During the week: Nationwide department store sales (16-22 Mar)				

Note: Times shown are local. Source: Private and public agencies and J.P. Morgan. Further details available upon request.

Canada economic calendar

Monday	Tuesday	Wednesday	Thursday	Friday
20 Feb Family Day Markets closed	21 Feb CPI (8:30am) Jan <u>5.8%</u> <i>o.y.a</i> (0.4% <i>n.s.a</i>) Retail sales (8:30am) Dec <u>-0.2%</u> ex autos <u>-0.1%</u>	22 Feb Food services and drinking places (8:30am) Dec New housing price index (8:30am) Jan <u>-0.2%</u>	23 Feb CFIB Business Barometer Index (6:00am) Feb Payroll employment (8:30am) Dec	24 Feb Wholesale trade: Early indicator (8:30am) Jan
27 Feb Current account (8:30am) 4Q	28 Feb Quarterly GDP (8:30am) 4Q Monthly GDP (8:30am) Dec	1 Mar Quarterly capital spending: Oil and gas industries (8:30am) 4Q22 S&P Global manufacturing PMI (9:30am) Feb	2 Mar	3 Mar Building permits (8:30am) Jan Productivity & costs (8:30am) 4Q
6 Mar Ivey PMI (10:00am) Feb	7 Mar	8 Mar International trade (8:30am) Jan Bank of Canada Rate announcement (10:00am)	9 Mar Senior Deputy Governor Carolyn Rogers presents the "Economic Progress Report" at the Manitoba Chambers in Winnipeg, MB (1:45pm)	10 Mar Labor Force Survey (8:30am) Feb Capacity utilization (8:30am) 4Q
13 Mar National Balance Sheet (8:30am) 4Q	14 Mar Manufacturing sales (8:30am) Jan	15 Mar Housing starts (8:15am) Feb Existing home sales (9:00am) Feb	16 Mar Wholesale sales (8:30am) Jan	17 Mar IPPI (8:30am) Feb International transactions in securities (8:30am) Feb Teranet/National Bank HP Index (8:30am) Feb

Source: Private and public agencies and J.P. Morgan. Further details available upon request.

Latin America economic calendar

Monday	Tuesday	Wednesday	Thursday	Friday
20 Feb	21 Feb Mexico Retail sales Dec <u>3.3%oya</u> ; <u>0.4%/m/m,sa</u>	22 Feb Paraguay BCP rate decision Feb <u>8.5%</u> Argentina Budget balance Jan Trade balance Jan <u>US\$1.0bn</u>	23 Feb Peru GDP 4Q22 <u>1.7%oya</u> Mexico Biweekly core CPI Feb <u>8.38%oya</u> ; <u>0.35%/m/m</u> Biweekly CPI Feb <u>7.81%oya</u> ; <u>0.36%/m/m</u> Argentina Economic activity Dec <u>2.0%oya</u>	24 Feb Brazil FGV: consumer confidence Feb IPCA-15 Feb <u>5.58%oya</u> ; <u>0.72%/m/m</u> Current Account Jan <u>-US\$5.8bn</u> FDI Jan <u>US\$7.9bn</u> Mexico GDP monthly proxy Dec <u>2.2%oya</u> ; <u>0.4%/m/m</u>
During the week: Brazil Tax collections Jan (20-27 Feb)				
27 Feb Brazil IGP-M Feb Central government budget Jan Mexico Trade balance Jan Chile Unemployment Dec	28 Feb Chile Industrial production Dec Retail sales Dec Brazil Primary budget balance Jan Colombia Unemployment Jan Uruguay National Unemployment rate Dec	1 Mar Brazil PMI Manufacturing Feb Trade balance Feb Mexico Remittances Jan IMEF manufacturing index Feb IMEF nonmanufacturing index Feb Peru CPI Feb	2 Mar Paraguay CPI Feb Mexico PS budget balance Jan Unemployment Jan Brazil FIPE CPI Feb	3 Mar Argentina Vehicle sales Feb Vehicle production Feb Uruguay CPI Feb
During the week: Argentina Tax collections Feb (1-6 Mar) Colombia CPI Feb (4 Mar)				
6 Mar Mexico GFI Dec Auto report Feb Colombia Exports Jan	7 Mar Brazil IGP-DI Feb Chile Trade balance Feb	8 Mar	9 Mar Mexico Biweekly core CPI Core CPI Feb CPI Feb Biweekly CPI Peru Reference rate Mar	10 Mar Brazil IPCA Feb
During the week: Brazil Vehicle sales Feb (6-7 Mar) Brazil Auto production Feb (6-7 Mar) Chile Vehicle Sales Total Feb (7-10 Mar)				
13 Mar Mexico ANTAD same-store sales Feb IP Jan Uruguay Industrial production Jan	14 Mar Argentina CPI Feb	15 Mar Peru Economic Activity Jan National Unemployment rate Feb Colombia IP Jan Retail sales Jan	16 Mar	17 Mar Colombia Trade balance Jan Economic Activity Jan
During the week: Uruguay GDP 4Q (15-31 Mar)				

Times shown are local. Private and public agencies and J.P. Morgan. Further details available upon request.

UK and Scandinavia economic calendar

Monday	Tuesday	Wednesday	Thursday	Friday
20 Feb United Kingdom Rightmove HPI (12:01am) Feb Sweden CPI (8:00am) Jan -0.7%/m, nsa (12.2%oya) Riksbank monetary policy meeting minutes (9:30am) Feb	21 Feb United Kingdom Public sector finances (7:00am) Jan PMI Mfg prelim (9:30am) Feb PMI Serv. prelim (9:30am) Feb Comp: 49.0 CBI survey of industrial trends (11:00am) Feb Sweden Valueguard house prices (6:00am) Jan Prospera inflation expectations (8:00am) Feb Production value index (9:30am) Feb	22 Feb United Kingdom IDR inflation forecast (7:00am) Dec	23 Feb United Kingdom CBI survey of distributive trades (11:00am) Feb Norway Credit indicator growth (8:00am) Jan BoE Mann Speech (9:30am) BoE Cunliffe Speech (10:45am)	24 Feb United Kingdom GfK cons. conf. (12:01am) Feb Sweden Consumer confidence (9:00am) Feb Economic Tendency survey (9:00am) Feb
27 Feb United Kingdom CBI services sector survey (11:00am) 1Q Sweden Household lending (8:00am) Jan Retail sales (8:00am) Jan Financial markets statistics (9:00am) Jan Norway Retail sales (8:00am) Jan	28 Feb Sweden GDP final (8:00am) 4Q PPI (8:00am) Jan Trade balance (8:00am) Jan Wage stats (8:00am) Dec	1 Mar United Kingdom CBI growth indicator (12:01am) Feb M4 & M4 lending final (9:30am) Jan Net lending to individuals (9:30am) Jan PMI Mfg final (9:30am) Feb Sweden PMI (8:30am) Feb Norway PMI Mfg (10:00am) Feb	2 Mar United Kingdom Decision Maker Panel Survey (9:30am) Feb	3 Mar United Kingdom PMI Serv. final (9:30am) Feb Sweden PMI Serv. (8:30am) Feb Norway Labor directorate unemployment (10:00am) Feb
During the week: Nationwide HPI Feb (28-3 Mar) BoE/NOP Inflation attitudes survey Feb (3-12 Mar)				
6 Mar United Kingdom New car regs (9:00am) Feb PMI Construction (9:30am) Feb	7 Mar United Kingdom BRC retail sales monitor (12:01am) Feb Halifax HPI (7:00am) Feb Sweden Budget Balance (8:00am) Feb Norway IP Mfg (8:00am) Jan	8 Feb United Kingdom S&P jobs report (12:01am) Jan	9 Mar United Kingdom RICS HPI (12:01am) Feb Sweden Monthly GDP indicator (9:00am) Jan Industrial production (8:00am) Jan Household consumption (9:30am) Jan	10 Mar United Kingdom Industrial production (7:00am) Jan Index of services (7:00am) Jan Trade balance (7:00am) Jan Norway CPI (8:00am) Feb PPI (8:00am) Feb
13 Mar	14 Mar United Kingdom Labor market report (7:00am) Feb Sweden PES unemployment (6:00am) Feb	15 Mar Sweden CPI (8:00am) Feb Norway Trade balance (8:00am) Feb	16 Mar Norway Regional Network Survey (10:00am) 1Q	17 Mar United Kingdom LFS unemployment rate (9:30am) Feb

Times shown are local. Source: Private and public agencies and J.P. Morgan. Further details available upon request

Emerging Europe/Middle East/Africa economic calendar

Monday	Tuesday	Wednesday	Thursday	Friday
20 Feb Poland PPI (10:00am) Jan Industrial output (10:00am) Jan Average gross wages and Employment (10:00am) Jan Serbia CPI (12:00pm) Jan Israel Bol rate decision (4:00pm) Feb 25bp hike: 4.0%	21 Feb Poland Retail sales (10:00am) Jan	22 Feb Turkey Capacity utilization (9:00am) Feb Israel Trade balance (1:00pm) Jan State of the economy index Jan Kenya Real GDP 4Q <u>5.0%oya</u> Russia Industrial output (7:00pm) Jan - <u>1.9%oya</u> PPI (7:00pm) Jan <u>-5.8%oya</u> South Africa Budget presentation (2:00pm) FY23	23 Feb Hungary Average gross wages (9:00am) Dec Poland Unemployment (10:00am) Jan Turkey CBRT rate decision (1:00pm) Feb <u>100bp cut: 8.00%</u> Zambia CPI Jan <u>9.5%oya</u>	24 Feb Hungary Unemployment (9:00am) Jan Kazakhstan NBK rate decision (2:00pm) Feb On hold: 16.75%
During the week:				
27 Feb Turkey Foreign trade (9:00am) Jan Israel Unemployment rate (1:00pm) Jan	28 Feb South Africa Private sector credit (8:00am) Jan Quarterly Labour Force Survey (11:30am) 4Q Budget (2:00pm) Jan Trade balance (2:00pm) Jan Turkey GDP (9:00am) 4Q Czech Republic PPI (9:00am) Jan Poland GDP final (10:00am) 4Q Hungary NBH rate decision (2:00pm) Feb	1 Mar Russia Manufacturing PMI (9:00am) Feb Retail sales, Unemployment & Investment (7:00pm) Feb Turkey PMI (9:00am) Feb Hungary PMI (9:00am) Feb Poland PMI (9:00am) Feb Czech Republic PMI (9:30am) Feb South Africa Barclays PMI (11:00am) Feb	2 Mar Hungary GDP final (9:00am) 4Q Kazakhstan CPI Feb	3 Mar Turkey CPI (9:00am) Feb Czech Republic GDP prelim (9:00am) 4Q Hungary Trade balance final (9:00am) Jan
During the week:				
6 Mar Romania Retail sales (9:00am) Jan Czech Republic Average real wage (9:00am) 4Q Hungary Retail sales (9:00am) Jan	7 Mar South Africa Gross reserves (8:00am) Feb Hungary Industrial output (9:00am) Jan	8 Mar Romania GDP prelim (9:00am) 4Q Hungary CPI (9:00am) Feb Poland NBP rate decision Mar	9 Mar Saudi Arabia GDP final (9:00am) 4Q Czech Republic Trade balance (9:00am) Jan South Africa Current account and Quarterly Bulletin (11:00am) 4Q Serbia NBS rate decision (12:00pm) Mar	10 Mar Turkey Industrial output (9:00am) Jan Czech Republic CPI (9:00am) Feb Industrial output (9:00am) Jan Hungary Trade balance (9:00am) Jan Russia CPI (7:00pm) Feb
During the week: Israel GDP prelim 4Q (12 Mar) Israel Current account 4Q (12 Mar) South Africa BER business confidence 4Q (10-16 Mar)				
13 Mar Romania CPI (9:00am) Feb Trade balance (9:00am) Jan Turkey Current account (9:00am) Jan	14 Mar Romania Industrial output (9:00am) Jan South Africa Manufacturing output (1:00pm) Jan	15 Mar Poland CPI (10:00am) Feb South Africa Retail sales (1:00pm) Jan Israel CPI (6:30pm) Feb	16 Mar Czech Republic Current account (10:00am) Jan Poland Core inflation (2:00pm) Feb Current account (2:00pm) Jan Romania Current Account Jan	17 Mar Russia CBR rate decision (1:30pm) Mar
During the week: South Africa BER consumer confidence 4Q (13-20 Mar) Poland Budget balance Feb (15-31 Mar)				

Times shown are local. Source: Private and public agencies and J.P. Morgan. Further details available upon request.

Global Data Diary

Week / Weekend	Monday	Tuesday	Wednesday	Thursday	Friday
18 - 24 February	<p>20 February</p> <p>Euro area ●EC cons conf (Feb)</p> <p>Israel ●Bol mtg: +25bp</p> <p>Sweden ●CPI (Jan)</p>	<p>21 February</p> <p>Canada ●CPI (Jan)</p> <p>Euro area ●Flash PMI (Feb)</p> <p>Japan ●Flash PMI (Feb)</p> <p>United Kingdom ●Flash PMI (Feb)</p> <p>United States ●Existing home sales (Jan) ●Flash PMI (Feb) ●Philly Fed non-mfg (Feb)</p> <p>Mexico ●Retail sales (Dec)</p>	<p>22 February</p> <p>Germany ●HICP final (Jan) ●IFO business survey (Feb)</p> <p>Japan ●Reuters Tankan (Feb)</p> <p>New Zealand ●RBNZ mtg: +50bp</p> <p>United States ●FOMC minutes</p>	<p>23 February</p> <p>Euro area ●HICP final (Jan)</p> <p>Hong Kong ●CPI (Jan)</p> <p>Korea ●BoK mtg: no chg</p> <p>Singapore ●CPI (Jan)</p> <p>Turkey ●CBRT mtg: -100bp</p> <p>Peru ●GDP (4Q)</p> <p>United States ●GDP (4Q, 2nd)</p>	<p>24 February</p> <p>Japan ●Core CPI (Jan)</p> <p>Malaysia ●CPI (Jan)</p> <p>Singapore ●IP (Jan)</p> <p>United States ●New home sales (Jan) ●Personal income (Jan) ●UMich cons sent (Feb, fnl)</p>
25 - 03 March	<p>27 February</p> <p>Euro area ●EC survey (Feb)</p> <p>United States ●Durable goods (Jan) ●Pending home sales (Jan)</p>	<p>28 February</p> <p>Canada ●GDP (4Q)</p> <p>Hungary ●NBH mtg: no chg</p> <p>Japan ●IP (Jan) ●Retail sales (Jan)</p> <p>Turkey ●GDP (4Q)</p> <p>United States ●Adv econ inds (Jan) ●Case-Shiller HPI (Dec, 4Q) ●Cons conf (Feb) ●FHFA HPI (Dec, 4Q)</p>	<p>01 March</p> <p>Australia ●GDP (4Q)</p> <p>Germany ●HICP (Feb, prl)</p> <p>Indonesia ●CPI (Feb)</p> <p>Japan ●Auto regs (Feb)</p> <p>Peru ●CPI (Feb)</p> <p>United States ●ISM mfg (Feb) ●Light vehicle sales (Feb)</p> <p>Global ●Mfg PMI (Jan)</p>	<p>02 March</p> <p>Euro area ●HICP flash (Feb) ●U-rate (Jan)</p> <p>Japan ●Cons snt (Feb) ●Corp survey (4Q)</p> <p>Korea ●IP (Feb)</p> <p>Paraguay ●CPI (Feb)</p>	<p>03 March</p> <p>Czechia ●GDP (4Q)</p> <p>Japan ●Tokyo core CPI (Feb) ●U-rate (Jan)</p> <p>Uruguay ●CPI (Feb)</p> <p>Turkey ●CPI (Feb)</p> <p>United States ●ISM srv (Feb)</p> <p>Global ●All-ind PMI (Jan)</p>

Source: Private and public agencies and J.P. Morgan. Further details available upon request.

Analysts' Compensation: The research analysts responsible for the preparation of this report receive compensation based upon various factors, including the quality and accuracy of research, client feedback, competitive factors, and overall firm revenues.

Other Disclosures

J.P. Morgan is a marketing name for investment banking businesses of JPMorgan Chase & Co. and its subsidiaries and affiliates worldwide.

UK MIFID FICC research unbundling exemption: UK clients should refer to [UK MIFID Research Unbundling exemption](#) for details of JPMorgan's implementation of the FICC research exemption and guidance on relevant FICC research categorisation.

Any long form nomenclature for references to China; Hong Kong; Taiwan; and Macau within this research material are Mainland China; Hong Kong SAR (China); Taiwan (China); and Macau SAR (China).

J.P. Morgan Research may, from time to time, write on issuers or securities targeted by economic or financial sanctions imposed or administered by the governmental authorities of the U.S., EU, UK or other relevant jurisdictions (Sanctioned Securities). Nothing in this report is intended to be read or construed as encouraging, facilitating, promoting or otherwise approving investment or dealing in such Sanctioned Securities. Clients should be aware of their own legal and compliance obligations when making investment decisions.

Any digital or crypto assets discussed in this research report are subject to a rapidly changing regulatory landscape. For relevant regulatory advisories on crypto assets, including bitcoin and ether, please see <https://www.jpmorgan.com/disclosures/cryptoasset-disclosure>.

The author(s) of this research report may not be licensed to carry on regulated activities in your jurisdiction and, if not licensed, do not hold themselves out as being able to do so.

Exchange-Traded Funds (ETFs): J.P. Morgan Securities LLC ("JPMS") acts as authorized participant for substantially all U.S.-listed ETFs. To the extent that any ETFs are mentioned in this report, JPMS may earn commissions and transaction-based compensation in connection with the distribution of those ETF shares and may earn fees for performing other trade-related services, such as securities lending to short sellers of the ETF shares. JPMS may also perform services for the ETFs themselves, including acting as a broker or dealer to the ETFs. In addition, affiliates of JPMS may perform services for the ETFs, including trust, custodial, administration, lending, index calculation and/or maintenance and other services.

Changes to Interbank Offered Rates (IBORs) and other benchmark rates: Certain interest rate benchmarks are, or may in the future become, subject to ongoing international, national and other regulatory guidance, reform and proposals for reform. For more information, please consult: https://www.jpmorgan.com/global/disclosures/interbank_offered_rates

Private Bank Clients: Where you are receiving research as a client of the private banking businesses offered by JPMorgan Chase & Co. and its subsidiaries ("J.P. Morgan Private Bank"), research is provided to you by J.P. Morgan Private Bank and not by any other division of J.P. Morgan, including, but not limited to, the J.P. Morgan Corporate and Investment Bank and its Global Research division.

Legal entity responsible for the production and distribution of research: The legal entity identified below the name of the Reg AC Research Analyst who authored this material is the legal entity responsible for the production of this research. Where multiple Reg AC Research Analysts authored this material with different legal entities identified below their names, these legal entities are jointly responsible for the production of this research. Research Analysts from various J.P. Morgan affiliates may have contributed to the production of this material but may not be licensed to carry out regulated activities in your jurisdiction (and do not hold themselves out as being able to do so). Unless otherwise stated below, this material has been distributed by the legal entity responsible for production. If you have any queries, please contact the relevant Research Analyst in your jurisdiction or the entity in your jurisdiction that has distributed this research material.

Legal Entities Disclosures and Country-/Region-Specific Disclosures:

Argentina: JPMorgan Chase Bank N.A Sucursal Buenos Aires is regulated by Banco Central de la República Argentina ("BCRA"- Central Bank of Argentina) and Comisión Nacional de Valores ("CNV"- Argentinian Securities Commission" - ALYC y AN Integral N°51). **Australia:** J.P. Morgan Securities Australia Limited ("JPMSAL") (ABN 61 003 245 234/AFS Licence No: 238066) is regulated by the Australian Securities and Investments Commission and is a Market, Clearing and Settlement Participant of ASX Limited and CHI-X. This material is issued and distributed in Australia by or on behalf of JPMSAL only to "wholesale clients" (as defined in section 761G of the Corporations Act 2001). A list of all financial products covered can be found by visiting <https://www.jpmm.com/research/disclosures>. J.P. Morgan seeks to cover companies of relevance to the domestic and international investor base across all Global Industry Classification Standard (GICS) sectors, as well as across a range of market capitalisation sizes. If applicable, in the course of conducting public side due diligence on the subject company(ies), the Research Analyst team may at times perform such diligence through corporate engagements such as site visits, discussions with company representatives, management presentations, etc. Research issued by JPMSAL has been prepared in accordance with J.P. Morgan Australia's Research Independence Policy which can be found at the following link: [J.P. Morgan Australia - Research Independence Policy](#). **Brazil:** Banco J.P. Morgan S.A. is regulated by the Comissão de Valores Mobiliários (CVM) and by the Central Bank of Brazil. Ombudsman J.P. Morgan: 0800-7700847 / ouvidoria.jp.morgan@jpmorgan.com. **Canada:** J.P. Morgan Securities Canada Inc. is a registered investment dealer, regulated by the Investment Industry Regulatory Organization of Canada and the Ontario Securities Commission and is the participating member on Canadian exchanges. This material is distributed in Canada by or on behalf of J.P.Morgan Securities Canada Inc. **Chile:** Inversiones J.P. Morgan Limitada is an unregulated entity incorporated in Chile. **China:** J.P. Morgan Securities (China) Company Limited has been approved by CSRC to conduct the securities investment consultancy business. **Dubai International Financial Centre (DIFC):** JPMorgan Chase Bank, N.A., Dubai

Branch is regulated by the Dubai Financial Services Authority (DFSA) and its registered address is Dubai International Financial Centre - The Gate, West Wing, Level 3 and 9 PO Box 506551, Dubai, UAE. This material has been distributed by JP Morgan Chase Bank, N.A., Dubai Branch to persons regarded as professional clients or market counterparties as defined under the DFSA rules. **European Economic Area (EEA):** Unless specified to the contrary, research is distributed in the EEA by J.P. Morgan SE (“JPM SE”), which is subject to prudential supervision by the European Central Bank (“ECB”) in cooperation with BaFin and Deutsche Bundesbank in Germany. JPM SE is a company headquartered in Frankfurt with registered address at TaunusTurm, Taunustor 1, Frankfurt am Main, 60310, Germany. The material has been distributed in the EEA to persons regarded as professional investors (or equivalent) pursuant to Art. 4 para. 1 no. 10 and Annex II of MiFID II and its respective implementation in their home jurisdictions (“EEA professional investors”). This material must not be acted on or relied on by persons who are not EEA professional investors. Any investment or investment activity to which this material relates is only available to EEA relevant persons and will be engaged in only with EEA relevant persons. **Hong Kong:** J.P. Morgan Securities (Asia Pacific) Limited (CE number AAJ321) is regulated by the Hong Kong Monetary Authority and the Securities and Futures Commission in Hong Kong, and J.P. Morgan Broking (Hong Kong) Limited (CE number AAB027) is regulated by the Securities and Futures Commission in Hong Kong. JP Morgan Chase Bank, N.A., Hong Kong Branch (CE Number AAL996) is regulated by the Hong Kong Monetary Authority and the Securities and Futures Commission, is organized under the laws of the United States with limited liability. Where the distribution of this material is a regulated activity in Hong Kong, the material is distributed in Hong Kong by or through J.P. Morgan Securities (Asia Pacific) Limited and/or J.P. Morgan Broking (Hong Kong) Limited. **India:** J.P. Morgan India Private Limited (Corporate Identity Number - U67120MH1992FTC068724), having its registered office at J.P. Morgan Tower, Off. C.S.T. Road, Kalina, Santacruz - East, Mumbai – 400098, is registered with the Securities and Exchange Board of India (SEBI) as a ‘Research Analyst’ having registration number INH000001873. J.P. Morgan India Private Limited is also registered with SEBI as a member of the National Stock Exchange of India Limited and the Bombay Stock Exchange Limited (SEBI Registration Number – INZ000239730) and as a Merchant Banker (SEBI Registration Number - MB/INM000002970). Telephone: 91-22-6157 3000, Facsimile: 91-22-6157 3990 and Website: <http://www.jpiml.com>. JPMorgan Chase Bank, N.A. - Mumbai Branch is licensed by the Reserve Bank of India (RBI) (Licence No. 53/ Licence No. BY.4/94; SEBI - IN/CUS/014/ CDSL : IN-DP-CDSL-444-2008/ IN-DP-NSDL-285-2008/ INBI00000984/ INE231311239) as a Scheduled Commercial Bank in India, which is its primary license allowing it to carry on Banking business in India and other activities, which a Bank branch in India are permitted to undertake. For non-local research material, this material is not distributed in India by J.P. Morgan India Private Limited. **Indonesia:** PT J.P. Morgan Sekuritas Indonesia is a member of the Indonesia Stock Exchange and is registered and supervised by the Otoritas Jasa Keuangan (OJK). **Korea:** J.P. Morgan Securities (Far East) Limited, Seoul Branch, is a member of the Korea Exchange (KRX). JPMorgan Chase Bank, N.A., Seoul Branch, is licensed as a branch office of foreign bank (JPMorgan Chase Bank, N.A.) in Korea. Both entities are regulated by the Financial Services Commission (FSC) and the Financial Supervisory Service (FSS). For non-macro research material, the material is distributed in Korea by or through J.P. Morgan Securities (Far East) Limited, Seoul Branch. **Japan:** JPMorgan Securities Japan Co., Ltd. and JPMorgan Chase Bank, N.A., Tokyo Branch are regulated by the Financial Services Agency in Japan. **Malaysia:** This material is issued and distributed in Malaysia by JPMorgan Securities (Malaysia) Sdn Bhd (18146-X), which is a Participating Organization of Bursa Malaysia Berhad and holds a Capital Markets Services License issued by the Securities Commission in Malaysia. **Mexico:** J.P. Morgan Casa de Bolsa, S.A. de C.V. and J.P. Morgan Grupo Financiero are members of the Mexican Stock Exchange and are authorized to act as a broker dealer by the National Banking and Securities Exchange Commission. **New Zealand:** This material is issued and distributed by JPMSAL in New Zealand only to "wholesale clients" (as defined in the Financial Markets Conduct Act 2013). JPMSAL is registered as a Financial Service Provider under the Financial Service providers (Registration and Dispute Resolution) Act of 2008. **Pakistan:** J. P. Morgan Pakistan Broking (Pvt.) Ltd is a member of the Karachi Stock Exchange and regulated by the Securities and Exchange Commission of Pakistan. **Philippines:** J.P. Morgan Securities Philippines Inc. is a Trading Participant of the Philippine Stock Exchange and a member of the Securities Clearing Corporation of the Philippines and the Securities Investor Protection Fund. It is regulated by the Securities and Exchange Commission. **Russia:** CB J.P. Morgan Bank International LLC is regulated by the Central Bank of Russia. **Singapore:** This material is issued and distributed in Singapore by or through J.P. Morgan Securities Singapore Private Limited (JPMSS) [MCI (P) 060/08/2022 and Co. Reg. No.: 199405335R], which is a member of the Singapore Exchange Securities Trading Limited, and/or JPMorgan Chase Bank, N.A., Singapore branch (JPMCB Singapore), both of which are regulated by the Monetary Authority of Singapore. This material is issued and distributed in Singapore only to accredited investors, expert investors and institutional investors, as defined in Section 4A of the Securities and Futures Act, Cap. 289 (SFA). This material is not intended to be issued or distributed to any retail investors or any other investors that do not fall into the classes of “accredited investors,” “expert investors” or “institutional investors,” as defined under Section 4A of the SFA. Recipients of this material in Singapore are to contact JPMSS or JPMCB Singapore in respect of any matters arising from, or in connection with, the material. As at the date of this material, JPMSS is a designated market maker for certain structured warrants listed on the Singapore Exchange where the underlying securities may be the securities discussed in this material. Arising from its role as a designated market maker for such structured warrants, JPMSS may conduct hedging activities in respect of such underlying securities and hold or have an interest in such underlying securities as a result. The updated list of structured warrants for which JPMSS acts as designated market maker may be found on the website of the Singapore Exchange Limited: <http://www.sgx.com>. **South Africa:** J.P. Morgan Equities South Africa Proprietary Limited and JPMorgan Chase Bank, N.A., Johannesburg Branch are members of the Johannesburg Securities Exchange and are regulated by the Financial Services Board. **Taiwan:** J.P. Morgan Securities (Taiwan) Limited is a participant of the Taiwan Stock Exchange (company-type) and regulated by the Taiwan Securities and Futures Bureau. Material relating to equity securities is issued and distributed in Taiwan by J.P. Morgan Securities (Taiwan) Limited, subject to the license scope and the applicable laws and the regulations in Taiwan. According to Paragraph 2, Article 7-1 of Operational Regulations Governing Securities Firms Recommending Trades in Securities to Customers (as amended or supplemented) and/or other applicable laws or regulations, please note that the recipient of this material is not permitted to engage in any activities in connection with the material that may give rise to conflicts of interests, unless otherwise disclosed in the “Important Disclosures” in this material. **Thailand:** This material is issued and distributed in Thailand by JPMorgan Securities (Thailand) Ltd., which is a member of the Stock Exchange of Thailand and is regulated by the Ministry of Finance and the Securities and Exchange Commission, and its registered address is 3rd Floor, 20 North Sathorn Road, Silom, Bangrak, Bangkok 10500. **UK:** Unless specified to the contrary, research is distributed in the UK by J.P. Morgan

Securities plc ("JPMS plc") which is a member of the London Stock Exchange and is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority. JPMS plc is registered in England & Wales No. 2711006, Registered Office 25 Bank Street, London, E14 5JP. This material is directed in the UK only to: (a) persons having professional experience in matters relating to investments falling within article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) (Order) 2005 ("the FPO"); (b) persons outlined in article 49 of the FPO (high net worth companies, unincorporated associations or partnerships, the trustees of high value trusts, etc.); or (c) any persons to whom this communication may otherwise lawfully be made; all such persons being referred to as "UK relevant persons". This material must not be acted on or relied on by persons who are not UK relevant persons. Any investment or investment activity to which this material relates is only available to UK relevant persons and will be engaged in only with UK relevant persons. Research issued by JPMS plc has been prepared in accordance with JPMS plc's policy for prevention and avoidance of conflicts of interest related to the production of Research which can be found at the following link: [J.P. Morgan EMEA - Research Independence Policy](#). U.S.: J.P. Morgan Securities LLC ("JPMS") is a member of the NYSE, FINRA, SIPC, and the NFA. JPMorgan Chase Bank, N.A. is a member of the FDIC. Material published by non-U.S. affiliates is distributed in the U.S. by JPMS who accepts responsibility for its content.

General: Additional information is available upon request. The information in this material has been obtained from sources believed to be reliable. While all reasonable care has been taken to ensure that the facts stated in this material are accurate and that the forecasts, opinions and expectations contained herein are fair and reasonable, JPMorgan Chase & Co. or its affiliates and/or subsidiaries (collectively J.P. Morgan) make no representations or warranties whatsoever to the completeness or accuracy of the material provided, except with respect to any disclosures relative to J.P. Morgan and the Research Analyst's involvement with the issuer that is the subject of the material. Accordingly, no reliance should be placed on the accuracy, fairness or completeness of the information contained in this material. There may be certain discrepancies with data and/or limited content in this material as a result of calculations, adjustments, translations to different languages, and/or local regulatory restrictions, as applicable. These discrepancies should not impact the overall investment analysis, views and/or recommendations of the subject company(ies) that may be discussed in the material. J.P. Morgan accepts no liability whatsoever for any loss arising from any use of this material or its contents, and neither J.P. Morgan nor any of its respective directors, officers or employees, shall be in any way responsible for the contents hereof, apart from the liabilities and responsibilities that may be imposed on them by the relevant regulatory authority in the jurisdiction in question, or the regulatory regime thereunder. Opinions, forecasts or projections contained in this material represent J.P. Morgan's current opinions or judgment as of the date of the material only and are therefore subject to change without notice. Periodic updates may be provided on companies/industries based on company-specific developments or announcements, market conditions or any other publicly available information. There can be no assurance that future results or events will be consistent with any such opinions, forecasts or projections, which represent only one possible outcome. Furthermore, such opinions, forecasts or projections are subject to certain risks, uncertainties and assumptions that have not been verified, and future actual results or events could differ materially. The value of, or income from, any investments referred to in this material may fluctuate and/or be affected by changes in exchange rates. All pricing is indicative as of the close of market for the securities discussed, unless otherwise stated. Past performance is not indicative of future results. Accordingly, investors may receive back less than originally invested. This material is not intended as an offer or solicitation for the purchase or sale of any financial instrument. The opinions and recommendations herein do not take into account individual client circumstances, objectives, or needs and are not intended as recommendations of particular securities, financial instruments or strategies to particular clients. This material may include views on structured securities, options, futures and other derivatives. These are complex instruments, may involve a high degree of risk and may be appropriate investments only for sophisticated investors who are capable of understanding and assuming the risks involved. The recipients of this material must make their own independent decisions regarding any securities or financial instruments mentioned herein and should seek advice from such independent financial, legal, tax or other adviser as they deem necessary. J.P. Morgan may trade as a principal on the basis of the Research Analysts' views and research, and it may also engage in transactions for its own account or for its clients' accounts in a manner inconsistent with the views taken in this material, and J.P. Morgan is under no obligation to ensure that such other communication is brought to the attention of any recipient of this material. Others within J.P. Morgan, including Strategists, Sales staff and other Research Analysts, may take views that are inconsistent with those taken in this material. Employees of J.P. Morgan not involved in the preparation of this material may have investments in the securities (or derivatives of such securities) mentioned in this material and may trade them in ways different from those discussed in this material. This material is not an advertisement for or marketing of any issuer, its products or services, or its securities in any jurisdiction.

"Other Disclosures" last revised February 04, 2023.

Copyright 2023 JPMorgan Chase & Co. All rights reserved. This material or any portion hereof may not be reprinted, sold or redistributed without the written consent of J.P. Morgan.

Completed 17 Feb 2023 08:54 PM EST

Disseminated 17 Feb 2023 08:56 PM EST