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ALLIANZ RESEARCH

VACCINE

ECONOMICS

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The Covid-19 vaccine will supercharge global growth in 2021, but short-term headwinds, and a complete recovery only by 2022, will create transition risks. Following the sharp Q3 rebound in economic activity, the rollercoaster ride continues at the turn of 2020/21. The resurgence of Covid-19 cases and fresh lockdowns will bring global economic activity to a standstill, with the quarterly rate slowing to +0.1% q/q in Q4 after +7.3% q/q % in Q3. The double-dip in Europe and marked slowdown in the US mean things will get worse before they get better. Recent breakthroughs on the vaccine front have led us to revise up our forecast for global economic growth to +4.6% (+0.2ppt) in 2021, and to +3.8% in 2022, as the policy mix remains supportive for another two years. 2023 may be a reality check as countries shall return close to potential growth, revealing who seized or wasted the crisis.

In mid-2021, despite the sizeable hurdles on the demand (vaccination skepticism) and supply sides (production & distribution bottlenecks), we expect the vaccination of vulnerable populations (20-40% of the total) to be completed, setting the stage for a buoyant growth rally in H2 2021. We should also stress the upcoming sizeable base effect in Q2 2021. Vaccine economics is about confidence restarting the service economy, recoupling (trade in goods are already back to pre-crisis levels, services and tourism should follow suit by 2022), forced and precautionary savings to be consumed in part and corporate investments to resume. Economies with delayed or limited vaccine access – notably in the emerging world – may lag behind. In the end, risks related to sequencing, and transitions (stop-and-go on the lockdown, politicization of vaccination campaigns, policy support) prevail.

Policymakers will particularly be under scrutiny as they will continue to run the show again in 2021-22. Knowing when and how to pull the plug will be essential. We expect policymakers to step up support to keep a lid on long-term scarring to the economy and provide a tailwind to the recovery. On the fiscal side, in Europe, safety net measures look set to be extended beyond mid-2021, albeit in a more targeted and cost-effective way, while in the US stimulus spending will be stepped up by another USD900bn in 2021. Central banks will continue to act as buyers-of-last-resort to the public and the private sectors to ensure favorable refinancing rates, with the Fed and ECB maintaining record-low interest rates until at least H2 2023. This will be justified by contained inflation dynamics (moderate inflation overshoot in the US after H2 2022) as oil prices are expected to remain below 55 USD/bbl on average until mid-2022. On the other hand, the accelerating global economic recovery could see Chinese authorities already withdrawing policy support in H1 2021, with focus shifting to mitigating long-term risks. Catalysts for economic and financial turbulence include unsuccessful fiscal pivoting, unnecessary regulatory and macroprudential pain points and mismanagement of growing insider/outside divide. In the medium-run, a debt and liquidity overhang will create needed and heated debates, especially in countries with elections looming ahead.

Financial markets have been pricing in all possible good news - and more. However, competing scenarios of a post-pandemic economy are reflected in prices of safe and risky assets. We expect a slight increase in yields due to reflationary expectations. This will put pressure on already stretched equity valuations, leaving investors with an uncomfortable double asymmetry: changes in earnings expectations remain skewed to the downside, while changes in long-term yields are skewed to the upside.

In the real economy, cyclical sectors (including energy, metals, and automotive) to see strong catch-up growth as soon as Q2 2021 as the recovery starts to unfold and economic uncertainty recedes. Meanwhile, Covid-19 sensitive sectors (including accommodation, food services and transportation) will outperform markedly from H2 2021 onwards. Despite the favorable momentum, the scars from the 2020 hit on turnover and profitability will take time to heal. We expect the majority of sectors to return to pre-crisis levels of turnover and profitability only by early 2022. Oversized balance sheets pose some concerns. As policy support is gradually phased out, expect a delayed wave of insolvencies to surface: we expect a significant increase of +25% y/y in 2021 and +13% in 2022.

+4.6%

**Global GDP growth
forecast for 2021**

THE COVID-19 VACCINE WILL SUPERCHARGE GLOBAL GROWTH IN H2 2021, ALLOWING FOR A FULL RECOVERY BY 2022

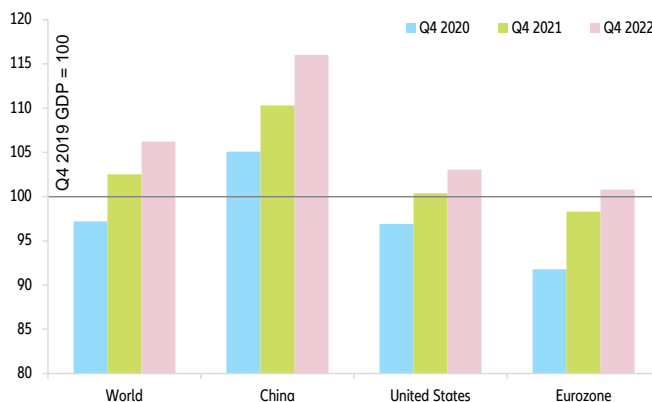
Recent breakthroughs on the vaccine front have led us to revise up our forecast for global economic growth to +4.6% (+0.2pp) in 2021, followed by a sustained recovery in 2022 at +3.8%. Despite sizeable hurdles on the demand (vaccination skepticism) and supply sides (production & distribution bottlenecks (see Box 1 for details), we expect the vaccination rollout to vulnerable populations (20-40% of the total) to be completed by mid-2021 in developed countries and large Emerging

Markets. By greatly reducing the pressure on healthcare systems, this will allow for a notable easing of Covid-19 restrictions, in turn setting the stage for a buoyant growth rally in H2 2021 (Q3 2021 GDP growth could reach a record +1.8% q/q, second only to the rapid rebound seen in Q3 2020).

Expect sectors and countries most impacted by the Covid-19 crisis to outperform in this context, with the return of “social spending” ringing in the re-convergence between manufacturing

and services. Meanwhile, economies with delayed or limited vaccine access – notably in the emerging world – will lag behind. A return to pre-crisis GDP levels is expected by Q4 2021 in the US and H1 2022 in Europe. China, meanwhile, will continue its economic normalization. The largely synchronized global economic upswing will also move forward the global trade recovery by a year, with trade in goods back at pre-crisis value levels by end-2020 and services in 2022.

Figure 1: Real GDP, Q4 2019 = 100

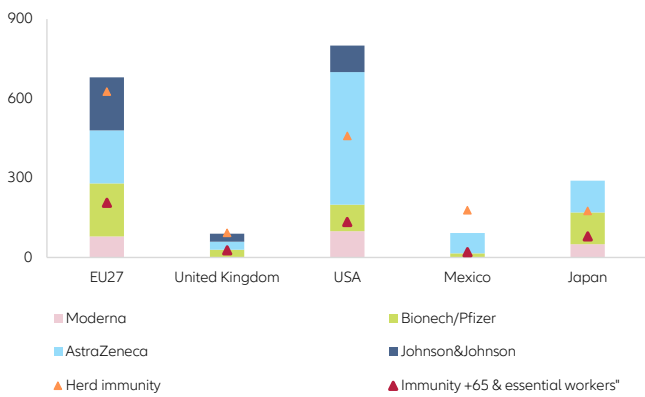


Sources: Euler Hermes, Allianz Research

BOX 1: VACCINE HURDLES

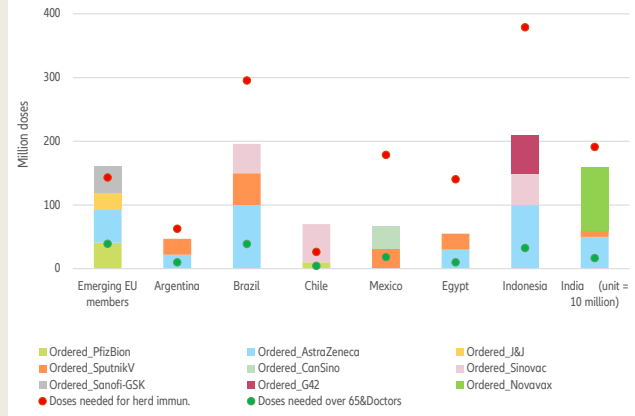
Sizeable hurdles in supply (production & distribution)...The risk of bottlenecks on the production side, at least for developed economies, looks limited as many governments have already ordered sufficient doses to create herd immunity (see Figures 2 & 3). However, a supply-side bottleneck could arise from distribution as individual countries are entering the immunity race at different starting positions. Firstly, cold-chain infrastructure must be available (depending on the vaccine, temperatures down to -70°C are required) and this could represent a logistical constraint. Secondly, the quality and flexibility of health systems will determine how much friction will occur during the implementation of the vaccination campaign –the number of health workers and Covid-19 testing capabilities could serve as proxies (see Figure 4).

Figure 2: Vaccine orders sufficient for herd immunity (in million doses)



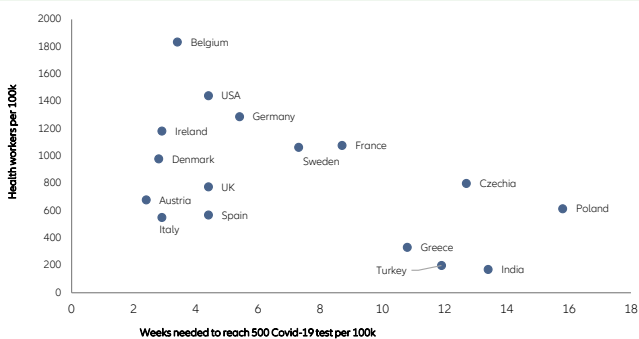
Sources: Company data, WHO, Allianz Research

Figure 3: Emerging Markets: vaccine orders (1 shot) vs. doses needed



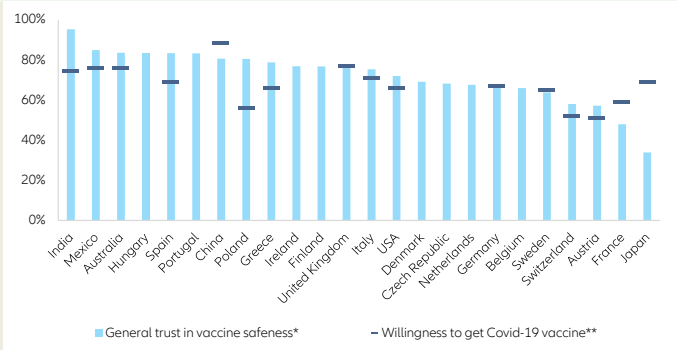
Sources: Duke University, World Bank, Allianz Research

Figure 4: Health system readiness (probability of distribution friction)



Sources: Refinitiv, WHO, Allianz Research

Figure 5: Trust in vaccines and willingness for Covid-19 vaccination



*Gallup Wellcome Global Monitor 2018, Question 25

**recent polls (Ipsos, Kantar, Gallup, Pew Research and other national sources) and Lazarus, J.V., Ratzan, S.C., Palayew, A. et al. A global survey of potential acceptance of a COVID-19 vaccine. Nat Med (2020)

Sources: WHO, different national and international polls (see above), Allianz Research

...and demand. Divergences among countries might occur due to the degree of vaccine acceptance. Managing this will be essential to achieve herd immunity. Vaccine demand is determined by the willingness of the population to get vaccinated. Assuming vaccination remains voluntary, this demand will greatly depend on how safe people feel with vaccines in general and the Covid-19 vaccine in particular. Recent polls show that there are large divergences in the perception of vaccination risk among countries (see Figure 5). However, in these countries the willingness to be vaccinated against Covid-19 is above the general level of confidence, while in the other countries this willingness is slightly lower.

But vaccine demand is not static: the structural attitude may well change in this particular situation and can also be actively influenced, for better or for worse. The Gallup Wellcome Global Monitor shows that health professionals generally enjoy a high level of trust (around 90%), while confidence in the government related to health issues ranges from 40% to 90%. This shows that to ensure a high vaccination rate, it would be important that governments at least include the health sector in their communication strategies. A positive effect on the vaccination rate could be achieved by governments and companies creating incentives for people to participate in the Covid-19 vaccination. For example, participation in classroom instruction in schools could be made dependent on the vaccination and companies could make the return to office or the participation in events dependent on a vaccination. Generally, these incentives should aim at increasing the opportunity costs for a vaccine free-rider behavior.



Photo from Unsplash

However, the economic outlook risks getting worse before it gets better. Following the sharp Q3 rebound in activity, the economic rollercoaster ride continues at the turn of 2020/21. The resurgence in Covid-19 cases and fresh lockdowns will bring Q4 global economic activity to a standstill, with the quarterly

rate slowing to +0.1% q/q after +7.3q/q % in Q3, thanks to a double-dip in Europe and a marked slowdown in the US. An economic resurrection is only on the cards from Easter onwards as warmer temperatures together with progress on the vaccination front will allow for a more marked loosening of

restrictions and in turn the unleashing of demand pent up over the winter months.

POLICYMAKERS NEED TO STAY VIGILANT AS THE GLOBAL ECONOMY IS NOT OUT OF THE WOODS YET

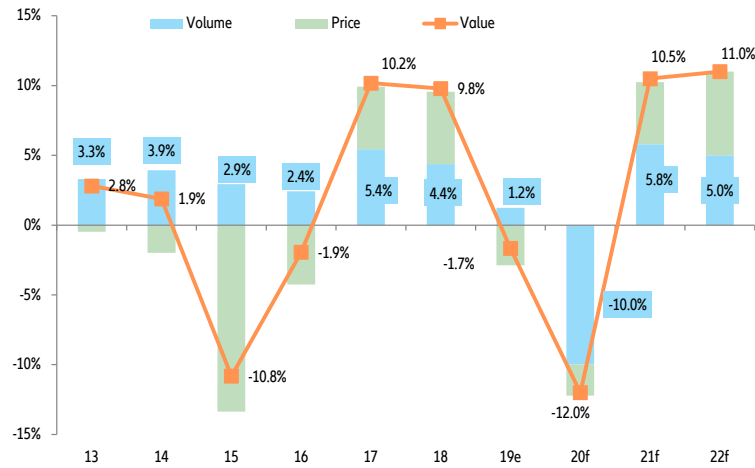
We expect policymakers to step up support to keep a lid on long-term scarring to the economy and provide a tailwind to the recovery. On the fiscal side, in Europe, safety net measures look set to be extended (short-work schemes, state guaranteed loans & sector support) while in the US stimulus spending will be stepped up by another USD900bn in 2021. Meanwhile, central banks will continue to act as buyers-of-last-resort to the public and the private sectors to ensure favorable refinancing rates, with the Fed and ECB maintaining record-low interest rates until H2 2023. This will be justified by relatively contained inflation dynamics. On the other hand, the accelerating global economic recovery could see Chinese authorities already withdrawing policy support in H1 2021 (rising probability of a first rate hike), with focus shifting to mitigating long-term risks.

The key risks to our economic outlook center on developments on the vaccine as well as the policy fronts (health & economic), including:

- A short longevity of the vaccine's efficacy (implying the need for much higher resources in terms of frequent vaccination campaigns, which would also be a blow to confidence in the vaccine).
- Mutation risk, which could see researchers having to move back to square one.
- A premature economic re-opening in Q1 in Europe/the US without adequate track & trace procedures in place, which could trigger a triple-dip.
- Inadequate fiscal and/or monetary policy support (including no US fiscal deal as well as a delay of EU recovery fund).
- Debt sustainability concerns flaring up in emerging economies as soon as 2021.
- Unmanaged banking sector weaknesses as solvency risk moves front and center.

Vaccine recovery tailwinds could push forward the global trade recovery by one year, with trade in goods returning to pre-crisis value levels by end-2020 and services by 2022. The stronger recovery of global trade in goods, notably helped by impressive Chinese growth and more targeted lockdowns in Europe, has led us to revise our global trade growth forecasts for goods and services to -10% in 2020 (from -13% previously), +5.8% in 2021 (from 7% previously) and +5% in 2022. We now expect that trade in goods will recover its losses in value terms by the end of 2020 while services would be back to pre-crisis levels in 2022. In 2021, most countries will see export gains (i.e. an increase in exports with respect to 2020), with China (+USD372bn), Germany (+USD192bn) and Italy (+USD139bn) being the main winners. China, Vietnam, Australia and the Netherlands are likely to recover the fastest, with 2021 exports likely to stand at more than 10% above 2019 levels.

Figure 6: Global trade growth, goods and services, volume and USD value (y/y, %)



Sources: Euler Hermes, Allianz Research

Even as the recovery of global demand strengthens in 2021, we do not expect the return of the early 2000s globalization trends, nor a complete de-globalization. Instead, we see competing dynamics in global trade. Reshoring talk - for lack of appropriate dynamics to bring production home - will

give way to Nearshoring moves i.e. bringing production to a nearby country as our [Global Supply Chain Survey](#) pointed out. This is in line with the renewed momentum for multilateralism, especially after the agreement of the RCEP and talks about the return of the US to TPP negotiations. Multishoring or

diversification is also on the agenda as companies look for cost-effective supply and production solutions (notably still in China) after an unprecedented shock.



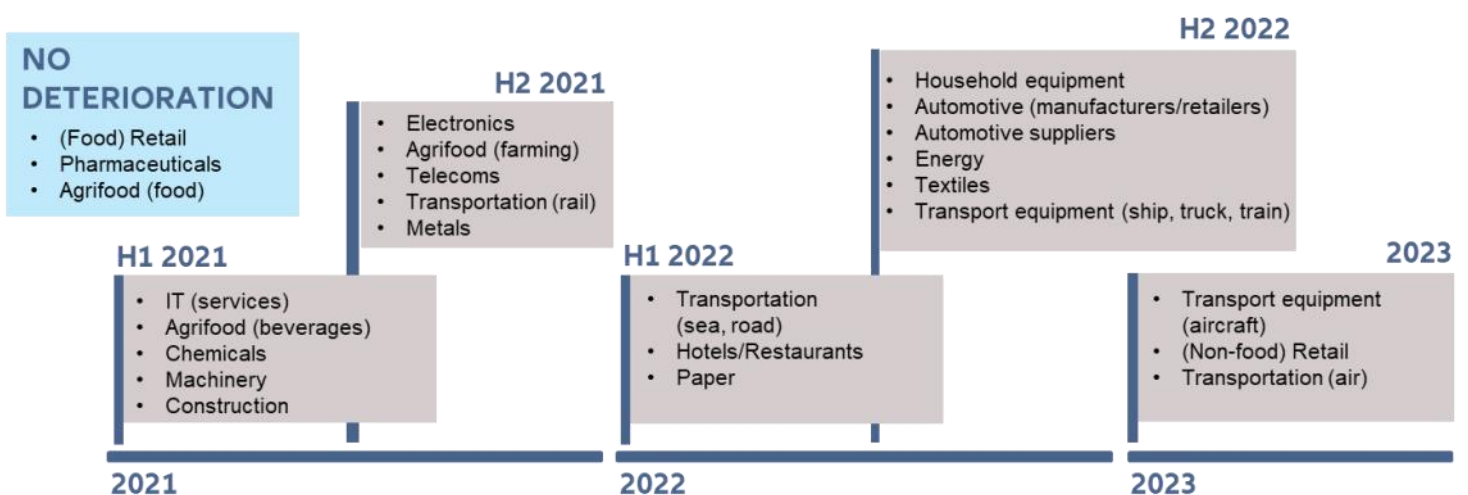
WHAT DOES THIS MEAN FOR SECTORS?

With the rollout of the vaccine allowing for a return to “business as usual”, we expect cyclical sectors (including energy, metals, equipment and automotive) to embark on strong catch-up growth as soon as Q2 2021. Covid-19 sensitive sectors will outperform markedly from H2 2021 onwards as the vaccination of

at-risk populations allows for a return of “social spending” (accommodation, food services, transportation etc.). But despite the favorable momentum, the scars from the 2020 hit on turnover and profitability will take time to heal. We expect a majority of sectors to return to pre-crisis levels of turnover and profita-

bility only by early 2022. Air transport (equipment and services) and non-food retail – in which the Covid-19-shock has accentuated powerful structural headwinds – stand out as key laggards that are only likely to recover to pre-crisis activity levels in 2023 and beyond.

Figure 7: Timeline recovery to pre-crisis turnover levels



Sources: Euler Hermes, Allianz Research

What does this mean for business insolvencies?

Our Global Insolvency Index posted a -12% y/y drop in Q3 2020, following -13% y/y in Q2, confirming the broad-based and prolonged slump in insolvencies recorded by courts. This despite hints of a timid trend reversal in some economies (Spain, Ireland, South Africa, South Korea, Hong Kong and Denmark) and conversely a downside reversal in China after a surge in Q2. Along with the lockdowns of courts, the paradoxical drop in insolvencies comes from massive support measures implemented and then extended by governments to provide liquidity, extra time and flexibility to companies before they resort to filing for bankruptcy.

The broad-based extension of "temporary" support measures into 2021 is likely to keep insolvencies artificially lower for longer. But their phasing out should start an increase in in-

solventcies as early as H2 2021, mainly composed of (i) pre Covid-19 "zombies", i.e. companies that were no longer viable before the crisis but were kept afloat by emergency measures and (ii) Covid-19 "zombies", i.e. companies weakened by the excess indebtedness resulting from the crisis. As a result, we expect our Global Insolvency Index to rise significantly in 2021 (+25% y/y), thanks to the basis effect created by the sharp drop in 2020 (-10%), as well as 2022 (+13% y/y). All regions would contribute positively to the upturn both

in 2021 and 2022, with North America recording the most severe rebound (+57% by end 2022 compared to 2019) compared to Western Europe (+23%) and Asia (+18% or +12% excluding India). Yet, in 2021, one out of two countries in our sample would still register a low number of insolvencies compared to the Great Financial crisis and even the long-term average, notably among advanced economies. All in all, our Glo-

bal Insolvency Index for 2021 would be 13% higher than in 2019, prior to the crisis, and 2022 would be 27% higher than in 2019.

The phasing out of support measures remains critical and uncertain. Any new extension in terms of timing or magnitude would lead to a modified outlook, with less insolvencies in the short term but more insolvencies in the long term due to the increased 'zombification' of companies, notably in the sectors most impacted by the crisis. To this regard, the probability of an additional extension of support measures is higher in countries with larger fiscal and financing room for maneuvering. At a global level, should the support measures be extended for six additional months, the rise in insolvencies would be lower in 2021 (-18 pp to +7%) and higher in 2022 (+6pp to +19%) in a vast majority of countries, with some extra insolvencies in 2023.

Figure 8: Business insolvencies by country

As of mid December 2020	in number					annual change in %					2021 vs 2019	2022 vs 2019
	2018	2019	2020f	2021f	2022f	2018	2019	2020f	2021f	2022f		
GLOBAL INDEX *	112	122	110	138	155	11%	9%	-10%	25%	13%	13%	27%
North America Index *	60	62	63	86	97	-4%	3%	3%	36%	13%	40%	57%
U.S.	22 158	22 720	23 500	32 000	36 000	-4%	3%	3%	36%	13%	41%	58%
Canada	2 677	2 746	2 250	3 000	3 400	-1%	3%	-18%	33%	13%	9%	24%
Latin America Index *	192	216	217	265	284	38%	13%	1%	22%	7%	23%	31%
Brazil	2 751	2 887	2 450	3 610	3 700	1%	5%	-15%	47%	2%	25%	28%
Colombia	1 243	1 272	1 100	1 400	1 560	53%	2%	-14%	27%	11%	10%	23%
Chile	1 386	1 701	1 880	2 150	2 300	32%	23%	11%	14%	7%	26%	35%
Western Europe Index *	133	134	110	141	164	0%	1%	-10%	26%	17%	5%	23%
Euro zone Index *	145	147	122	154	183	-2%	1%	-17%	22%	17%	-6%	24%
Germany	19 302	18 749	16 076	16 900	19 500	-4%	-3%	-14%	5%	15%	-10%	4%
France	54 394	51 413	32 900	50 000	60 500	-1%	-5%	-36%	52%	21%	-3%	18%
United Kingdom	21 161	22 078	15 410	20 250	25 300	10%	4%	-30%	31%	25%	-8%	15%
Italy	11 227	11 106	5 500	9 500	12 500	-7%	-1%	-50%	73%	32%	-14%	13%
Spain	3 915	4 162	4 080	4 900	5 640	0%	6%	-2%	20%	15%	18%	36%
The Netherlands	3 633	3 792	3 290	4 100	4 800	-6%	4%	-13%	25%	17%	8%	27%
Switzerland	4 952	4 923	4 300	5 200	5 500	4%	-1%	-13%	21%	6%	6%	12%
Sweden	7 223	7 358	7 000	7 500	7 900	13%	2%	-5%	7%	5%	2%	7%
Norway	5 010	5 013	3 900	5 500	5 900	10%	0%	-22%	41%	7%	10%	18%
Belgium	9 878	10 598	7 300	12 100	12 900	-1%	7%	-31%	66%	7%	14%	22%
Austria	4 980	5 018	3 300	5 400	6 000	-2%	1%	-34%	64%	11%	8%	20%
Denmark	2 434	2 590	2 250	2 900	3 300	7%	6%	-13%	29%	14%	12%	27%
Finland	2 954	2 989	2 350	2 940	3 450	14%	1%	-21%	25%	17%	-2%	15%
Greece	82	94	85	110	130	-28%	15%	-10%	29%	18%	17%	38%
Portugal	2 694	2 560	2 560	3 150	3 500	-13%	-5%	0%	23%	11%	23%	37%
Ireland	767	568	600	780	900	-12%	-26%	6%	30%	15%	37%	58%
Luxembourg	1 356	1 445	1 330	1 640	1 730	33%	7%	-8%	23%	5%	13%	20%
Central & Eastern Europe Index *	236	243	252	302	315	-16%	3%	4%	20%	4%	24%	30%
Russia	10 282	11 741	10 500	13 400	13 700	-11%	14%	-11%	28%	2%	14%	17%
Turkey	13 593	14 050	15 700	17 850	18 400	-8%	3%	12%	14%	3%	27%	31%
Poland	988	969	1 140	1 330	1 370	10%	-2%	18%	17%	3%	37%	41%
Czech Republic	6 140	6 620	9 300	11 500	11 500	-15%	40%	8%	24%	0%	33%	33%
Romania	8 304	6 524	6 200	7 200	8 000	-9%	-21%	-5%	16%	11%	10%	23%
Hungary	5 692	5 176	4 350	5 200	6 100	-13%	-9%	-16%	20%	17%	0%	18%
Slovakia	1 959	2 447	1 929	2 186	2 452	124%	25%	-21%	13%	12%	-11%	0%
Bulgaria	476	506	535	669	756	9%	6%	6%	25%	13%	32%	49%
Lithuania	2 091	1 610	770	1 600	2 100	-30%	-23%	-52%	108%	31%	-1%	30%
Latvia	593	557	350	610	720	2%	-6%	-37%	74%	18%	10%	29%
Estonia	273	148	120	200	250	-20%	-46%	-19%	67%	25%	35%	69%
Africa & Middle East Index *	148	163	147	174	184	0%	10%	-10%	19%	6%	7%	13%
South Africa	1 845	2 042	2 050	2 550	2 700	-1%	11%	0%	24%	6%	25%	32%
Morocco	7 944	8 439	7 300	8 500	9 000	-1%	6%	-13%	16%	6%	1%	7%
Asia-Pacific Index *	117	139	118	143	163	42%	19%	-15%	22%	14%	3%	17%
China	10 600	11 826	11 850	12 700	13 600	69%	12%	0%	7%	7%	7%	15%
Japan	8 235	8 383	8 200	8 900	9 500	-2%	2%	-2%	9%	7%	-6%	13%
India	965	1 895	740	1 600	2 500	-	-	-61%	116%	56%	-6%	32%
Australia	6 317	6 405	3 750	7 050	7 050	3%	1%	-41%	88%	0%	10%	10%
South Korea	469	414	400	470	470	-5%	-12%	-3%	18%	0%	14%	14%
Taiwan	217	205	205	220	230	-4%	-6%	0%	7%	5%	7%	12%
Singapore	207	287	217	260	300	23%	39%	-24%	20%	15%	-9%	5%
Hong Kong	255	244	250	300	300	-14%	-4%	2%	20%	0%	23%	23%
New Zealand	2 133	1 907	1 600	2 100	2 100	3%	-11%	-16%	31%	0%	10%	10%

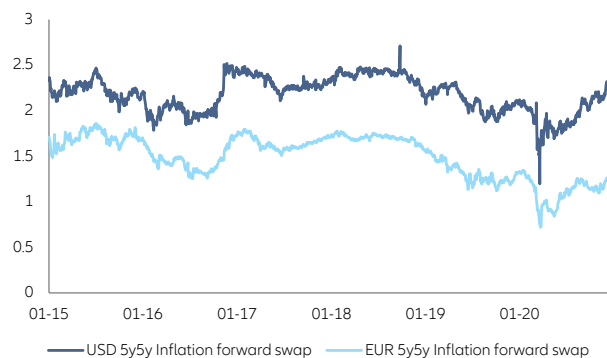
(*) Index 100: 2000

Sources: national figures, Euler Hermes estimations (e) and forecasts (f)

Sources: Euler Hermes, Allianz Research

WHAT DOES THIS MEAN FOR MARKETS?

Figure 9: Some upside for reflationary expectations



Sources: Euler Hermes, Allianz Research

With the announcement of a Covid-19 vaccine, financial markets priced out the negative scenario of a global economy endlessly shaken by recurring lockdowns. However, competing scenarios of a post-pandemic economy are reflected in prices of safe and risky assets. The latter trade with an optimism premium. Equity prices, especially in the US, reveal a clear V-shape in expected short-term earnings growth - on average +23% in the next two years after -22% this year - and very ambitious expected long-term earnings growth at +16%. In the EMU these are on average +26% in the next two years (after -28% this year) and +6% in the long run.

The fact that the stock markets have only risen moderately (+3% for the S&P 500) since the vaccine announcement shows that this optimism premium was already largely priced in before. Already in June, analysts were revising earnings forecasts upward. The post-vaccine stock market movements were indeed related to a sector rotation from pre-vaccine winners to pre-vaccine losers (since 9 November the equally-

weighted S&P 500 more than the NASDAQ 100). In summary, equity markets have enjoyed having their cake (high expected growth) and eating it, too (but with low interest rates). The difference between expected long-term earnings growth and long-term yields has widened to 15.5% in the US and 12.2% in the EMU, i.e. far above the 1999 and 2006 levels. A further widening cannot be ruled out, but this also means that most of the optimism story has been largely consumed and the upside seems limited. On the other hand, prices for safe assets embrace the still cautious stance of central banks, focusing on near-term economic risks linked to the second wave and possible longer-term scarring effects. Yields on US and Euro government bonds have certainly internalized the vaccination prospect, with an upward shift of 20bp and 10bp, respectively, for the 10y maturity. But long-term yields are now kept in a corridor capped to the downside by the improved outlook and to the upside by ongoing central bank intervention (QE-induced term premium compression).

The post-pandemic markets will be characterized by an uncomfortable double asymmetry of high valuations and low yields; changes in earnings expectations skewed to the downside and changes in long-term yields skewed to the upside. Our baseline scenario is that of a slight increase in yields due to reflationary expectations as the economic recovery unfolds. Market-based inflation expectations have already recovered to around 2.2% in the US and around 1.2% in the EMU (5y5y forward swap). Compared to pre-crisis levels, there could easily be some 20bps to go here. Although this rise in yields will put pressure on equity valuations via a higher discount rate, especially for growth stocks whose profits lie further into the future, this effect should not be sufficient to make stocks totally fail the valuation test. But equity valuations will remain stretched, leaving investors in an uncomfortable situation: avoiding duration risk, but at the same time facing high return asymmetry for risky assets.

REGIONAL OUTLOOKS

In the US, we expect a return to pre-crisis GDP levels in Q4 2021 as Biden's fiscal stimulus would add +1.0pp to GDP growth in 2021, followed by +1.6pp in 2022. While the November elections resulted in a divided Congress (re-balancing of the Democratic Lower House in favor of Republicans), we think that Biden's economic team has a higher-than-expected chance of implementing large swathes of its program by rallying bipartisan support thanks to (i) its assertive stance on China (ii) its pro-business industrial policy in favor of domestic production, (iii) the nomination of Janet Yellen as Treasury Secretary, who is highly regarded across the US political divide, (iv) its ambition for stronger big tech regulation, (v) an ambitious infrastructure plan to the tune of USD900bn to repair and rebuild the US's crumbling infrastructure and finally (vi) a shared sense of urgency amid the pandemic to provide private sector relief and to fund the country's economic recovery.

All in all, we see a good chance for a first round of fiscal stimulus to be voted during the lame duck session. The fiscal package proposed by a bipartisan group would bring in much needed assistance to local authorities, to households via a reiteration of extended unemployment benefits (USD300/week), and to SMEs. This package is expected to contribute around +1.0pp to GDP growth in 2021 (see Figure 10). Another round of stimulus to the tune of USD900bn should allow for the initiation of a first wave of infrastructure pro-

jects, with a +1.6pp contribution to 2022 growth.

On the Fed's side, we expect the US central bank to offset the lack of fiscal support in late 2020 and early 2021 with a stronger engagement, notably in terms of forward guidance on QE. From the second half of 2022, alongside the positive transmission of the monetary and fiscal stimuli, we expect the two-year average of US CPI

inflation to be above 2% y/y, allowing the start of a tapering process, which will be preceded six months before by the stabilization of the size of the Fed's balance sheet. We expect the first rate hike to take place from Q3 2023 only.

Figure 10: Global GDP growth, %

	2019	2020	2021	2022
World GDP growth	2.5	-4.2	4.6	3.8
United States	2.2	-3.7	3.6	3.1
Latin America	0.2	-7.6	3.5	2.5
Brazil	1.4	-5.0	3.0	2.0
United Kingdom	1.3	-12.0	2.5	4.9
Eurozone members	1.3	-7.5	4.3	4.3
Germany	0.6	-5.6	3.4	3.8
France	1.5	-9.9	6.1	3.8
Italy	0.3	-9.0	4.1	3.8
Spain	2.0	-11.6	5.6	5.8
Russia	1.3	-4.5	2.2	2.5
Turkey	0.9	-1.4	5.0	4.4
Asia-Pacific	4.2	-1.6	6.4	4.6
China	6.1	2.0	8.4	5.4
Japan	0.7	-5.5	2.6	1.9
India	4.2	-10.2	9.7	6.0
Middle East	0.5	-5.0	2.2	2.0
Saudi Arabia	0.3	-4.1	1.8	2.1
Africa	1.9	-4.3	3.2	2.9
South Africa	0.3	-8.2	2.7	2.1

* Weights in global GDP at market price

NB: fiscal year for India

Sources: Euler Hermes, Allianz Research

The Chinese recovery has become broad-based, but beware of earlier than expected policy normalization as authorities focus on long-term risks. Public spending is likely to be focused on more long-term themes such as supply chains, innovation and environmental protection. We expect the Chinese economy to grow by +2.0% in 2020 (after +6.1% in 2019), followed by +8.4% in 2021 and +5.4% in 2022. This continued outperformance compared to the rest of the world should allow authorities to start normalizing the policy mix, which in turn implies further renminbi appreciation (USDCNY towards 6.3 at the end of 2021). After a slump in Q1 2020 in the wake of the Covid-19 pandemic, the Chinese economy quickly rebounded, led by policy-driven sectors such as infrastructure and construction. Exports also performed strongly, supported by global demand for medical and electronic goods. It took longer for consumers and services to bounce back, but lower unemployment and rising income growth will extend the recovery in that area into 2021. As economic growth became more broad-based, policy support was dialed back in Q4 2020. This is reflected in our proprietary credit impulse index, which declined for the first time this year in November, in part due to slower corporate bond issuance. Indeed, defaults by state-owned enterprises show that authorities are now turning their focus to long-term risks rather than short-term economic support, in our opinion. Further non-systemic defaults are likely in the coming quarters, as regulators aim for more discipline in the financial system. A rate hike by the PBOC is also likely in Q1 2021, when activity indicators will be particularly strong, thanks to favorable base effects – we expect GDP growth to peak at +17.7% y/y in Q1 and come back to trend levels in the rest of the year (+5.6% y/y on average in the remaining three quarters). Recently, low inflation has been caused by temporary factors and we expect prices to grow by +2.5% in 2020 (after +2.9% in 2019), followed by +2.0% in 2021 and +2.4% in 2022. On the fiscal side, policy support will conti-

nue, but is likely to be of smaller amount – we estimate c.5.0% in 2021 compared with 7.2% in 2020. In particular, the special sovereign bonds quota, which represented c.2% of GDP in 2020, is unlikely to be renewed in 2021. Public spending is likely to be focused on more long-term themes such as supply chains, innovation and environmental protection. This is in line with the dual circulation strategy that was introduced in May 2020. Another policy area to watch is related to the real estate sector, which presents downside risks in the context of growing regulatory scrutiny over developers' debt and housing prices.

We expect Eurozone GDP to contract by -7.5% in 2020, followed by an expansion of +4.3% in both 2021 and 2022, against the backdrop of prolonged second lockdowns, on the one hand, and a marked services-driven vaccine-enabled rebound unfolding in the second half of 2021 on the other hand. A return to pre-crisis GDP levels is expected by mid-2022. In the final quarter of 2020 the vast majority of European countries retightened lockdown measures to address rising infection numbers. The at least initially pursued “lockdown light” approach together with a resilient manufacturing sector – thanks to tailwind from Chinese export demand – helped contain the negative impact on the economy. As a result, we expect the Eurozone economy to double dip by “only” -3.5% q/q in Q4 2020, around 30% of the contraction registered in Q2 2020. However with infection numbers now stubbornly plateauing at elevated levels in several key Eurozone countries, the tightening and prolongation of lockdown measures into early next year suggests the region's economy will start 2021 on a weak footing with increasing risks of a second consecutive quarter of recession, notably in Germany, France, Italy and the UK. Meanwhile an economic resurrection is only on the cards from Easter onwards as warmer temperatures together with progress on the vaccination campaign will allow for a gradual loosening of restrictions and in-

turn the unleashing of demand pent-up over the winter months. A full elimination of containment measures should only be feasible by mid-2021 when the vaccination of at-risk populations reduces the risk of a third lockdown as well as a triple-dip by alleviating pressures on healthcare systems. This milestone will set the stage for a swift and pronounced catch-up growth in H2 2021. In fact, we expect to see some of the strongest quarterly GDP expansions on record in 2021 – above +2% q/q in both Q2 and Q3 – second only to the sharp Q3 2020 growth spurt. Private consumption will lead the vaccine-enabled rebound as households start tapping into their precautionary savings in a context of markedly reduced economic uncertainty. In particular, ‘social spending’ stands to benefit, which will set the stage for a reconvergence between the services and the manufacturing sectors. Meanwhile, investment should pick up as early as Q2 2021, with the EU recovery fund providing additional tailwind in the following quarters. However, momentum will be held back by sizeable excess capacities and squeezed corporate financials. Moreover political risks around Brexit as well as the looming elections in Germany and France could weigh on investment plans. In 2022, we expect GDP growth to remain notably above potential as the achievement of herd immunity would allow for a return to economic normalcy while monetary and fiscal policy (don't expect the Eurozone budget deficit to fall below -3% before 2023) remain supportive. Labor markets meanwhile will start to recover with the unemployment rate falling to 8% in 2022 after reaching 9% in 2021. All in all, we expect Eurozone GDP to contract by -7.5% in 2020 followed by an expansion of +4.3% in both 2021 and 2022. We expect a return to pre-crisis GDP levels in H1 2022, however, inter-country divergences remain notable, with laggard countries including Spain and Italy requiring at least one additional year to heal.

The ECB has made its key policy objective crystal clear: no tightening in financing conditions will be tolerated.

To lend credibility to its increasingly explicit ambition to control yield curves – or rather, in the Eurozone context, to cap sovereign spreads – it has boosted its Pandemic Emergency Purchase Program (PEPP) to EUR1,850bn. With the horizon of PEPP purchases pushed out to March 2022, the additional QE-ammunition will allow the ECB to largely maintain in 2021 the average monthly asset purchase pace of EUR110bn it set since March, when added to the EUR20bn in monthly Asset Purchase Program (APP) purchases and the expected unspent PEPP powder of around EUR600bn as of end-2020. In practice, this will mean increasing the ECB balance sheet by another EUR1.6tn in QE purchases until spring 2022, however it could well end up not spending all of the PEPP ammunition. After all, the “threat” of a sizeable QE envelope to be deployed at any time to put out fires in bond markets has, in our view, a greater spread-compressing impact than a set monthly pace of asset purchases. We expect any unspent funds to be reverted to the APP in 2022, which will take the QE-lead as the economic outlook returns to normalcy. In light of the subdued inflation outlook (0.2% in 2020, 0.8% in 2021 and 1.2% in 2022) we expect monetary policy to remain expansive throughout 2022, with rate hikes remaining firmly off the

table before 2023. Moreover, we expect to see additional support for the banking sector in 2022 (fresh rounds of TLTROs at even more favorable rates) to mitigate a credit crunch as banks still struggle to digest the expected rise in NPLs. Regarding the euro, which has stubbornly settled above the important USD1.20 line, we think the ECB will not go beyond verbal intervention even though we expect the euro appreciation trend to run further in 2021, driven by a weaker dollar in a context of abating global uncertainty.

German GDP will contract by -5.6% in 2020 followed by a strong recovery of +3.4% and +3.8% in 2021 and 2022, respectively. As a consequence, we expect a return to pre-crisis GDP levels in early 2022. With the pre-Christmas return to a “hard lockdown” which is unlikely to be eased notably before February 2021, we expect the Germany economy to slip back into recession at the turn of 2020/21. With the easing of Covid-19 restrictions from Q2 onwards and the vaccination of the population at risk by mid-year, we expect German economic momentum to shift into overdrive. Fiscal policy looks set to remain supportive in 2021 and 2022 –the risk of premature withdrawal is rather low during an election year and our baseline of a conservative-green coalition should see more social spending thereafter – allowing for quarterly GDP growth to register above +2% q/q in Q2

as well as Q3. As uncertainty about the economic outlook recedes, the relatively solid labor market situation (unemployment forecast: 5.4% in 2022 after 6% in 2020) will provide support to the deployment of precautionary savings and in turn private consumption. Exports should continue to recover over the coming quarters, but given ongoing protectionist tendencies, a strong Euro and persistent structural headwinds facing German industry, the GDP growth contribution should slow below the pre-pandemic trend.

After a contraction of -9.9% in 2020, we expect a rebound in French GDP of +6.1% in 2021, followed by above-potential growth in 2022 (+3.8%). Consumer spending will remain the key driver of the recovery, thanks to improved confidence (active government support to labor markets) and the unleashing of EUR19bn of excess savings. The unemployment rate is expected to rise to 9.9% in 2021 and 10.1% in 2022. During the pre-electoral period we expect active labor market policies to focus on keeping the youth (new graduates) and the most vulnerable out of unemployment statistics. Inflation meanwhile looks set to remain muted (0.5% in 2021 and 0.7% in 2022) on the back of a negative output gap as the economy will not return to pre-crisis levels before mid-2022, alongside low energy prices and strong Euro.





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With new restrictions put in place in November, Italy in course to fall back into recession in Q4. Economic output is therefore likely to fall by -9% this year before rebounding by +4.1% in 2021.

Italy's contraction is less pronounced compared to other southern European countries, thanks to a lower share of Covid-19-sensitive services in private consumption and a higher importance of the manufacturing sector, combined with a strong rebound in exports. Italian industry currently is benefiting from its position in the global supply chain, with its focus on machinery, chemicals and high-end consumer goods, with production already back at pre-crisis levels. Italy ambitious fiscal stimulus package (additional spending to the tune of 6% GDP & state guarantees worth 35% of GDP) has boosted public spending by only 1% since the beginning of the year vs. 3% for other large Eurozone countries. Nevertheless it has been more successful in supporting corporate confidence: investments rebounded strongly in Q3 (+31% q/q). The rising volume of corporate loans (+5.3% y/y the strongest dynamic since end-2011) suggest the favorable trend looks set to continue. This is remarkable as the Italian banking sector remains vulnerable and even state-guaranteed loans to companies, especially SMEs, are covered only by 80% on average. Against this background we expect real GDP to grow at a rate of +4.1% in 2021 and +3.8% in 2022. Although Italy's debt-to-GDP ratio is on course to reach

160% this year and will only fall to 153% by 2022. The ECB will ensure that refinancing costs for the Italian sovereign remain favorable. Indeed, with the expansion of the PEPP program, the market supply of Italian government bonds should again decline next year. Only a flare-up of the Italexit topic could actually trigger market stress.

In Spain, restrictions will likely weigh on the short-term outlook and delay the consumer recovery, but the vaccine and ambitious stimulus are good news for the services-oriented economy. Only half the job losses in Spain have been recovered so far, and prolonged restrictions and a cautious reopening will weigh on consumer spending until spring 2021. Vaccination campaigns could be well advanced by summer, hence providing a boost to tourism revenues in H2. The global return to normalcy in 2022 could benefit further Spain's social spending. Therefore, after falling by -11.6% in 2020, we expect GDP to grow +5.6% in 2021 and +5.8% in 2022. Spain's ambitious stimulus paves the way for green investment and social redistribution. However, institutional and political hurdles could mean that not all EU grants (EUR72bn) are used in 2021-2023. In addition, we see the unemployment rate remaining high next year as emergency pandemic measures are phased out; it will only start decreasing in H2 2021 (+16% average in 2020, +17.2% in 2021 and +15.5% in 2022). Real economic activity

will return to pre-crisis levels early 2023. Downside risks are political risk and stimulus implementation, which would delay the recovery, especially for the labor market; upside risks include a faster than expected vaccination campaign, and a smooth and efficient allocation of EU stimulus funds.

In the UK, Brexit will act as a drag on the post-lockdown recovery, with GDP to remain -5% below pre-crisis levels at end-2022. We expect Q4 GDP to fall between -5% and -6% q/q – with the cost of the second lockdown up to one third of the first one. Social spending, primarily impacted by the lockdown measures, accounts for 48% of GDP. The start of the vaccination campaign is good news, but sanitary restrictions are expected to remain high until at least late spring as the vaccination of the population at-risk is estimated to take around five months. In addition, Brexit is expected to cut -2.5pp from the post-lockdown recovery in Q2 (to +3.5% q/q). Overall, we expect GDP growth to reach +2.5% in 2021 as the expected fiscal stimulus (around 3% - 4% of GDP, mainly focused on infrastructure spending and reducing consumer taxes to reduce the burden of higher import prices post Brexit) is unlikely to fully compensate for the cost of Brexit. The Bank of England is expected maintain its monetary policy stance throughout 2021 after having announced GBP150bn of additional QE in November. Assuming the fiscal stimulus

will feed into strong infrastructure spending to reduce the non-tariff barriers post Brexit (estimated at +10%), we expect GDP to accelerate by +6.5% in 2022, but to remain -5% below pre-crisis levels.

Emerging Markets as a whole (excluding China) are forecast to post a modest recovery, with real GDP expanding by +2.6% in 2021 and +2.2% in 2022. The pre-crisis full-year GDP level of 2019 is expected to be reached in 2022. This pattern is also true for the Central and Eastern Europe region as a whole, which is projected to grow by +3.2% in both 2021 and 2022 (after shrinking by -4.3% in 2020).. Average inflation in the CEE region is expected to tick up slightly from +4.5% in 2020 to +4.7% in 2021 and +4.6% in 2022. Price pressures are mitigated by moderating wage growth, which come along with rising unemployment in the region, forecast at 7.8% in 2021 and 6.8% in 2022, up from the pre-crisis rate of 6.5%.

Asia-Pacific overall is likely to continue outperforming other regions of the world in 2021, but that masks disparities across countries. Aggregate GDP growth for the region is likely to reach -1.6% in 2020 (after +4.2% in 2019), followed by +6.4% in 2021 and +4.6% in 2022. On the one hand, economies that are managing the Covid-19 crisis relatively well and that have strong exposure to global trade in goods are recovering faster – China, Taiwan, Vietnam (and South Korea to a lesser extent). Policy easing should turn less aggressive there (with China even gradually tightening). On the other hand, a more protracted epidemic in India, the Philippines and Indonesia means that their economic recoveries are slower and the loss of GDP compared to pre-crisis trends are very large (especially in the former two). While the pandemic was well-managed domestically in Thailand, the large exposure to services trade (tourism) is delaying the full recovery of the economy. We expect further policy easing in these economies.

Latin America: no remedy for pre-pandemic structural weaknesses. The region will only go back to pre-crisis activity levels by end-2023. In the short-term, risks of a second wave (especially in Mexico and Brazil) will keep sanitary

restrictions high and inhibit the recovery. Next year, domestic risks and vulnerabilities will also come to the forefront, despite the vaccine deployment which will be good for consumption and tourism in H2. Social risk in the region, anemic growth in Mexico, high unemployment and the debt burden in Brazil or political risk in Chile will be drags on regional activity: we expect +3.5% GDP growth in 2021 after -7.3% in 2020, and +2.5% in 2022. Lastly, there is a higher probability of scarring effects from the crisis in Latin America, namely hysteresis of the labor market and destruction of the capital stock, as few countries still have fiscal leeway (only Chile and Peru) to relaunch their economies. In 2022, the expectation of a US rate hike could put economies under pressure to promote visible fiscal adjustments (e.g., Argentina, Brazil) or gradually rebuild fiscal buffers used during the pandemic (e.g., Chile, Colombia).

After being through the worst recession in its recent history in 2020 (-4.2%), we expect the African economy to rebound by +3.2% in 2021 and +2.9% in 2022. Covid-19 infection rates remained relatively low on the continent compared with other parts of the world. However, African economies were severely hit by the crisis due to weak demand (internal and external) and commodity price shocks. In 2021 and 2022, we expect the recovery to be essentially driven by stronger world demand, higher commodity prices and resuming tourism activity. We see as the main challenge worsened fiscal imbalances –increasing public spending and loss of government revenues – and public debt pushed up to hardly sustainable levels. In terms of debt sustainability, we cannot exclude the contagion of sovereign defaults over the continent in 2021-2022. Angola, Mozambique, Ghana and Tunisia are most at risk for debt sustainability. African governments now have less fiscal space than after the onset of the Great Financial Crisis to boost economic recovery. Therefore, the continent needs to attract private investment more than ever as an engine of growth. Nevertheless, the lack of basic infrastructure (in energy and connectivity) and long-lasting structural issues (corruption, administrative barriers, rule of law defi-

cit, etc.) may continue to hold back the emergence of private sector-led growth in the medium term. Fragile democracies, upcoming elections, deteriorating labor market conditions, strong inequalities and endemic corruption set the stage for increased social tensions in 2021-2022. Zambia, Tunisia and Kenya are close to having new IMF program agreements in 2021. Yet, the fiscal consolidation requirements that would be associated with these programs might be contested by populations (already suffering significant economic losses because of Covid-19). Ethiopia, Nigeria, Tunisia and South Africa are most at risk for social unrest.

Regional growth in the Middle East is projected to recover only gradually, with real GDP increasing by +2.1% in both 2021 and 2022. As the region contracted by -5.8% in 2020, the pre-crisis full-year GDP level of 2019 will only be reached in 2023 at the earliest. Contained foreign investment and the lack of fiscal leeway – as most economies have already very high public debt burdens and an undifferentiated revenue structure – are the main brakes on the recovery. Regional inflation should remain elevated at around 7% but this average is tainted by very high price increases in a few crisis countries (Lebanon, Iran, Yemen). Most of the other economies in the region will experience deflation or subdued inflation at least until end-2021.

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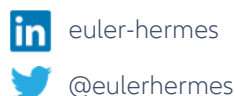
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