



## It ain't over 'til it's over

# 68 – 16 November 2020

### Key points

- The sanitary situation in the US is concerning and the good news on the vaccine won't likely change the macro trajectory before mid-2021. In the meantime, policymakers will be under heightened pressure. The European Central Bank (ECB) is moving towards implicit yield control but in some EMs the room for accommodation has disappeared. It would be nice to get some closure on the Brexit saga, but the negotiations may have to spill over next week.

After the near-exclusive focus on the US elections, attention has returned to the sanitary situation. News on this front are not positive in the US, pointing at more severe restriction to activity in the weeks ahead. This, together with the continuation of the lockdowns in many European countries, suggests that the good news on a vaccine will not alter the trajectory of GDP growth in most developed nations before mid-2021.

During the first wave in the US Democrats and Republicans had managed to bridge their difference and come up with a huge fiscal stimulus. So far in this second wave, no progress has been done. We are convinced help will come, but more in a reactive than in a pre-emptive way, and probably with less magnitude.

Meanwhile, in Europe the ECB is becoming ever clearer on its pandemic-fighting strategy. Christine Lagarde speech at the central bank's annual conference contained more than a hint at implicit yield control. With its insistence on fighting "crowding out", the ECB sent the signal it would effectively cap sovereign interest rates even when the supply of sovereign paper rises to make space for the fiscal stimulus. This implies that it will need all the flexibility of the PEPP – which we expect to see extended in December - to achieve this.

But policy accommodation is no longer possible everywhere. The market expects a huge rate hike in Turkey this week (marginally south of 500 basis points, on top of the 200 basis points delivered in September). Their situation is significantly less problematic than Turkey's but India and to a lesser extent Mexico are also dealing with a resurgence in inflation which will impair their capacity to provide additional stimulus. This is not necessarily conducive to systemic crises in EM (in most cases –Turkey being a major exception - their international financial position is solid) but is an issue for global demand in this second wave.

This week is expected to bring closure on the "Brexit saga" but negotiations may have to continue into next week. We don't think the dismissal of two leading "Vote Leave" advisors from the Prime Minister's office necessarily reflects a change of stance on this issue from Boris Johnson. He still needs some concessions to sell the agreement to the most radical wing of his party. We remain optimistic, but it will be a tense game until the very end.

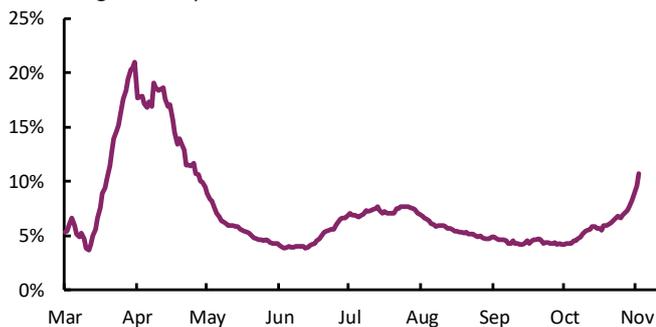
## US emergency

While the dust has not yet settled on the US elections – and probably won't before the two run-offs in Georgia on January 5<sup>th</sup> – immediate focus may have to turn again to the pandemic. Positivity rates continue to rise in the US (see Exhibit 1), especially in the Great Lakes/Mid-Western area. The incidence rate (number of cases per 100,000 people) has reached 57 in Michigan last week, close to the level France reached when the second lockdown started, even if differences in testing may blur the comparison. This is spreading to coastal areas which had managed to get the pandemic under control last summer. In the state of New York for instance the incidence rate stood at 18 last week, doubling in 2 weeks, close to the French level of early October.

From an economic point of view the US has been faring much better than Europe so far – although cumulated covid-related deaths in the US per head are now well above the levels seen in Italy or France – because (i) it eschewed national lockdowns while most states imposed less stringent restrictions to activity and (ii) it chose a “carpet-bombing” approach to fiscal support. So far, we had seen across the US only small movements towards re-imposing lockdowns or even postponing planned re-opening (see Exhibit 2) but this is probably on its way. New York Governor Cuomo last week order bars and restaurants to close by 10 pm, and Mayor di Blasio mentioned the possibility of schools closing as early as this Monday. With Thanksgiving approaching (November 26<sup>th</sup>), policymakers will be under pressure to allow more mobility than during the first wave, but the US is likely to face significant hurdles to activity into December.

Exhibit 1 – It's surging

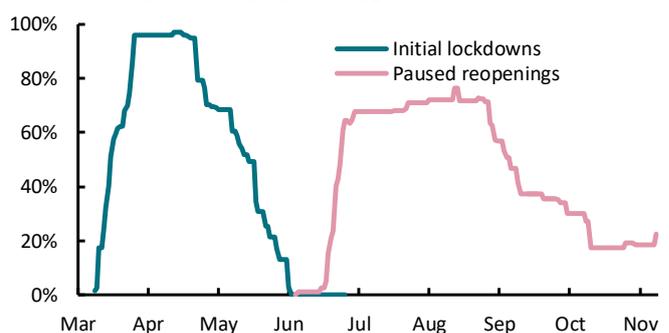
US Testing Positivity Rates



Source: CDC, AXA IM Research, November 2020

Exhibit 2 – Restrictions are only starting to come back now

States in lockdown as % national GDP



Source: NYT, BEA, AXA IM Research, November 2020

**The hazy political situation at the federal level is not helping.** While individual states retain essential powers when it comes to lockdowns, some aspects of the fight against the pandemic are within the purview of White House. The Centre for Disease Control's website provides a useful introduction to federal powers on these matters. On top of the possibility to restrict foreigners' entrance on the US territory – a strictly federal remit - the central government has some control over inter-state mobility and could severely restrict air transport for instance. However, Donald Trump's latest statements on Friday evening on the pandemic were focused on a future vaccination programme and dismissive of a lockdown option.

**The US is left with a coordination issue. It is highly likely that states will – for most of them – gradually embark into some form of lockdown in the weeks ahead, but this time without the support of the massive federal stimulus triggered during the first wave.** Although Republican Senate majority leader Mitch McConnell had indicated immediately after his re-election that a Covid relief bill would be the first item on the to-do list during the lame duck session, no progress has been made so far on this. There is still a bit of time – and in any case Congress needs to pass a government spending bill by December 11<sup>th</sup> to avoid a shutdown – but this issue is in our view the most crucial one during this very unusual “transition”.

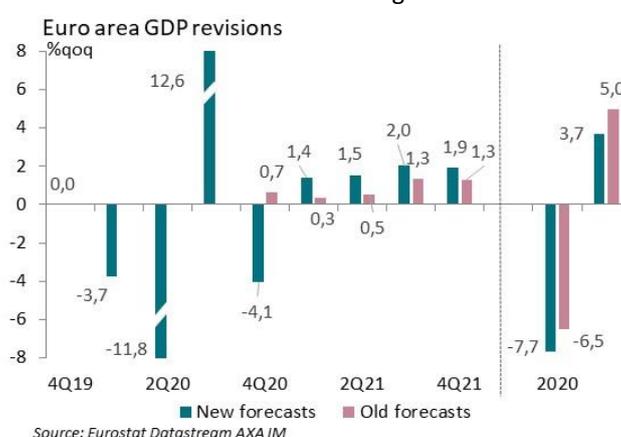
## The vaccine and the trajectory

The market has reacted strongly to the good preliminary news on Pfizer's vaccine, which reported a 90% efficacy. This will help dispel the concern that the lockdown/re-opening pattern, and its persistent damage to trend growth, would be a permanent state of affairs (assuming it provides lasting immunity and the virus does not mutate beyond

its reach). That at some point the world economy would be Covid-free was already in most forecasters' baseline (it was in ours, since we have no "third wave") but it is always good to have strong scientific evidence for such a key assumption. A crucial question though when thinking about what it means for the growth trajectory is how quickly it may clear the sanitary horizon.

Pfizer is communicating on a cumulated production of 1.3bn doses by the end of 2021. Since the vaccine takes two jabs, this would be enough to cover two third of the population of the nations which have pre-contracted with Pfizer, mostly developed countries (the vaccine's dependence on a robust cold chain makes it ill-suited for many emerging markets). If a 90% efficacy is confirmed, this could be enough to provide herd immunity. However, it may not be quick enough to alter the state of play for this winter, which to a large extent is going to drive the overall growth performance of 2021. There is absolutely no reason the depth of the ongoing Q4 GDP contraction should be altered - vaccination beyond the study group would start in December in the best scenario, and it takes three weeks between the two shots - and on balance we think there is little reason why we should not continue to expect a shallow recovery in Q1 2021 (see Exhibit 3).

Exhibit 3 – How the second wave changed our forecasts



Indeed, assuming governments will take the risk of re-opening their economy quickly after Christmas in the knowledge that a vaccine is on the way is a brave bet in our view, even with an immunisation programme starting with the health professionals reducing the pressure on the healthcare system. It is likely that the vaccination campaign would extend first to the most vulnerable demographics after the healthcare staff. Between 15 and 20% of the population in developed nations is older than 65, i.e. c.200 million people, in need of 400 million doses. This alone – assuming the vaccine is as efficacious on elderly people as on the general population, which the data so far released by Pfizer cannot ascertain - would absorb more than the entirety of the likely vaccine output available in Q1 (it is likely that it would take some time for production to reach its cruise speed, so the heuristic of 1.3bn/12 to proxy monthly output is probably wrong). True, more vaccines on top of Pfizer's may become available, but there is likely to be production/distribution bottlenecks anyway (there is for instance a question on procuring enough medical glass for the vials).

The picture would get clearer from the spring of 2021 onward, but depending on the production capacity, herd immunity may not be reached before well into the year – possibly after the summer, which would be bad news for the tourism season in the Northern hemisphere. **The confidence effect brought about by the vaccine will have to be measured against the scarring effect of nearly a year and half of uncertainty and stop and go.** Lost jobs will not be immediately recouped. The legacy debt incurred by the corporate sector could also impair the rebound in investment.

However, **the perspective of restoring normal sanitary conditions at some point in the second half of 2021 should make policymakers more generous with their stimulus.** Indeed, if 1H 2021 is the "last mile" that needs to be covered, then fiscal authorities should be less worried about the possibility of an endless drift in public debt and take the risk of providing more support in the months ahead. In the same vein, central banks are in general allergic to the notion that they could fall in the "Japanese trap", forced to engage in more or less explicit debt monetization on a permanent basis. If there is a plausible horizon for normalization, they should be more open to providing help in making the fiscal push financially sustainable.

## It's getting clearer now

Lagarde's speech last week contained the right "short term monetary policy hints" which one would expect from a "Sintra speech", which had been routinely used by Draghi to telegraph imminent decisions on top of more strategic considerations. That another stimulus package was due in December was obvious after the last Governing Council meeting. There remained some doubts as to the precise content of the package. Lagarde could hardly have been clearer: it will revolve around the Pandemic Emergency Purchase Programme (PEPP), which will need to be extended in time and quantum, and the Targeted Longer-Term Refinancing Operations (TLTROs). Again, **there was no mention at all of the possibility to cut the deposit rate further, which we think puts this firmly off the table** – they would want to prepare the market better if they were seriously thinking about cutting the deposit rate again, given how controversial such a move would be.

There is still quite a lot we don't know about the December meeting (e.g. how the ECB will fine-tune the recalibration of PEPP between quantum and time, or how exactly the TLTROs are going to be made more generous), but anyway **the speech went far beyond pre-selling the December move. It contained what we think is a truly strategic shift**, which to some extent pre-empts the conclusions of the review which has barely started.

Lagarde reiterated the point now commonly made by ECB speakers – even if it is a small revolution in its own right – that fiscal policy should be the spearhead of the fight against the economic consequences of the pandemic. When the ECB acknowledged in its September prepared statement the contribution from fiscal policy to making progress towards price stability (explicitly taking on board the contribution from the fiscal stimulus to its inflation forecasts), this was laying the ground for proper cooperation between governments and the ECB. In her "Sintra" speech, Lagarde went one step further when she said that *"while fiscal policy is active in supporting the economy, monetary policy has to minimise any "crowding-out" effects that might create negative spill overs for households and firms. Otherwise, increasing fiscal interventions could put upward pressure on market interest rates and crowd out private investors, with a detrimental effect on private demand"*.

**"Crowding out" in our view encapsulates the new thinking at the European Central Bank.** Usually, the concept is favoured by fiscal hawks. The idea is that beyond a certain point, fiscal reflation become detrimental to growth because government issuance "smothers" private sector funding. Here, the concept supports the views of the monetary doves.

**We don't think it is an over-interpretation to read this as the pre-announcement by the ECB of implicit yield curve control.** The ECB's rationale for quantitative easing was initially focused on displacement – forcing a reduction in the interest rate on risky assets by removing large quantities of safe assets from the investible universe - and money creation – by-passing banks by channelling cash directly to non-financial agents. Now it's more straightforward: **the ECB will act by effectively capping sovereign interest rates even when the supply of sovereign paper rises to make space for the fiscal stimulus.**

We don't think the ECB will go as far as the Bank of Japan and announce an explicit target for long term interest rates, if only because they would have to engage in constant fine-tuning not just on the reference yield – 10-year Bund – but also on all the sovereign spreads. **But minimizing "crowding out" is consistent with continuing to take a relaxed approach to the ECB limits.** Indeed, the ECB can hardly tell the governments "we have your back" and then withdraw support because their holdings of sovereign bonds have reached a certain level. Actually, Lagarde insisted in her speech that support was not only needed in terms of quantity, but also in terms of duration, which is another indication that the central bank is in this for the long haul.

Assuming Lagarde's speech reflects the centre of gravity of the Governing Council's views, what would be left to discuss in the strategy review? Beyond some obvious moves, such as making the inflation target properly symmetric, we think the debate could focus more on preparing the "exit strategy" from the emergency framework.

**Arguably the Euro area will no longer be in a proper “state of emergency” towards the end of 2021 if the sanitary outlook has cleared.** Maintaining the PEPP beyond such point would be difficult to justify. **However, it is highly unlikely that inflation could be materially close to 2% by then** (the ECB’s latest forecasts – established before the second wave – put it at 1.5% year-on-year in Q4 2021). This alone would mean that the “ordinary” monetary policy stance would have to remain accommodative.

Fiscal policy will also probably need to remain supportive. While GDP will be growing again, the output gap (the distance between where GDP actually is and where it should be if it had grown on trend) will still be massively negative. The economy won’t have reached the “boiling point” beyond which it can grow on a sustained basis without policy props (in particular because wage moderation would still be in full swing). This means that public deficits would remain huge, fuelling a high supply of government paper at a time when savings would start becoming less abundant (the savings ratio is probably already past its peak, while public debt will probably continue to rise for several years).

**For these two reasons – low inflation and risks of “crowding out – significant quantitative easing will still be justified.** In all likelihood, this would entail boosting the ECB’s “ordinary” QE, the Asset Purchase Programme. Since even the German government has converted to fiscal profligacy, the supply of Bunds is rising, which would make it easier for the ECB to maintain a stream of bond purchases while respecting the capital key to allocate them, without allowing its holding of sovereign bonds to exceed 30% in any of its constituencies. Moreover, the EU’s Recovery and Resilience Fund will have taken off by then, offering another pool from which the ECB will be able to buy (especially since the holding limit stands at 50% for supranational bonds). Still, the market may question by that time the credibility of APP if indeed the central bank is in for the long haul should the ECB fail to explicitly tackle the “limits” issue. This is when extending to the APP the flexibility offered on the PEPP will be crucial.

**More fundamentally, the strategy review may have to address head-on the issue of cooperation between monetary and fiscal policy which we think will need to be maintained well *after* the end of the current emergency.** Indeed, there will need to be some mutual trust between the central bank and the governments. Fiscal authorities will need to know they can count on prolonged monetary support to maintain their own accommodative stance for long enough before shifting to a gradual tightening without too much pressure from the “bond vigilantes”. Symmetrically, the central bank will need to be reasonably comfortable with the fact that fiscal policy will at some point start consolidating to take the risk of extending long term support. **This probably calls for a thorough overhaul of economic macro management in the Euro area which goes beyond the ECB’s own review, but they can help steer the debate in Brussels on the fiscal rulebook.**

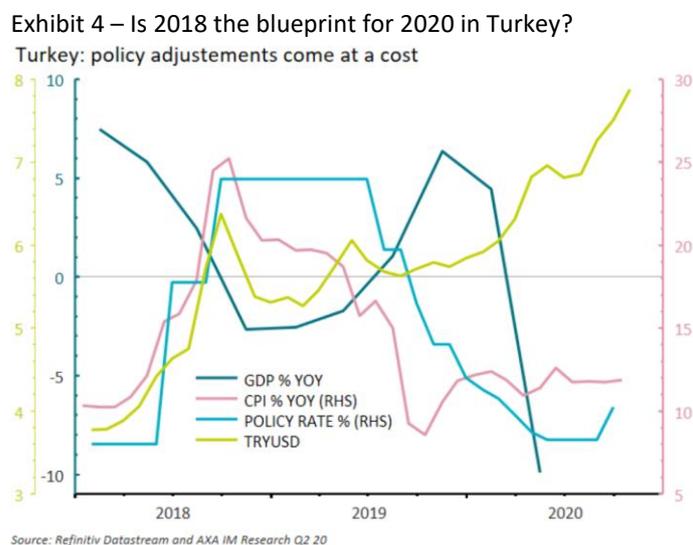
## **Conflict of objectives looming in EM**

More monetary accommodation is not on the agenda everywhere in the world though. The market has welcomed the replacement of the economic policy-making team in Turkey last week with a spectacular rebound in the exchange rate. The message to investors – the bit on “*turning Turkey into a low risk and high return investment location*” specifically - was widely read as signalling an imminent and massive interest rate hike. Why this had to be done with a new Governor at the CBRT is unclear – the last one ended his tenure with a 200 basis points’ hike – but in any case, **the market is now expecting a very significant move at the next CBRT meeting on November 19<sup>th</sup>.**

According to Bloomberg, forecasters expect on average a 475-basis points hike this week, to 15%, which would bring it squarely in positive territory in real terms (inflation hit 11.9% in October). Beyond the move on the main policy rate, investors will probably also want to know more about monetary policy transmission. The CBRT has engaged in policy tightening by “stealth” recently, tweaking rates on various liquidity windows. Key is to see how banks will pass the central bank’s hike to the remuneration of their lira deposits, which so far had remained too weak relative to inflation, thus fuelling more dollarization of the Turkish economy. In other words, **the bar is high to keep investors happy this week now that their expectations have shifted.**

Turkey is back to where it was in mid-2018. Inflation had reached 2-digit levels at the beginning of that year, but CBRT refused to hike until June, and as often in this type of configurations, when finally it relented, the tightening

had to be massive (they brought their main policy rate from 8% to 17.75%). The market turmoil was then fuelled by political tensions with the US (on August 9<sup>th</sup>, 2018 President Trump raised customs duty on Turkish products to incentivise Ankara to release American citizen Andrew Brunson). The exchange rate fell further, forcing yet another policy rate hike to 24% (see Exhibit 4).



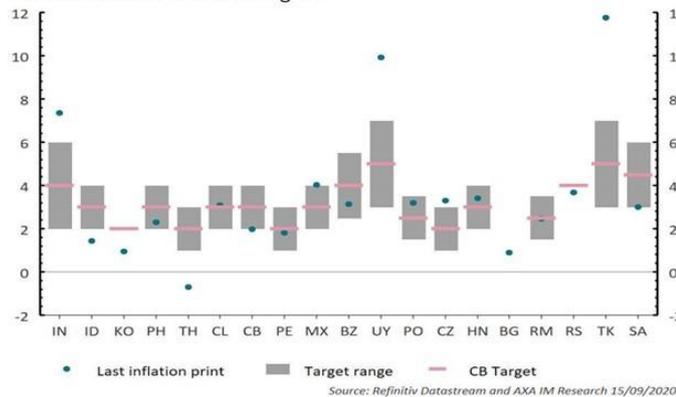
The financial crisis resolved itself only after Brunson was released, but the macroeconomic impact was massive, with Turkey falling into recession, which is widely seen in Erdogan’s party as the root cause of their under-performance in the local elections of March 2019 (symbolised by their loss of Istanbul). A willingness to re-start the economy at all cost, immediately after this episode, including with ultimately unsustainable economic policy, contributed to the pre-Covid deterioration in Turkey’s standing in the market. This year again, the combination of the lagged effect of inflation on real income with a monetary tightening will likely trigger a relapse into recession by year end. A risk of course is a replication of the same policy mistakes as in 2019 after a brief respite (hopefully) brought about by the expected rate hikes this week.

**From a global point of view, the issue Turkey illustrates is that some emerging markets are now facing a difficult trade-off between financial stability and fighting the effect of the Covid crisis on aggregate demand.** Turkey receives less than 2% of German exports, but during the 2018 recession, the collapse in demand was so acute that German shipments to Turkey fell by 30% at trough, bringing a negative contribute to overall German export growth of -0.6%, c.0.3% of GDP. Of course, losing 0.3% of GDP to an isolated EM crisis looks small when compared with the massive gyrations in economic activity since the pandemic, but still, it would not help.

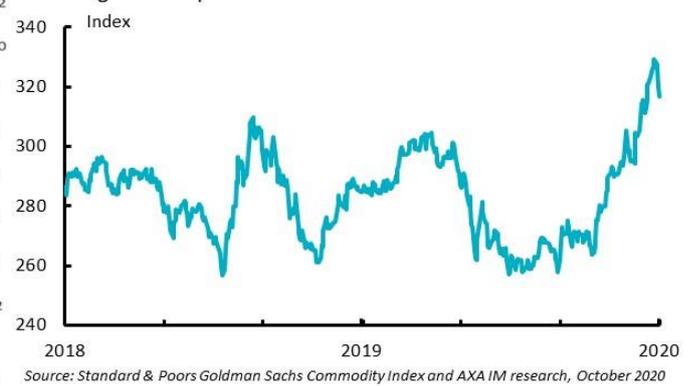
Turkey is probably an extreme case, illustrated by the large risk premium reflected in the Credit Default Swaps which in Turkey exceeds by far what can be seen in other large EMs, because its current account and foreign reserves position was already under stress before the Covid crisis started. Still, we can look at other EMs which have to deal with a resurgence in inflation and are thus getting constrained on their capacity to provide more accommodation.

**We compare in exhibit 5 the latest inflation prints with the local central bank’s inflation target range. Among the “big players”, India stands out, with consumer prices running far ahead of the Reserve Bank’s target.** The issue there is the impact of food prices which have been rising globally since the start of the Covid crisis (see exhibit 6) in a country where food accounts for 45% of the consumer price basket (19% in the Euro area). Given such a large weight, it is difficult for the central bank to emulate the Fed or the ECB and disregard such movements as mere volatility (rising food prices would immediately filter through inflation expectations and wage pressure). Another big beast where inflation is above the central bank’s target is Mexico, although to a much lesser extent than in India. Interestingly the central bank of Mexico, upon keeping its policy rate unchanged last week, tried to strike a balance between reiterating its commitment to maintain an accommodative stance and acknowledging the challenges inflation is creating.

**Exhibit 3 – Look at the odd one outs**  
EM inflation rates and CB targets



**Exhibit 4 – Food inflation**  
Global agriculture prices

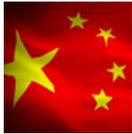


Again, the issue this is creating is not so much the advent of systemic crises in EM, but a difficulty in some countries which are relevant for global demand to provide additional stimulus while the second wave of the pandemic is in full swing.

### **“Hangman, hold it a while longer”**

This week is supposed to be THE week as far as negotiating a deal between the UK and the EU is concerned. The latest noises from the British press point however to the need for a few more days next week to unblock the discussion. The continental press has interpreted the dismissal of two prominent “Vote Leave” advisors from 10 Downing Street as an indication Boris Johnson was ready to compromise. We are afraid things might be a little more complicated than that. Dominic Cummings and Lee Cain leaving seems to be part of a generic power battle within the Johnson administration which does not originate from a disagreement on the Brexit negotiating stance.

We continue to think that the general political configuration in the UK is conducive to a deal, but Johnson will still need some form of concession from the EU to sell the agreement to the most radical part of the Conservative party – and we have explained previously in Macrocast why an extension of UK’s fishermen quotas could do the trick. But we are a bit concerned that European leaders could take the latest convulsions in the British government as a signal they can push their luck, expecting a total capitulation from London. We remain constructive, but we are not there yet.

Country/Region	What we focused on last week	What we will focus on this week
	<ul style="list-style-type: none"> <li>President Trump has filed legal challenges, refusing to concede; Biden widely considered to have won, transition delayed</li> <li>Pfizer announce 90% effective COVID vaccine</li> <li>CPI inflation slipped to 1.2% and 'core' to 1.6% in October, 0.1ppt below expectation</li> <li>Fed report records tighter lending standards again in Q3 for mortgages and corporates</li> </ul>	<ul style="list-style-type: none"> <li>Virus outbreak following record new cases (150k) last week and rising restrictions</li> <li>US election developments – prolonged legal challenge or an outcome</li> <li>Retail sales for October, expected solid pre-empting Christmas spending</li> <li>Empire and Philadelphia surveys for November watched for signs of softness</li> </ul>
	<ul style="list-style-type: none"> <li>EA IP disappointed at -0.4% mom</li> <li>Dovish speech by Lagarde at Sintra, emphasizing the importance of the duration of the policy support, and that PEPP and TLTROs are the tools of choice</li> <li>France jobless rate soars to 8.8% in Q3 after a misleading (very large halo of unemployment) 12-year low of 7.0% in Q2 20</li> </ul>	<ul style="list-style-type: none"> <li>Watch daily Covid infections data for confirmation that "light lockdowns" are working</li> <li>Euro area flash consumer confidence to show some further decline</li> <li>European Council to hold a meeting on the EU response to the pandemic</li> </ul>
	<ul style="list-style-type: none"> <li>Q3 GDP recorded 15.5% q/q record rise, but left output still 9.7% below end-2019 level</li> <li>Unemployment rose to 4.8%, extension of furlough until Mar 21 will disguise true slack</li> <li>House of Lords blocked Internal Mkts Bill</li> <li>Retail footfall 75% down in new lockdown</li> <li>No progress in EU-UK trade deal</li> </ul>	<ul style="list-style-type: none"> <li>15 Nov latest UK-EU trade deal deadline, expect it missed but real deadline looming</li> <li>CPI inflation (Oct) expected around Sept's 0.5%yoy</li> <li>Expect weaker retail sales (Oct) at -0.8% (consensus -0.2%)</li> <li>Public finances (Oct)</li> </ul>
	<ul style="list-style-type: none"> <li>November Reuters Tankan Manufacturing index increased to -13 from -26</li> <li>October bank lending remains dynamic at 6.2%yoy from 6.4%</li> <li>September machinery orders declined by 4.4% mom and remains at -11.5%yoy</li> </ul>	<ul style="list-style-type: none"> <li>Release of Q3 GDP first estimate. We expect a rebound of +4.2%qoq while consensus is around +4.4%</li> <li>Oct trade figures to assess external demand</li> <li>Oct CPI should decline with the end of VAT hike base effect and "go to" campaign</li> </ul>
	<ul style="list-style-type: none"> <li>Trade data shows continued solid performance in exports and ongoing recovery in domestic demand</li> <li>Price pressure eases more than expected due to falling pork and oil prices</li> <li>A seasonal dip in credit supply does not suggest monetary policy is tightening</li> </ul>	<ul style="list-style-type: none"> <li>October data to show further recovery in retail sales and broadly stable production and investment growth</li> </ul>
	<ul style="list-style-type: none"> <li>Last week, central bank of Mexico decided to keep the policy rate unchanged at 4.25% as we expected. The Banxico acknowledge that the risk for inflation poses (still above upper range) challenges for monetary policy but reiterate their will to remain supportive for an extended period</li> <li>Russia's economy contracted 3.6% as the coronavirus pandemic and lower prices for oil took their toll</li> </ul>	<ul style="list-style-type: none"> <li>Central bank meetings: Turkey, Philippines</li> <li>Industrial production in Russia (Oct).</li> <li>CPI Inflation in India (Oct)</li> <li>Q3 GDP in Chile</li> </ul>
<b>Upcoming events</b>	<p><b>US :</b> Mon: Empire State mfg survey (Nov); Tue: Retail sales (Oct), IP (Oct); Wed: Building permits (Oct), Housing starts (Oct), Thu: Phil Fed index (Nov), Leading index (Oct)</p> <p><b>Euro Area:</b> Mon: Lagarde speaks at WEF, It HICP (final, Oct); Tue: Brexit video conference; Wed: EZ HICP (final, Oct); Thu: Lagarde speaks, EC video conference; Fri: Lagarde speaks, Consu Confi (Nov), Ge PPI (Nov)</p> <p><b>UK:</b> Tue: BoE Bailey &amp; Ramsden speak, Wed: CPI (Oct); Thu: CBI Industrial Trends Survey (Nov, Q4); Fri: GfK consumer confidence (Nov), PSNB (Oct), Retail sales (Oct)</p> <p><b>China:</b> Mon: IP (final, Sep); Tue: Trade Balance (Oct); Thu: CPI (Oct); Fri: Mfg PMI (prel., Nov)</p> <p><b>Japan:</b> Mon: Fixed asset investment (Oct), IP (Oct), Retail sales (Oct), Unemployment (Oct); Fri: One-year loan primie rate (Nov)</p>	

**Our Research is available on line: <http://www.axa-im.com/en/insights>**



## Insights Hub

The latest market and investment insights, research and expert views at your fingertips

[www.axa-im.com/insights](http://www.axa-im.com/insights)

### DISCLAIMER

This document is for informational purposes only and does not constitute investment research or financial analysis relating to transactions in financial instruments as per MIF Directive (2014/65/EU), nor does it constitute on the part of AXA Investment Managers or its affiliated companies an offer to buy or sell any investments, products or services, and should not be considered as solicitation or investment, legal or tax advice, a recommendation for an investment strategy or a personalized recommendation to buy or sell securities.

It has been established on the basis of data, projections, forecasts, anticipations and hypothesis which are subjective. Its analysis and conclusions are the expression of an opinion, based on available data at a specific date. All information in this document is established on data made public by official providers of economic and market statistics. AXA Investment Managers disclaims any and all liability relating to a decision based on or for reliance on this document. All exhibits included in this document, unless stated otherwise, are as of the publication date of this document. Furthermore, due to the subjective nature of these opinions and analysis, these data, projections, forecasts, anticipations, hypothesis, etc. are not necessary used or followed by AXA IM's portfolio management teams or its affiliates, who may act based on their own opinions. Any reproduction of this information, in whole or in part is, unless otherwise authorised by AXA IM, prohibited.

Neither MSCI nor any other party involved in or related to compiling, computing or creating the MSCI data makes any express or implied warranties or representations with respect to such data (or the results to be obtained by the use thereof), and all such parties hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability or fitness for a particular purpose with respect to any of such data. Without limiting any of the foregoing, in no event shall MSCI, any of its affiliates or any third party involved in or related to compiling, computing or creating the data have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages. No further distribution or dissemination of the MSCI data is permitted without MSCI's express written consent.

This document has been edited by AXA INVESTMENT MANAGERS SA, a company incorporated under the laws of France, having its registered office located at Tour Majunga, 6 place de la Pyramide, 92800 Puteaux, registered with the Nanterre Trade and Companies Register under number 393 051 826. In other jurisdictions, this document is issued by AXA Investment Managers SA's affiliates in those countries.

In the UK, this document is intended exclusively for professional investors, as defined in Annex II to the Markets in Financial Instruments Directive 2014/65/EU ("MiFID"). Circulation must be restricted accordingly.

© AXA Investment Managers 2020. All rights reserved

### AXA Investment Managers SA

Tour Majunga – La Défense 9 – 6 place de la Pyramide 92800 Puteaux – France  
Registered with the Nanterre Trade and Companies Register under number 393 051 826