J.P.Morgan

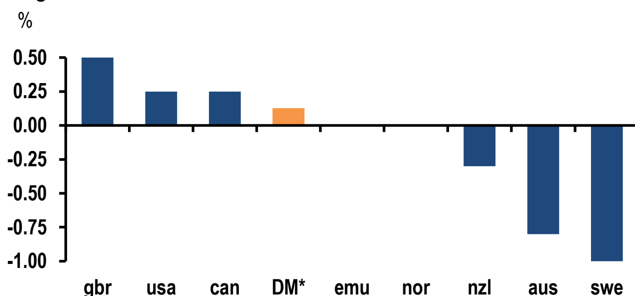
When you wish upon r*

- **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 remained 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 markets 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.

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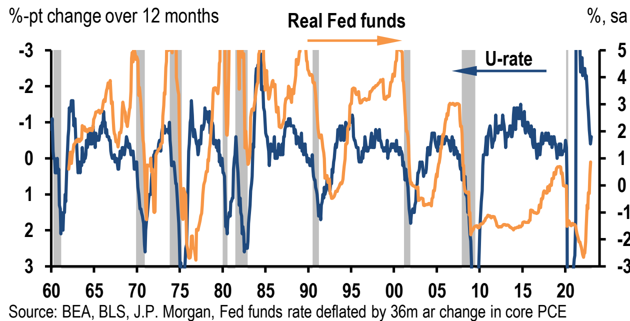
What's more, the economy's underlying structure evolves in ways that alter these linkages over time. It is thus no surprise that policymakers are genuinely cautious in making statements about where the neutral rates lies at any specific juncture. Indeed, history shows that both the average level of US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

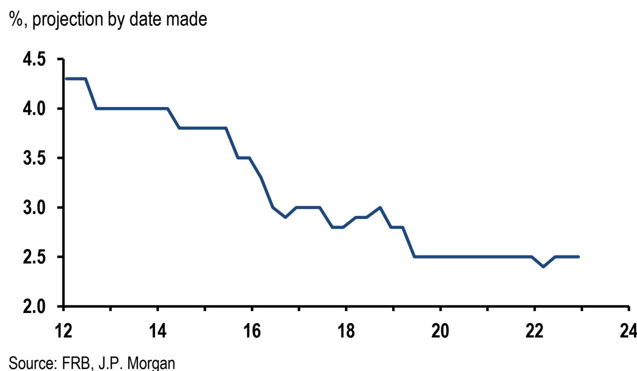
Figure 2: US real policy rate and unemployment rate



Source: BEA, BLS, J.P. Morgan, Fed funds rate deflated by 36m ar change in core PCE

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



Source: FRB, J.P. Morgan

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 Antipodeans.

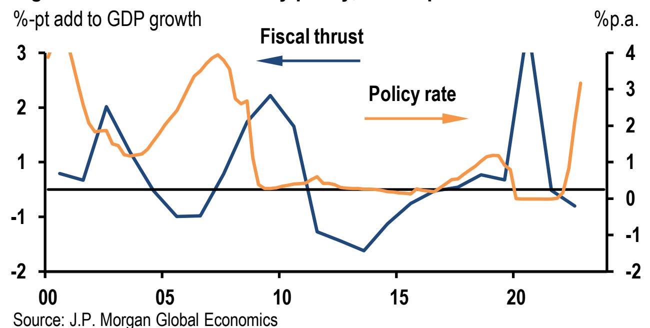
The r* industrial complex

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



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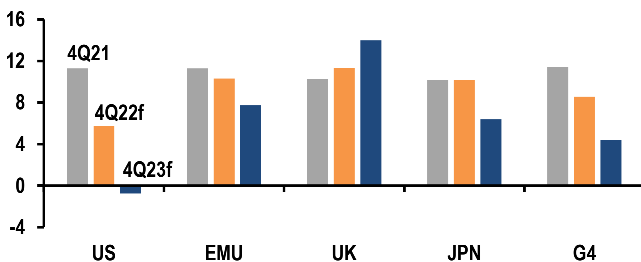
This time is different

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



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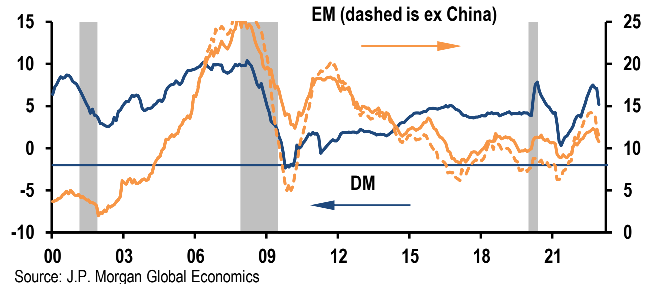
- **No credit overhang to unwind.** In the aftermath of the GFC the global economy went a prolonged period in which private sector credit demand remained weak despite low interest rates (Figure 6). In the immediate aftermath of the 2008-9 recession this impulse was greatest in DM as households de-levered 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



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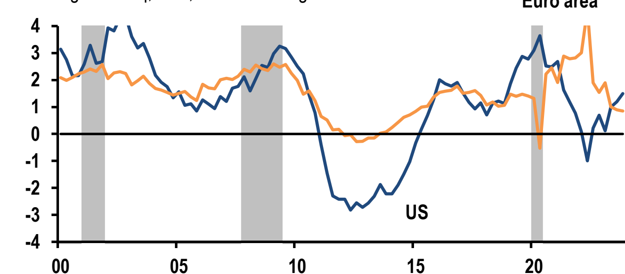
- **The absence of a large fiscal shock, so far**. Although budget deficits fallen from a 2020 spike which pushed DM deficits to a level of 11% of GDP, fiscal policy is not moving in the aggressive counter-cyclical fashion seen over 2011-15. To be sure there are notable drags as US transfers programs 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.

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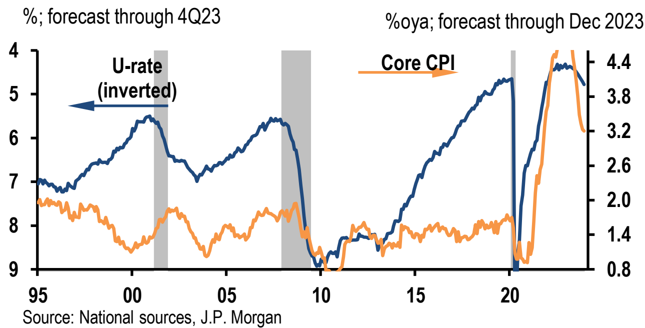
Figure 8: DM unemployment rate and core CPI

%; forecast through 4Q23 %oya; forecast through Dec 2023

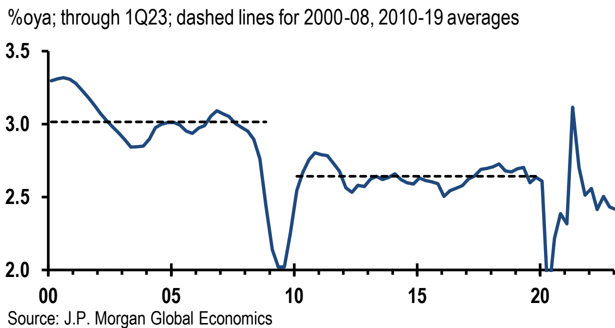


Source: National sources, J.P. Morgan

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 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

%oya; through 1Q23; dashed lines for 2000-08, 2010-19 averages



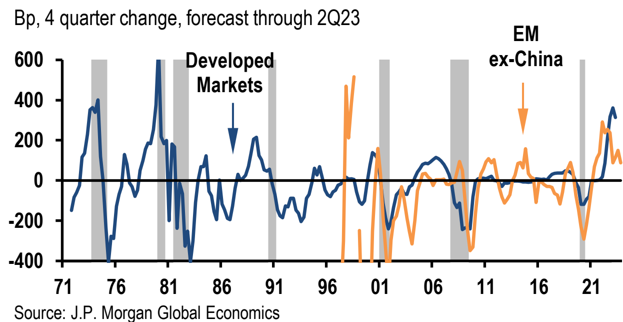
Source: J.P. Morgan Global Economics

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

Bp, 4 quarter change, forecast through 2Q23

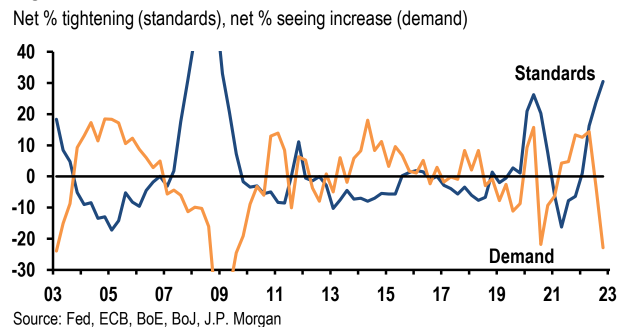


Source: J.P. Morgan Global Economics

This point is reinforced by a range of US model estimates that suggest that a sustained 100bp rise in Fed policy rates should depresses 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

Net % tightening (standards), net % seeing increase (demand)



Source: Fed, ECB, BoE, BoJ, J.P. Morgan

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.

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