Aligning Incentives

96 – 21 June 2021

Key points

- More than the message from the "median Fed forecaster" we focus on the polarization within the Federal Open Market Committee (FOMC). We remain in the "it's a transitory" camp on inflation, but we reiterate our view that US real rates should go higher.
- We take a hard look at Rhaguram Rajan's proposal to align the incentives of high and low carbon emitters towards the green transition.

Last week was dominated by the change in the Federal Reserve (Fed)'s open-market committee members' median forecasts for the policy rate. As such, bringing forward the Fed Funds lift-off to 2023 makes the trajectory more realistic as the market never believed the central bank's previous trajectory in which policy rates would not change before 2024 (our own baseline has been two hikes in 2023 since the end of last year). What we focus on is the polarization of the FOMC across doves and hawks as the distribution of the members' individual forecasts is widening. There are still doves who don't want to contemplate hikes in the "policy relevant horizon" at all, and hawks who seem to get ready for a higher number of hikes. This polarization echoes the general debate on the possible fate of the current inflation spike. We remain in the "it's transitory" cam", which seems to still dominate at the Fed even if clearly some members are not inclined to take chances.

The market has responded to the new Fedspeak with a flattening of the US curve. We find this move itself understandable, but we remain puzzled by the level of yields at the very end of the curve, which we find low compared to the Fed's median forecast for the "longer-term" Fed Funds rate. We reiterate our view that there is a plausible macroeconomic case for a rise in real rates in the US. We complement our argument by adding some considerations on supply and demand conditions on the US bond market in the next one or two years. US banks have raised their share in the ownership of US public debt, which for the recent period we attribute to the combination of a "deposit glut" which needs to be recycled and low demand for credit from the private sector. As the economy continues to reopen, we think this factor will fade, adding upward pressure to yields as the Fed tapers.

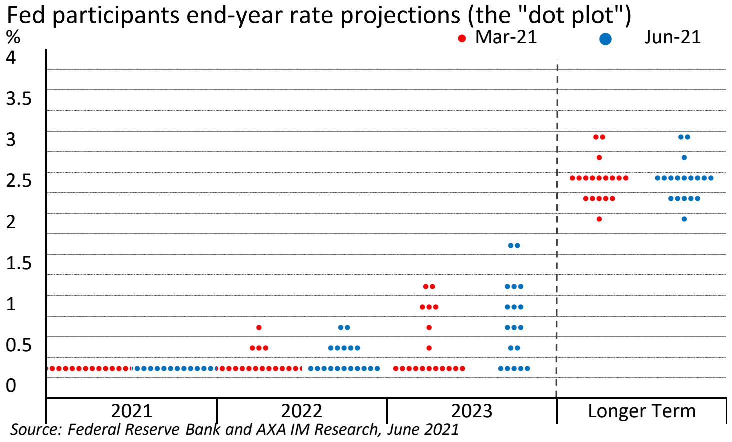
Last week we promised to extend our analysis of the G7 summit's conclusions pertaining to the funding of the green transition in the less advanced economies. We were intrigued by Rhaguram Rajan's proposal of a Global Carbon Incentive which would drive high CO2 emitters to curb their emissions and low emitters to keep them low. We have issues with the design of his formula – focusing on CO2 per head and ignoring CO2 per unit of GDP triggers all sort of adverse side effects – but his point on the potentially antagonistic interests of developed and less advanced economies when it comes to decarbonization holds. We think he dismisses carbon border taxes too easily as a solution, especially if the proceeds are recycled to fund transition projects in the South.

On the dot!

More than the change in the policy forecasts from the "median member", it's the division within the FOMC which we think is the most interesting signal we got from the Fed's communication last week. Indeed, in any case the market did not believe the message from the old "dot plot" – and its unchanged policy rate before 2024 – long before last week. From this point of view, with two 25 basis point (bp) hikes pencilled in in 2023 (which has been our baseline since March 2021), the Fed policy forecast is more realistic, while remaining extremely accommodative: the central bank would refrain from hiking the policy rate for around 2 years after the output gap is plugged, which is likely to have happened in Q2 2021 already.

The FOMC however is looking more polarized, with still five members who forecast no hike at all before 2024, while now seven of them (against only four in March) would see this happening next year already. Moreover, beyond the discussion on the timing of the lift-off, the most hawkish members now expect the Fed to be forced into a rapid succession of hikes, with five of them forecasting a Fed Funds rate above 1.0% in 2023, against only two in March (Exhibit 1). This polarization echoes in our view the underlying debate on the fate of inflation in the economic profession at large, on which we have been commenting for several months now. The fact that the median forecast for the first hike is still a long way away suggests the "inflation hump" scenario continues to be broadly supported at the FOMC, but some members are clearly concerned by the latest prints and want to get ready to stop any lasting building up in price expectations above the Fed's target. This is in a nutshell what Jim Bullard expressed quite candidly in an interview on CNBC on Friday: *"these are big numbers, and we have to be nimble"*.

Exhibit 1 – Fewer doves, bolder hawks
Fed participants end-year rate projections (the "dot plot")



Source: Federal Reserve Bank and AXA IM Research, June 2021

Beyond the difficulty to sift through inflation data for transitory and persistent factors, **monetary policy-setting is going to be very difficult in the months ahead given the questions surrounding fiscal policy.** At the beginning of the pandemic, both macro policies were pushing in the same direction and complementing each other: it was all about substituting public spending to missing private income and avoiding any debate on the cost of such fiscal support by keeping market interest rates low. The economics of the reopening are more complex. There is an ongoing debate on the appropriateness of Biden's stimulus even among staunch supporters of active fiscal policy while the central bank has to balance the risk of allowing the resulting overheating to lift inflation too high for too long, against the risk of forcing a" sudden stop" in fiscal support while the economy remains intrinsically fragile by tightening too early.

The Fed's Average Inflation Targeting (AIT) – and its corollary, waiting for longer than usual after the economy has turned "red hot" before normalizing interest rates – is clearly tilted towards avoiding the second risk. Indeed, during the overshooting phase, the US government finances would continue to benefit from extremely low interest rates. In this configuration, by the time the Fed hikes, the cyclical component of the government finances would have significantly improved, and public debt would have started to spontaneously erode, reducing the need to engage in a brutal fiscal discretionary tightening down the road. A rising number of FOMC members may however start to consider that a too long "grace period" could drive long-term inflation expectations significantly above the Fed's target in an entrenched manner. **The result of the debate between hawks and doves may ultimately be settled by the state of fiscal policy at the end of the year,** which at this stage remains very uncertain given the Democrats' wafer-thin majority in the Senate. If Biden manages to get the entirety of his additional two fiscal packages through Congress, even if those are less massive in the short run than the first one, the hawks might get the upper hand if inflation expectations are still elevated by then.

We need to take financial stability concerns on board as well though. In our critique of AIT last year (see Macrocast # 59) we discussed a "thought experiment" in which the Fed was faced with a swift decline in the unemployment rate, strong credit growth and buoyant asset prices. Our contention then was that even if inflation was only slightly above its target, the Fed would feel compelled to hike. An interesting side-effect of last week communication by the Fed is that equity prices suffered significantly. If even the whiff of a rate hike sometime in 2023 is enough to spook risky assets, the hawks may think twice about trying too hard to deliver on their urge to hike next year already. As things stand, we remain comfortable with our call for two rate hikes in 2023.

Exhibit 2 – US curve flattening

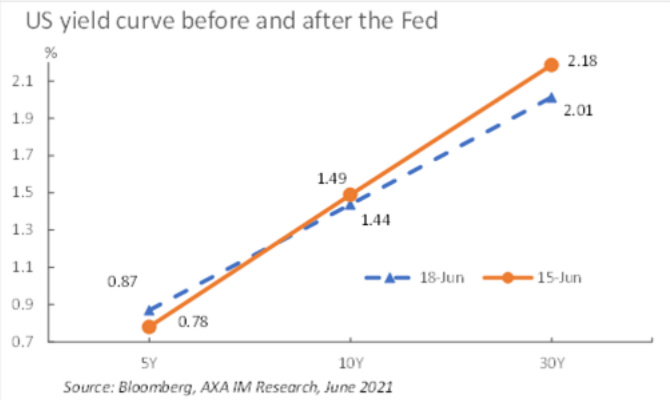
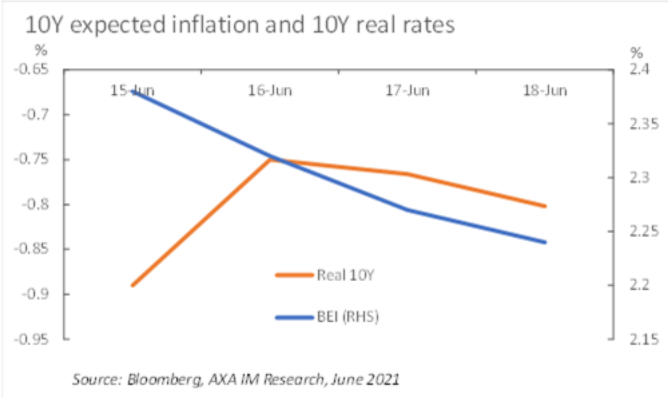


Exhibit 3 – Expected inflation down, real rates up



Turning the bond market, focusing on the 10 year yield the reaction has been very limited. However, the curve has flattened significantly (Exhibit 2), the rise in the 5-year yield reflecting expectations of a faster monetary tightening while the decline at the very long-end of the curve (almost 20bps on a 30 year) conveys the message that a less "benign" Fed in the face of price pressure on exiting from the pandemic crisis would provide more protection against an inflation drift in the long term. **While these *changes* are understandable, we remain puzzled by the *level* of yields.** Our compass for this is the FOMC's longer-term forecast for the Fed Funds, which we think is a good proxy for the "equilibrium rate" in the US. Its median level is at 2.5% (unchanged from March). That 30-year interest rates now stand nearly 50bps below this equilibrium rate – especially if one takes on board a term premium – would signal intense, and in our view unreasonable, market bearishness on the long-term trend for nominal GDP growth in the US.

Real rates and "supply and demand" on the bond market

While inflation expectations have been revised down, the US 10-year yield has risen somewhat in real terms after the Fed meeting (Exhibit 3). This is consistent with a less benign Fed, but b**eyond the gyrations in Fed speak, we have argued already in April (see Macrocast # 88) that there is plausible case for a rise in real rates in the US on trend.** We listed at the time a number of long-term macroeconomic factors. This week we complement this for the year ahead with some considerations on supply and demand conditions on the US bond market as the economy reopens.

In April, we made the point that structural demand from not-profit seeking, non-resident investors for dollar-denominated assets, which had contributed to the decline in the US equilibrium rate before and after the Great Financial Crisis (GFC), was now much less assured. The pandemic, despite the "fight for safety" that it triggered, did not usher in a massive return to the US bond market by foreigners, at least until the end of 2020, which is the latest for which we found comprehensive data on the Treasury Department database (Exhibit 4). However, over the last

10 years there has been a steady increase in the share of US banks in the ownership of US public debt, exceeding that of pension funds for the first time in the second half of 2020. Using weekly data from the Fed, so far in 2021 there has been no trend reversal recently (Exhibit 5). This may help explain why the US bond market remained composed, with yields retreating from their 1.74% recent peak in late March.

Exhibit 4 – Less foreigners, more US banks

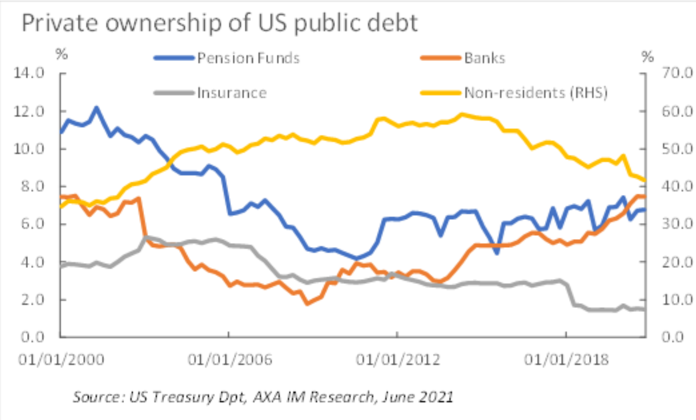
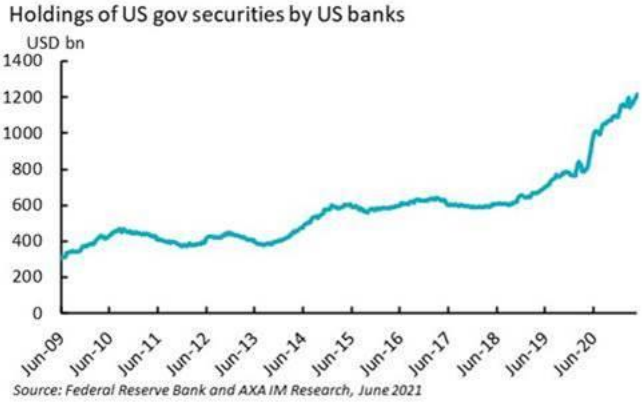


Exhibit 5 – Banks' appetite for USTs untamed in 2021



The rising share of US banks in public debt ownership since the GFC for a part reflects the regulatory pressure which has forced credit institutions to keep more risk-free, liquid assets on their balance sheet, but the recent spike **probably reflects first a flight to safety but later as well as an adaptation to the "deposit glut" triggered by the pandemic**. In times of crisis when credit risk is high, banks usually react by re-allocating a larger share of their balance sheet towards government bonds. Such behaviour was widespread in the Euro area – and particularly in the peripherals – in the aftermath of the GFC 10 years ago. We suspected in the US this reallocation continued into 2021 out of a combination of (i) ample overnight deposits, as forced savings accumulated; (ii) low demand for credit from the private sector after the leveraging spree seen at the peak of the pandemic last year; (iii) decent carry-trade as the US bond market kept yields in positive territory.

This combination is unlikely to persist. **As the economy reopens, excess savings will be gradually absorbed while – possibly with a lag – demand for credit from the private sector should re-start, leaving less resources to be invested on the US sovereign bond market by banks**. True, as reopening makes further progress, the US cyclical deficit should fall which, combined with the end of the emergency stimulus, should reduce the supply of US treasuries next year… but this is going to be partly offset – we don't know yet to which extent – by the two new programmes, and by the tapering which seems to be consensual across hawks and doves even if some haggling around the precise timeline and speed of completion is probably still underway. This would constitute another "technical" factor behind a further rise in real rates next year.

Defining "international fairness" in net-zero strategies

As much as your humble servant can never completely shake his fondness for monetary policy – that's what 12 years at Banque de France would do to you – there is more to life, even for a dry economist, than gazing at the endless complexities of central banking. Last week we mentioned that the G7 reaffirmed its – so far unfulfilled – commitment to transfer USD100bn per annum in financial resources from the public and private sector to help less mature economies through their own net zero trajectory. In the following page of the communique, the G7 expressed an unambiguous support to carbon pricing: *"we recognise the potential of high integrity carbon markets and carbon pricing to foster cost-efficient reductions in emission levels (…) We underline their importance towards the establishment of a fair and efficient carbon pricing trajectory to accelerate the decarbonisation of our economies"*. Two weeks before the G7 summit, Rhaguram Rajan, former Chief Economist of the IMF and former Governor of the central bank of India made a proposal combining the two threads: **using carbon pricing methods as a tool to generate transfers to developing nations in a way which would incentivise them to avoid raising their carbon intensity as their GDP grows.**

The conflict of interest between developed and developing nations when it comes to decarbonisation is a well-recognized issue. The usual grievance in the emerging/developing countries is that – should the price of carbon be the same across the planet – they would face a higher hurdle to their economic development than the richer economies, even though their contribution to the depletion of the global carbon budget – the difference between the maximum stock of CO_2 released in the atmosphere consistent with a certain limit to global warming and the cumulative quantum of carbon already issued- is comparatively small.

Rajan proposes to align incentives across the two groups. Countries whose carbon emissions per head exceeds the world average would pay a carbon penalty, which would be the product of their excess per capita emissions, their total population and a "Global Carbon Incentive". To take an example, the US current carbon intensity stands at 16.1 tons/head. For a GCI at 10 dollars and a world average carbon per head of 4.6 tons (t), the US penalty would stand at USD37bn given the US population. The sum of these penalties would fill the coffers of a global fund, on which countries with a carbon/head ration below the average could draw following the same formula. For instance, India, which issues 1.9t of CO_2 per head, would receive USD39bn. High emitters would thus have a strong financial interest in reducing their footprint, while low emitters would benefit from keeping their carbon intensity as low as possible.

Beyond the "mechanistic" nature of the formula, which would – at first glance – reduce risks of endless haggling in international forums, this system would benefit from what is a key feature of carbon pricing, explaining its appeal among economists: once the penalty is established, stakeholders are perfectly free to choose whatever approach they like to curb their emissions. Carbon pricing is not prescriptive, leaving it up to individual governments to design the appropriate policies.

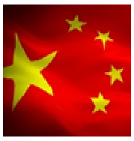
So far, so appealing, but it would not be the first time however that an international mechanism, based on carbon pricing, fails to take off. The Kyoto agreement in 1997 set the basis for internationally tradable carbon credits. More than twenty years later in it is still a source of international disputes. Looking hard into this new proposal, we find some limitations.

The system ignores the levels of economic development. Rajan's idea is based on a specific definition of carbon intensity, CO_2 per head. Another one could be envisaged: CO_2 per unit of GDP. Indeed, in the current state of his proposal, high emitters with a comfortable GDP per head would be in a better position than the others. To take an example, under Rajan's plan, although the two countries have roughly the same CO_2/head ratio, the US would end up paying a penalty equal to 0.2% of its GDP, while for Turkmenistan the bill would amount to 1.4% of GDP. In other words, some of the **countries with the highest economic capacity to pay because of their high level of development would pay proportionally less than less advanced economies.** However, moving to a carbon/GDP ratio would completely change the ranking of countries across the high/low emitters frontier. For instance, India's carbon emission per unit of GDP is about 3 times the level found in France, although its CO_2/head is 2.5 times lower, which of course simply reflects the fact that its GDP per head in India is much lower.

True, Rajan adds to his proposal a radical change in the way the carbon footprint is measured. In his view, the carbon content of a country's imports should be added to a country's emissions and subtracted from the exporter's. This may help reduce the imbalance between countries such as the US and Turkmenistan (we suspect the latter's carbon footprint has a lot to do with what it produces to export), but this would become counter-productive. Indeed, a low-emission country could constantly raise its carbon intensity while keeping its transfers from the GCI unchanged as long as this was done to increase its exports to high-emitters. This would benefit small, export-oriented economies at the expense of countries trying to build up a domestic demand model. At the beginning of his piece, Rajan states that "*the bureaucrats who dominate international meetings will want to dismiss this proposal as interesting but simplistic".* In this instance, we would sympathize with the bureaucrats. For a CGI to work, the formula would have to be significantly refined, in our opinion.

Still, a central point of Rajan's proposal cannot be dismissed: aligning incentives across high and low emitters is not just a matter of fairness. It is also a question of collective welfare. If the countries which are currently low emitters were to increase their carbon intensity, the "good intentions" now displayed by high emitters to move towards net zero could be easily thwarted. The example of India provides a good illustration. At the moment, this country emits carbon to the tune of 1.9t per head, much below the average. **If India were to merely bring its carbon intensity to the world average of 4.6t/head, given its size, this would raise total world emissions by 10%,** enough to offset a lot of what the EU and (now the US) can achieve by curbing their own emissions.

We think Rajan dismisses a bit too quickly carbon border taxes as unfair. In his paper, a carbon tax is presented as ultimately transferring the adjustment burden to the poorer nations, as the carbon content of their exports would be high (e.g., because their energy mix is often still heavily reliant on coal). One thing that we had to consider at the time of the “trade war” between the US and China is that the cost of a targeted custom tariff – which in essence is what a border tax is – is primarily borne by the country which implements it, as it results in a decline in its purchasing power, at least until supply chains change so that it can rely on a less carbon-intensive producer. It would still provide a strong incentive to exporting countries to reduce their carbon intensity, or at least not raise it for those where it is still low, to win the race across alternative suppliers. Still, Rajan’s idea of organizing transfers to developing countries to help them deal with their own green transition can be recycled in what would become of the proceeds of a border tax. In clear, a share of these proceeds, levied in the rich countries, could be used to fund decarbonization projects in less advanced countries.

Country/Region	What we focused on last week	What we will focus on in next weeks
	• FOMC raised forecasts for Fed Funds Rate, median now sees two hikes in 2023; now "talking about talking about tapering"; and IoER +5bps • 10yr yields rose to 1.58%, before reversing gains, but rotation from Bei to real rates • US retail sales -1.3% in May, close to flat for Q2. Industrial activity +0.8% in May, expecting GDP of 8% annualised • Pres Biden extends tour, met EU leaders and Putin	• PCE inflation (May), expected to rise again, but should peak this month against reverse base effects next • Personal spending and income data watched to fine tune Q2 consumption forecast • Jobless claims watched after unexpected rise this week • 5-10yr consumer inflation expectations (Michigan Uni, Jun) watched after preliminary dip back to 2.8% • New & existing home sales (May), watch for rebound from Apr's drops against still negative tone in mortgages
	• Germany raises 2022 borrowing from EUR 81.5bn to EUR 100bn, but we highlight regular undershooting of deficit • Core inflation rose to 1.0%yoy mainly on seasonal distortions • No sign of pressure from German wage negotiations in retail and construction sectors	• Results of the French regional elections: check the degree of political fragmentation and the strength of the "front républicain" • PMIs surveys, German IFO and French INSEE to show further momentum in services but peak behind for manufacturing • ECB credit data and EU council on NGEU
	• Re-opening of economy deferred to 19 July as new cases rise to 11k/day – highest since Feb • CPI inflation rise to 2.1% May, 22-month high • Employment +113k (3m Apr), unemp 4.7% • Retail sales -1.4% (May) after +9.2% (Apr), broader consumption likely with re-opening • Lib Dems win by election in huge swing vote	• BoE announcement, no change to policy and no forward projections published at this meeting. Minutes judged for broader outlook • PMI preliminary estimates for June • Public finances (May) • Consumer confidence (Jun), watched for any retracement in outlook
	• The BoJ extended the special covid-19 prog until Mar 2022 and will release a new financial support to address climate change issues • May real export slightly down by 0.2%mom • New core cpi stands at -0.2%yoy	• June Manufacturing PMI Flash to assess the level of demand but also the shortage in auto production • June core CPI Tokyo (exc food) should be flat despite strong energy contribution
	• May activity data disappoints the market, but better consumption and services growth is encouraging	• May activity data to show a recovery in consumer spending and manufacturing investment, while industrial production growth should remain solid Worth paying attention to the commodity market to see any sustained reactions to China's recent actions to dampen metal prices
	• CB of Indonesia, Taiwan, Egypt, Turkey and Ukraine remained on hold, Brazil hiked rates by another 75bps	• CB meetings: Thailand, the Philippines and Mexico to stay on hold, while Czech and Hungary to start the interest rates normalisation cycle by a first hike • May IP in Poland, Taiwan • May CPI in Singapore, Malaysia, SA • Korea 20-days exports for June

Upcoming events	US:	Wed: Mfg&Serv PMI ('flash', June); Thu: GDP (final, Q1), jobless claims; Fri: Core PCE price index (May), Michigan consumer sentiment (Jun)
	Euro Area:	Tue: EA cons conf (adv, Jun); Wed: Comp PMI ('flash', June), Ge, Fr mfg&serv PMI ('flash', June)
	UK:	Tue: PSNB (May), Wed: Comp PMI ('flash', June); Thu: MPC meeting (unch, 0.1%); Fri: GfK cons conf (June)
	Japan:	Wed: BoJ meeting minutes from 26-27 Apr
	China:	Mon: One-year loan prime rate

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