

Annex to the blogpost:

EU recovery fund proposal: crisis relief with massive redistribution

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Detailed description of the cross-country allocation key proposals of the Commission for each instrument and the assumptions and methodologies I use in my estimation

All euro amounts indicated are at 2018 constant prices.

1.1a Recovery and Resilience Faculty – grants (€310 billion from ‘Next Generation EU’)

The proposal allocation depends on (a) 2019 population, (b) the inverse of 2019 GDP per capita, and (c) the 2015-2019 average unemployment rate, all relative to the EU27 value. Relative GDP per capita is capped at 150% of EU27 average, while the unemployment rate ratio is capped at 150% for countries with GDP per capita below the EU average and at 75% for countries with GDP per capita above the EU average. Our calculations use the shares of country-allocations published by the Commission in the [annex](#) of the regulation proposal.

Surprisingly, neither the regulation proposal nor its annex specify the units of measurement, which is particularly critical for GDP per capita. We replicated the calculations and found that current price euro values of GDP per capita were used by the Commission. This choice is unusual and necessitates justification. Cross-country comparisons of economic development usually consider GDP at purchasing power standards, which is the proper unit for measuring the relative level of development.

1.1b Recovery and Resilience Faculty – loans (€250 billion from ‘Next Generation EU’)

The maximum volume of the loan for each Member State is constrained by two factors:

- 4.7% of Gross National Income, but in exceptional circumstances the amount of the loan support may be increased by derogation, subject to availability of resources;
- the volume of loans cannot be higher than the total cost of the investments and reforms spelled out in the recovery and resilience plan, minus the amount of grants received from the Recovery and Resilience Facility.

In my calculations I use 4.7% of GNI.

1.2 Recovery Assistance for Cohesion and the Territories of Europe (REACT-EU) – grants (€50 billion from ‘Next Generation EU’ and €4.8 billion from the amendment of the 2020 annual EU budget)

The proposed [allocation methodology](#) of REACT-EU is quite complex.

It considers the following indicators:

- 66.7%: GDP contraction from the first half of 2019 and the end of the applicable reference period (see this later), using seasonally-adjusted GDP in euro at constant prices, which is

adjusted by the ratio of the Member State's GNI per capita to the GNI per capita of the EU-27. No information is provided about the unit of measurement of GNI per capita, nor the time period considered. In my calculations I consider purchasing power standard values in 2020 according to the May 2020 Commission forecast;

- 16.7%: total unemployment in January 2020;
- 5.6%: increase in total unemployment from January 2020 to the end of the applicable reference period;
- 8.3%: youth unemployment in January 2020;
- 2.8%: increase in youth unemployment from January 2020 to the end of the applicable reference period.

While seasonal adjustment is explicitly mentioned for GDP (though we believe the Commission plans to use seasonally and calendar adjusted data), it is not mentioned for any unemployment indicators. However, unemployment is rather seasonal and seasonality differs across member states, so using unadjusted unemployment indicators would not make sense. I therefore use seasonally adjusted data for unemployment too.

Allocation is made separately for 2020-2021 and for 2022 and hence there are two corresponding reference periods:

- GDP: from the first half of 2019 to either the first half of 2020 (for the 2020-2021 allocation) or the first half of 2021 (for the 2022 allocation);
- Unemployment: the change from January 2020 to either the average of June to August 2020 (for the 2020-2021 allocation) or the average of June to August 2021 (for the 2022 allocation).

Caps per Member State for the whole period 2020 to 2022:

- High-income countries (GNI per capita in PPS for the period 2015-2017 is above 109% of the EU-27 average): 0.07% of "real GDP of 2019" (no information is provided on what "real GDP" means in this context; since commitments are made in current prices euros, I use current price euro values for GDP);
- Low-income countries (GNI per capita in PPS for the period 2015-2017 is below 90% of the EU-27 average): 2.6% of "real GDP of 2019";
- Middle-income countries: linear interpolation between 0.07% and 2.6% of "real GDP of 2019";
- Excess amounts over the caps are proportionally redistributed to countries whose average GNI per capita in PPS in 2015-2017 was under 100% of the EU-27 average.

Adjustment for [outermost regions](#):

- Before the allocation for 2020, €30 per inhabitant will be allocated to the outermost NUTS level 2 regions, and only the remaining amount for 2020 will be distributed according to the criteria discussed above. No special allocation is proposed for the outermost regions for 2021-2022.

In order to simulate a hypothetical scenario, the following forecasts are needed for 2020-2021:

- Quarterly real GDP forecast: available for 23 EU countries in the spring forecast of the Commission. It is not available for Cyprus, Greece, Luxembourg and Malta. For these countries, I approximate quarterly developments. This is consistent with the Commission's

annual forecast, by assuming a time-profile similar to Spain in the cases of Cyprus, Greece and Malta, and a time-profile similar to Germany in the case of Luxembourg;

- Monthly total and youth unemployment forecast: not available. Annual average total unemployed forecast is available in the spring 2020 Commission forecast. To approximate monthly values for total unemployment, I use a quadratic function (separately for each country) to match the average annual forecast included in the Commission's spring 2020 forecast. The quadratic function results in an inverted U-shape development in monthly unemployment, which is consistent with the Commission forecast for an increase in unemployment in 2020 followed by a decline in 2021. For youth unemployment, I assume that the share of youth unemployment in total unemployment remains the same as in the most recent data, which is for April 2020 for most countries.

1.3 European Agricultural Fund for Rural Development (EAFRD) – grants (€15 billion from Next Generation to top-up the 'standard' seven-year MFF)

The allocation of these additional resources for each member state is proposed to be the same as the May 2018 Commission's proposal for EAFRD allocation of the 'standard' seven-year MFF was, which is available in Annex IX [here](#). I use this allocation key in my calculations.

1.4 Just Transition Fund (JTF) – €40 billion grants consisting of €30 billion from 'Next Generation EU' plus €10 billion from the 'standard' seven-year 2021-2027 MFF

The basic [allocation](#) considers carbon-intensive sectors (with 49% weight), employment in mining of coal and lignite (25%), employment in carbon-intensive industry (25%), production of peat (0.95%) and production of oil shale (0.05%).

This basic allocation is then:

- adjusted upward for countries with GDP per capita below the EU average and downward for countries with GDP per capita above the EU average;
- capped at the maximum of €8 billion per member state for the whole €40 billion JTF (or at €6 billion for the €30 billion component of 'Next Generation EU') and at a minimum of €32 per capita.

A [factsheet](#) published by the Commission lists the country-allocation of the €30 billion component belonging to 'Next Generation EU': I use this list in my own calculations.

2.1 Solvency Support Instrument – guarantees (€26 billion from 'Next Generation EU' and €5.3 billion from the amendment of the 2020 annual EU budget)

The regulation proposal says that “no geographical quotas will be established”. Yet it also says that “The Solvency Support Instrument will be open to all Member States and to all the sectors covered by the EFSI Regulation, with a focus on those Member States whose economies have been most affected by the effects of the COVID-19 pandemic and/or where the availability of State solvency support is more limited.” and “action at the Union level will allow to counterbalance distortions in the internal market caused by the different fiscal capacity of individual Member States to provide State aid for solvency support to their companies”.

It therefore seems that this instrument will be distributed between EU member states by considering two criteria:

- the impact of the COVID-19 pandemic on the economy;
- the fiscal capacity of the member state.

I have illustratively considered these two factors the following way:

- the share in GDP loss: the same way as calculated for REACT-EU, by the averaging shares obtained for the 2019H1-2020H1 and the 2019H1-2021H1 periods (but without the GDP/capita correction, because the regulation proposal of Solvency Support Instrument does not mention the level of development as a relevant factor);
- the ratio of public debt to GDP, divided by the average EU27 public debt/GDP ratio.

I multiply the share in GDP loss with the relative public debt position (a correction similar in spirit to several similar corrections made in the proposals for other instrument) and then calculate the share of each country in the sum of this product for all EU member states.

2.2 InvestEU – guarantees (€30.3 billion from ‘Next Generation EU’ to top-up allocations in the ‘standard’ seven-year 2021-2027 MFF)

Geographical quotas are not set for InvestEU, yet the regulation proposal suggests aspects similar to the Solvency Support Instrument. The InvestEU regulation proposals say:

- *“It is crucial that the economies of Member States hardest hit by the impact of the pandemic benefit from the support of programmes under the EU budget.”*
- *“The proposal is of particular importance in the post-crisis situation to build up a resilient, inclusive and integrated European economy and preserve the Single Market also to the benefit of those Member States that have less financial means to support such projects with national financing sources.”*
- *“Only a resilient, inclusive and integrated European economy can preserve the Single Market and the level playing field also to the benefit of the hardest-hit Member States.”*

Therefore, I use the same shares that I calculated for the Solvency Support Instrument.

3.1 EU4Health – grants (€7.7 billion from ‘Next Generation EU’ plus €1.7 billion from the ‘standard’ seven-year 2021-2027 MFF leading to a total of €9.4 billion)

This instrument can best be seen as a European public good and therefore country allocation does not make sense. Geographical quotas are not set for EU4Health, yet Article 14 states that eligible entities *“are active at Union level and in at least half of the Member States, and have a balanced geographical coverage of the Union.”* In my illustrative calculations I apportion EU4Health funds across EU member states according to their share in EU GNI. Since the marginal contribution to the EU budget is based on the shares in EU GNI, this ex ante allocation does not foresee any cross-country redistribution.

3.2 rescEU – grants (€2.0 billion from ‘Next Generation EU’ plus €1.1 billion from the ‘standard’ seven-year 2021-2027 MFF leading to a total of €3.1 billion)

This instrument can also be seen as a European public good and therefore country allocation does not make sense. Geographical quotas are not set for rescEU. The aim of the proposal is that *“the European Union supports, coordinates and supplements the action of Member States in the field of civil protection to prevent, prepare for and respond to natural and man-made disasters within and outside the Union. Building on the principles of solidarity and shared responsibility, the overall objective of this proposal is to ensure that the Union can provide a better crisis and emergency support to its citizens in Europe and beyond.”* Similarly to EU4Health, I apportion rescEU funds across EU member states according to their share in EU GNI, which does not involve any ex ante cross-country redistribution.

3.3 Horizon Europe – grants (€13.5 billion from ‘Next Generation EU’ plus €80.9 billion from the ‘standard’ seven-year 2021-2027 MFF leading to a total of €94.4 billion)

Geographical quotas are not set for Horizon Europe. Existing allocations of EU research funds primarily based on excellence but there are also dedicated instruments for cohesion in research. Excellence is rather persistent, since the best research centres attract the best minds and therefore a research centre which was successful in obtaining EU funds in the past will likely be successful in the future too. Therefore, for my illustrative calculations I apportion Horizon Europe funds across EU member states according to their share in actual Horizon 2020 payments in 2014-2018 in EU27 countries.

Thereby, I assume that the top-up of Horizon Europe by ‘Next Generation EU’ would be fully spent in EU27 member states. In 2014-2018, 7.1% of Horizon 2020 was provided to non-EU entities and 10.9% to the UK.

3.4 Neighbourhood, Development and International Cooperation (NDIC) – guarantees (€10.5 billion from ‘Next Generation EU’ plus €75.5 billion from the ‘standard’ seven-year 2021-2027 MFF leading to a total of €86.0 billion)

This is an instrument for non-EU countries and therefore EU countries do not benefit from it directly.

3.5 Humanitarian Aid – grants (€5 billion from ‘Next Generation EU’ plus €9.8 billion from the ‘standard’ seven-year 2021-2027 MFF leading to a total of €14.8 billion)

This is an instrument for non-EU countries and therefore EU countries do not benefit from it directly.

4. European Fund for Sustainable Development (EFSD) – guarantees (€1 billion from the amendment of the 2020 annual budget)

This is an instrument for non-EU countries and therefore EU countries do not benefit from it directly.