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# Getting a grip on the climate challenge to build the future of Europe

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Based on the observation of deceleration since the financial crisis and persistent divergence between the countries of the European Union, this paper firstly highlights the challenges that lie before Europe's economy. Amongst these the climate features as a central issue. The economic tools at Europe's disposal are then assessed, of which the Investment Plan, a promising tool, and action undertaken vis-à-vis the climate. Finally, the paths that might be taken towards climate transition are laid out to provide a response to the threat of secular stagnation and division on the continent. Proposals are made for the Investment Plan for it to become a privileged vector of this strategy. Apart from the establishment of a framework to redirect financial flows towards green investments, the establishment of a climate transition authority and a steering committee might provide the Plan with the industrial strategy it is lacking. This might be implemented to a widened base and become a key factor in the European response to Eurosceptic movements.

As the European elections draw closer the Union seems divided and under the threat of a rising wave of sovereigntisms. Weakened by the financial crisis, the Union is riddled with evident economic rifts between the countries in the North and South. The rise of populism is in part the result of this tension. In addition to the economic challenges faced by the Union, there is also a demand for climate transition. This means seeing how Europe can devise a response to this vital issue using the instruments it has at its disposal in the context of international agreements, including the Investment Plan. We should first gauge the Union's economic assets and weaknesses, then the major issues which it faces, notably regarding the climate and energy. Then we shall assess the European Union's responses to low investment and climate transition. Finally, we shall draw up some possible ways to introduce a measure to guarantee climate transition. This project could revive the economy, help to absorb unemployment and exclusion, and, at the same time, provide a response to the multiple voices which doubt the European project.

## 1 – A EUROPEAN ECONOMY WEAKENED IN THE FACE OF THE CLIMATE CHALLENGE

We shall examine the economy of the euro zone as a whole, then by groups of countries, North and South, and the challenges that the Union's economy is facing, amongst which the climate plays a central role.

### 1. Diagnosis: a disparate, weakened economy

#### A – The euro zone and the Union: a distinct delay in comparison with the USA.

The increase in the GDP was significant in the euro zone in 2017 (+2.4%), as in 2018 (+2.1%)[1] However, its output rate is not more than 6 points over its 2007 pre-crisis level, whilst the Union and the USA respectively display increases of 8 and 15 points[2].

Despite a significant recovery since 2015, industrial output in the euro zone was still 5 points below its 2007 level in 2017. Potential growth[3], which lay at 1.4% in 2017 for the euro zone, of course shows an improvement in comparison with the period immediately after the crisis (+0.6% between 2009 and 2013) but has remained well below the average of the decade 1999-2008 (1.95%). It is due to increase significantly until 2020, but remain very much inferior to that of the USA[4].

In marked contrast with this country, which is in chronic deficit (-1.7% in 2017), the euro zone's external trade enjoys a significant surplus (4% of the GDP, a comparable level with that of Japan), thanks, amongst other things, to an improvement in competitiveness costs. The real effective exchange rate of the euro zone[5] has declined by 5 percentage points since 2010, reflecting an improvement in its competitive position, whilst this indicator totals nearly 17 points in the USA, reflecting the opposite trend.

1. Statistical Annex of the European Economy, Autumn 2018, European Commission. In 2018, this is the output expected.
2. Regarding the base index of 100 in 2007, the euro zone's GDP reached 106 in 2017 in comparison with 108 and 115 regarding the EU and the USA.
3. Potential growth or the potential for growth matches normal growth of the economy taking into account output factors (capital, labour), as well as technical progress, independent of the economic cycle.
4. European Economic Forecast, Autumn 2018, Table 13.
5. The real effective rate of exchange is an indicator of a country's cost-competitiveness on the international market. It takes on board the change in exchange rate as well as the movements of costs and prices, whilst weighting this data with the relative influence of the main competitors in the country in question. The decline in this indicator reveals an improvement of its cost competitiveness.

As for public finances, unlike the USA (-4% of the GDP in 2017) and Japan (-3.7%), which have been in deficit for many years, the euro's budgetary deficit (-0.9% in 2017) is very limited. Consequently, the public debt of the euro zone, which lay at 89% of the GDP in 2017, is of course high, but remains well below the ratio recorded in the USA (108%) and especially Japan (236%).

Regarding investment, the euro zone lags behind considerably. Public investment indeed represented 2.6% of the euro zone's GDP in 2017, a ratio that was clearly below that of the USA (3.7%) and of Japan (3.2%). The euro zone's total investment in volume is 5 percentage points lower than its 2007 level, whilst the USA lies above this by 6 points. In the Union the shortfalls in investments are obvious in research and innovation[6]; investment in infrastructures, is down in comparison with the GDP, whilst requirements are obvious[7].

Finally, the unemployment rate lay at 9.1% of the working population in the euro zone in 2017, a high level, contrasting quite sharply with the ratios of almost full employment in the USA (4.4%) and in Japan (2.8%).

**B – Clear divergence between the countries in the North and the South.** In the euro zone, four of the six countries in the North from our sample[8], witnessed their output (measured by the GDP) rise easily beyond their pre-crisis level with indicators ranging from 109 to 112 in 2017 (on a base of 100 in 2007)[9]. France, an intermediary country, reached 107. As for the four countries in the South[10], only Spain with an indicator of 103, is now over the 2007 level.

From the point of view of industrial output, apart from the Netherlands and Finland, the countries in the North clearly went beyond the pre-crisis level of 2007. For its part, France is below this by nearly 10 points, whilst the countries in the South have lost 20 points, except for Portugal.

In 2017, potential growth lay between 1.4% and 1.8% in the countries of the North[11], in contrast a delta of

1% to 1.4% for the countries of the South, apart from Italy whose stagnation at 0.3% is worrying. Again, with its 1.2% France finds itself at an intermediary level, between the North and South.

Regarding the foreign trade balance, the six countries in the North are in surplus; three of them, including Germany, have a surplus in excess of 8% of their GDP. Apart from Greece, the countries of the South are in surplus. France for its part, has a current account deficit of 0.6% of the GDP, which sets it apart.

In view of public finances, the countries of the North are close to budgetary balance – in the case of four of the six, and two, Germany and the Netherlands, are in surplus. Except for Belgium, the public debt of the countries in the North is contained. Except for Greece, which is in surplus, the countries of the South show high budgetary deficits however and significant public debt. From the point of view of the deficit, as well as the debt, France clearly lies with the countries of the South.

In stark contrast, depending on the euro zone regions, the unemployment rate lies within a delta of 3.8% and 7.1% of the working population in the countries of the North[12]. In the countries of the South, the delta lies between 9% and 21.5%. With a rate of 9.4% France again lies amongst the countries of the South.

## 1.2 – The challenges to rise to: growth, convergence, climate transition

The European Union and the euro zone face two vital macro-economic challenges, which emerge from the previous analysis: the need to increase growth potential; the decisive implementation of a convergence process between divergent national economies. Climate transition is another issue of size, which could transform into an opportunity for the European economy.

**A – Increasing growth potential to prevent the trap of secular stagnation.** The euro zone's growth potential we note decreased sharply after the financial crisis. Its current low level can be attributed to several

6. Draft regulation 6th June 2018 establishing the InvestEU programme, COM(2018) 439 final.

7. Idem.

8. Our selection covers 11 countries representing 97% of the GDP and more than 95% of the euro zone's population; 83.3 % of the GDP and 72.9 % of the population of the entire EU.

The "Northern countries" are: Germany, Austria, Netherlands, Belgium, Ireland and Finland; the "Southern countries": Italy, Spain, Portugal and Greece.

France is apart, between the two groups.

9. Two of the six countries distinguish themselves from this delta: Ireland, which peaked at 149 and Finland, which just managed to attain its pre-crisis level.

10. See note 8.

11. Ireland is an exception at 8%.

12. From this point of view Finland stands out with a rate of 8.6%.

factors. Firstly, we might mention the slow rise in output, notably in services[13]. This phenomenon can be attributed both to the weak level of public investment in the Union as well as to spectacular reductions in the volume of investments since the crisis[14]. The lack of spending on research and innovation is also to be highlighted[15]. Major shortfalls in the skills of the working population are preventing the support of ongoing technological transfers[16]. Secondly, the size of the public debt, i.e. a ratio of 89% of the GDP on average in the euro zone, but well above this in several countries in the South, is preventing public investment. We might also note the lack of structural reform. This is a leitmotiv in the draft recommendations made by the Commission under the European Semester[17].

Finally, the inadequate “cleansing” of banks’ balance sheets after the crisis, despite the ECB’s truth-operation in 2014[18], is certainly behind the semi-stagnation of lending[19] that lasted until 2018 despite massive intervention on the markets by the ECB.

**B – Ensuring rapprochement between national economies.** The disparities observed in the development of national economies in the euro zone have been caused by several things. Firstly, some economies in the South really fell a long way short of satisfying the required criteria[20] when they entered the single currency. Moreover, trade in the euro zone was undertaken to the benefit of some countries and to the detriment of the periphery, mainly in the South. Hence, the single currency was a catalyst for disparity, depriving the economies of the periphery of a vital adjustment variable, the exchange rate. Indeed, without any effective budgetary and economic policy coordination, the economies of the euro zone diverged sharply in terms of competitiveness, which could only be reflected in differences in revenues and in some cases, in trade imbalances.

Since 2011 economic governance has had new instruments to provide impetus towards convergence. However, these have their limits and the process is confronted by leaders whose ability to take decisions is extremely weak[21].

**C – The climate challenge.** The energy and climate challenge to be overcome by the European economy under international agreements, comprises a transition that will enable the substitution of the present energy model, responsible for global warming, whose consequences might be devastating for mankind, the environment and our economies, with sustainable development, that aims to stop the emission of greenhouse gases (GHG).

**Typology of the financial risks associated with the climate.** Transition towards a carbon-neutral economy places financial players centre stage, due both to the risks they run, as well as the decisive role they play in the desirable redirection of financing towards sustainable development. Financial enterprises are indeed exposed to three types of climate-related risks[22].

The risk of catastrophe associated with a worsening climate. On the rise, damage of this type totalled 337 billion dollars (Bn\$) in 2017 of which 130 Bn\$ were covered by insurance[23].

The risk of transition. If it is managed badly transition might lead to a sudden devaluation of assets affecting fossil energies[24], following regulatory and technological changes to the benefit of low-carbon models.

Finally, the risk of litigation resulting from the financial effects on certain players due to quests to apportion responsibility for climatic accidents.[25].

More widely, the idea of systemic climate risk, extended by analogy to that of systemic financial risk, points to the sudden downturn in financial stability, typified by contagion and the spread of shocks due to the impact of climate change[26].

**A political obstacle: the “tragedy of the horizon”.**

The need to make the transition over to a low carbon economy faces a major political problem that has been qualified as the “tragedy of the horizon” and which might be summarized as follows: the exorbitant cost of climate change would be borne by future generations,

13. 2019 Annual growth survey, COM (2018 770 final).
14. The overall decline is of around 15% between 2007 and 2013, with more significant decreases in the countries of the South “An Investment Plan for Europe” Commission Communication, 26th November 2014, COM (2014) 903 final.
15. The percentage of the GDP invested in R&D in the EU lies at 2.03% against 2.79% in the USA, 3.29% in Japan and 4.23% in South Korea. “Annual Growth Assessment”, op. cit.
16. 40% of the EU’s employers find it hard to find people with the right skills and 60 million adults in the EU lack the basic reading, writing and maths skills and in the digital area. Cf. « Annual Growth Assessment 2019 », op. cit.
17. See the draft recommendation by the Commission regarding the euro zone’s economic policy, COM (2018) 759 final.
18. This is the “Comprehensive assessment” undertaken by the ECB, prior to the full attribution of its responsibilities as the singular supervisor of the euro zone.
19. Between the end of the 2015 and Q3 2018, i.e. nearly three years, loans to businesses, have only increased by 2.5%, i.e. semi-stagnation.
20. The so-called Maastricht Criteria.
21. D. Perrut, 2018, “How to consolidate the euro zone?”, European Issue n° 478, June, Robert Schuman Foundation.
22. M. Carney (2015), *Breaking the Tragedy of horizons*; (2018), *A transition in thinking and action*, 6 April.
23. Munich Reinsurance Company, *Geo Risks Research*, 2018.
24. This is the idea of “stranded assets”.
25. In January and February 2018, the cities of New York and Paris brought action against several oil companies for their role in climate change. Cf. Charlotte Gardes (2018), *Le changement climatique un enjeu systémique pour le système financier*, BSI Economics (Climate Change, a systemic challenge for the financial system).
26. M. Aglietta and E. Espagne (2016) “Climate and Finance Systemic Risks: more than an analogy? The climate fragility hypothesis”, Working Paper CEPIL, April.

whilst those presently responsible have no direct interest in implementing climate transition, because the impact of the catastrophes resulting from their inertia is well beyond the traditional horizon of the mandates of the various executives. Yet, once a catastrophe has occurred, it will be too late to remedy it[27].

**The international framework of action against climate change.** This was set by the Paris Climate Agreement of 2015[28] and by the UN's Sustainable Development Goals 2030[29]. The Paris Agreement provides goals for the reduction of greenhouse gases, so as to maintain climate warming well below 2°, adhering as closely as possible to 1.5°.

As part of the general goals, the G20 then defined an Energy and Climate Action Plan for Growth in 2017[30]. Moreover, in June 2017, the "Task-Force on Climate-Related Disclosures" (TCFD), introduced by the Financial Stability Council, published its recommendations on information that all businesses will have to reveal regarding the risks and opportunities that they are experiencing in the face of climate change[31].

Finally, a recent report by the OECD, the UN and the World Bank aims to show the G20 its recommendations in six points, focusing on infrastructures. The latter, in the area of energy, transport, building and water are responsible for 60% of the greenhouse gas emissions[32].

**Colossal investment requirements, equal to the total of the world's GDP.** Recent reports on the issue agree: the investment requirements for climate transition are considerable and total around one ear of the world's GDP[33].

Recalling both the central role played by infrastructures in economic development, and the state of chronic under investment in this domain across the world, the report deems that world financial requirements for transition in infrastructures by 2030 will total, 6.900 billion \$ per year, i.e. a total of 83.000 billion \$[34]. Two years ago, in order to achieve the same goals UNEP estimated financing requirements at 90.000 billion \$ over the next 15 years[35].

Hence the transition towards a low carbon economy, especially from the point of view of infrastructures, provides an opportunity for a vast investment programme. This might be the time to "tear the world economy from secular stagnation"[36]. This process, which should place financial intermediaries at the heart of the reorientation of flows towards green investments, should simultaneously address two other related issues, that of exclusion and poverty (113 million people, i.e. 22% of the Union's population, are exposed to the risk of poverty and exclusion), as well as that of digital technology, which will be an integral part of the transition process[37].

## 2 – EUROPEAN RESPONSE: THE INVESTMENT PLAN AND THE PROGRAMME FOR ENERGY AND CLIMATE

We shall examine the economic tools available to the EU to respond to these challenges. Amongst these, the investment plan launches a new industrial dynamic. We shall see how the Union is responding to the climate threat.

### 2.1 – A new dynamic with the Investment Plan

**A – The Union's economic tools.** The Union has a composite decision-making body that is responsible for economic governance. It has three types of tool and procedure at its disposal: Single Market Policy, the budget and the new tool, the Investment Plan.

**Economic and Fiscal Governance.** This is implemented by intergovernmental bodies, the European Council, the Council of Ministers (ECOFIN), with the Eurogroup for the euro zone. Governance aims to:

- Coordinate national fiscal and economic policies as part of the Stability and Growth Pact and according to new procedures in the European Semester, in force since 2011[38];
- Undertake legislative reform, jointly with the European Parliament;
- Implement, if necessary, "anti-crisis" weapons established for the euro zone between 2010 and 2013: the assistance mechanisms for countries in

27. M. Carney (2015, 2018), op. cit.

28. Paris Agreement, 2015, as part of the UNFCCC (UN Framework on Climate Change).

29. UN, 2018, Report on sustainable development goals.

30. G20, 2017, Action plan energy climate for growth, Hamburg.

31. G20 TCFD (2017), Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures, June.

32. OECD, UN Environment, The World Bank (2018): Financing climate futures, rethinking infrastructures, November.

33. The current world gross domestic product totalled 80.330 Bn \$ in 2017.

34. OECD, UN Environment, The World Bank (2018), op. cit.

35. UNEP (2016), Design of a sustainable financial system. This report is based on the following sources: New Climate Economy (2014). Better Growth, Better Climate. International Energy Agency (2015). World Energy Outlook Special Briefing For COP 21

36. Michel Aglietta, dir. (2018), Transformer le régime de croissance, CEPII, (Transforming the growth system) October.

37. The 2019 Annual growth survey mentions these two major challenges which alone would justify a study but which we shall not address here.

38. This role is based on economic factors completed by social and environmental indicators; Europe 2020 Strategy defines the goals that are also followed as part of the European Semester.

difficulty[39]; the European Stability Mechanism[40]. Let us now look at the three main economic tools implemented by the Union, the Single Market, the budget and the Investment Plan.

**The Single Market Policy.** The Common Market, established when the Union was launched, was redefined by the Single Act of 1986, which established the idea of the Single Market, which is based, in our opinion on three pillars:

- the four fundamental freedoms (free movement of people, goods, services and capital);
- the idea of a level playing field, which harmonises the terms of competition based on a rigorous regulatory framework that protects the consumer and the environment, whilst guaranteeing greater security for the economic system;
- the competition policy, over which the Commission enjoys exclusive supervision, and which frames State aid and limits dominant positions. The Single Market is also divided into sectors, with action plans presently involving the Capital Market Union as present, the Digital Single Market and Energy Union.

**The Union's Budget.** Introduced in Europe's early years, the Union's budget has mainly been directed towards territorial development, with two main areas of intervention – the Cohesion Policy and the Common Agricultural Policy (CAP) established in 1962.

The draft budget (or the Multi-annual Financial Framework) for 2021-2027, represents 1.135 billion € in commitments, i.e. 1.1% of the Union's GDP. Despite the British departure from the Union, which will reduce the budget by around 8%, the dominating priorities find expression in several areas: research, innovation and digital; climate and the environment; security and defence; migration, the borders and external action.

**The Investment Plan (or the Juncker Plan).** The latter, established as an emergency measure, became operational in 2015. Its role is to revive investment in the Union, which has been collapsing since the financial crisis, we note, negatively affecting potential growth and employment[41].

The plan targets strategic European investments in infrastructures: broad band and energy networks; transport infrastructures for industrial centres. It involves stimulating green growth, with renewable energies and improving energy efficiency. Research and innovation, as well as education also feature amongst the priorities. The Plan also supports SMEs.

**The Logic of the Plan.** This comprises, based on limited European public commitment, attracting, via a multiplying effect (of around 15), a high volume of public and private capital, frequently in the shape of public-private partnerships. Moreover, the criteria of European value added (wide geographic coverage, test on new products), response to market shortfalls and "additionalities" (financing is directed towards projects that would not have come to fruition otherwise) are used to select projects[42].

**The Measure.** The Investment Plan focuses on several tools, notably the EU's budget, which provides a guarantee of a total 16 billion € to the European Investment Bank (EIB), which intervenes to a total of 5 billion € in the European Fund for Strategic Investments (EFSI)[43]. The latter acts as a guarantee mechanism enabling the EIB group to intervene in projects that are riskier than those falling within its remit[44].

At the end of 2017, the duration of the plan was extended until 2020, to reach, with greater means, a total of 500 billion € (against 315 originally). The Union's budgetary guarantee rose from 16 billion € to 26 and the EIB's commitment in the EFSI increased by 2.5 billion €[45].

The plan is due to be extended from 2021 to 2027 with the InvestEU measure, which will take over from the EFSI, so that all of the Union's tools are under one roof[46]. InvestEU is due to generate (thanks to a Union guarantee totalling 38 billion €) an additional amount of investments of 650 billion €[47]. The InvestEU action would comprise four pillars; research, innovation, digitisation; SME's; investments in skills and social matters. We might note a 30% share of the InvestEU's overall envelope is due to be devoted to actions that include climate goals[48].

39. Regulation of 2013 focusing on the assistance to Member States in difficulty. (EU) regulation n° 472/2013

40. Treaty establishing the European Stability Mechanism 2012 (entry into force at the beginning of 2013).

41. An investment plan for Europe, Commission Communication, COM(2014) 903 final.

42. Draft regulation of 6th June 2018 establishing the InvestEU programme, op. cit.

43. European Fund for Strategic Investments (EFSI)

44. The EFSI guarantees the EIB's financing (regarding the Infrastructures and Innovation Chapter) and also that of its branch the EIF (for SMEs).

45. On 12th December 2017, the European Parliament and the Member States came to agreement regarding the regulation that aims to strengthen the EFSI, renamed EFSI Z.0, and to bring the investment goal up to 500 Bn€ by the end of 2020.

46. Draft regulation of June 6th 2018 establishing the InvestEU programme, op. cit.

47. Idem.

48. This share is due to rise to 40% in the infrastructures and innovation sectors.

*Review and outlook.* Originally the Plan provided for the mobilisation of a total capital of 315 billion € between 2015 and 2017, 240 of which were to be made in strategic investments and 75 in SMEs. In the second semester of 2018, the Plan mobilised 360 billion €, two thirds of which came from private sources. In 2020, the Plan is due to create around 1.4 million jobs and increase the Union's GDP by 1.3%[49]. Over the entire period 2015-2027, the three-stage plan, is due to mobilise a total of 1,150 billion € in investments.

**B – The quest for a means to link the tools.** In the Union there is a natural complementarity between economic tools. The cohesion policy provides for example 8.5% of the Union's public investments (and more than 50% in seven countries, including Portugal, Poland and Hungary[50]). In virtue of this, it is complementary to the Investment Plan. Moreover, alignment is required between the cohesion policy and the economic governance rules. Becoming evident in the 2014-2020 budget, the wish to improve coordination between these two pillars has been re-asserted in the draft budget 2021-2027 and takes the following shape:

*The tightening of links between the cohesion policy and economic governance.* A closer link has been established in the present EU budget (2014-2020), between the priorities of the European Semester and the use of the Structural and Investment Funds (ESI Funds)[51]. In the design of the national and regional programmes co-financed by these funds, the Member States have to take into account all of the pertinent recommendations regarding their countries under the European Semester[52].

*The establishment of a link between the Investment Plan and the Cohesion Fund.* This link works, on the one hand, via co-financing involving the funds both from the Investment Plan as well as the Cohesion Fund; on the other as part of the desire to rationalise programmes and instruments, either to remedy certain shortfalls in the tools designed for SMEs[53], or to improve coherence between financial instruments[54].

Observers note that the coherence between the Investment Plan and the Cohesion Fund are still

extremely lacking[55]. They also point to shortfalls in engineering skills at local level to take these projects forward, notably in the social area.

## 2.2 – European responses to the climate challenge

**The Union's general climate goals** are to reduce greenhouse gas emissions by 40% by 2030 (in comparison with 1990) and to achieve climate neutrality by 2050.

Immediately after the Paris Agreement on the Climate of 2015 the Commission presented a "Clean Energy Package" in November 2016, covering 8 legislative proposals to implement the commitments taken and to achieve Energy Union[56].

At the end of 2018 each Member State was to have delivered its project for a National Climate and Energy Plan in view of establishing the 2030 goals and the Union's strategy for 2050 at Union level. This will be defined in 2019[57], in view of a presentation at the 2020 UNFCCC[58].

**The Action Plan "Financing Sustainable Growth"**, published by the Commission in March 2018, defines the content of sustainable finance[59]. This is supposed to improve the financial system's contribution to sustainable, inclusive growth and to strengthen financial stability by integrating environmental, social and governance factors (ESG factors). The Action Plan then establishes three guidelines so that finance matches both environmental and societal concerns. These are:

- Firstly, redirecting flows of capital towards a more sustainable economy by means of – a standardised baseline focusing on sustainable activities; – European standards and labels for sustainable financial products;
- Then integrating sustainability in the management of the risks taken by financial intermediaries ensuring: the integration of sustainable criteria by ratings agencies; the clarification of the duties of major investors; client information regarding sustainability and finally the integration of sustainable criteria in the prudential requirements for banking and insurance[60].

49. The Juncker Plan at work, 22nd November 2018.

50. Commission Report 2017, "7th report on economic, social and territorial cohesion", COM(2017) 583 final,

51. The deepening of the Economic and Monetary Union, op. cit. p. 25

52. The granting of cohesion funds is subordinate to the European Semester. The Member State asking for funds must satisfy two types of condition: - Ex-ante or prior conditions which notably ensure the respect of the EU's economic legislation by this Member State and per country of recommendations which are addressed to it; - Macro-economic conditions which demand the respect of corrective budgetary (excessive deficit procedure) or economic measures (excessive imbalance procedure) by the country in question.

53. The wish to harmonise the rules concerning an identical area of action to avoid overlapping between the COSME, Horizon 2020 and EFSI programmes is expressed in the document "The future of the EU's finances, a concept paper by the Commission", 28.6.2017, p. 23.

54. In section 10 the 7th report on cohesion advocates greater coherence between the FDEIS, the new European venture-capital and lending, guarantee, and own-fund instruments managed by the Member States as part of the Cohesion Policy.

55. Confrontations Europe, 2018, Assises européennes du long terme, Colloque, Paris, 14th November. Moreover the draft regulation establishing InvestEU mentions situations of duplication between the EU's tools and sometime complications resulting from different rules and which are sometimes incompatible (Draft regulation InvestEU, op. cit., recital n° 2)

56. Package of measures: «Clean Energy for all Europeans», 2016.

57. Conclusions of the European Council on 13th and 14th December 2018.

58. EC communication, A clean planet for all, COM(2018) 773 final. CCNUCC

59. European Commission, Action Plan: financing the sustainable crusade, COM(2018) 97 final.

60. These prudential requirements mainly involve the level of own funds which banks must hold (as part of the so-called Basel III standard) and insurance companies (as part of the so-called Solvency II standard) in view of the commitments they make.

- Finally fostering transparency and the recognition of the long term by the financial institutions, in line with the Financial Stability Council's ad hoc working group's recommendations (TCFD)[61].

To implement this Action Plan, the timing of which is demanding, since 10 series of measures have to be turned into proposals before mid-2019, the Commission adopted a package of measures in May 2018[62]. This notably includes two draft regulations, one offering a framework for sustainable investment, mainly focused on the standardised baseline for sustainable activities; the other on reporting requirements in terms of investments and sustainable risks on the part of investors and managers.

In view of preparing the European Union's contribution to the UNFCCC 2020, the Commission published its vision for a long-term European strategy in its communication 'A clean planet for all',[63], mainly focused on the reduction of greenhouse gases by 2050, according to eight scenario and seven strategic points: energy efficiency; the decarbonisation of energy production; clean, safe, connected transport; a circular, competitive economy; a smart network of infrastructures and interconnections; the use of the bio-economy; the capture and storage of residual carbon.

Finally, the Union wants to step up its financial commitment to transition. The Investment Plan 2021-2027 (InvestEU), which should lead to the strengthening of the European guarantee, is due to devote a share of 30% of the financing to the transition (the ratio rises to 40% for infrastructures), i.e. 195 billion € in all and 28 billion € per year. The Union's 2021-2027 budget, for its part should be granted 25% (against 20% in the present budget) for transition, i.e. around 270 billion € in all and 41 billion € per year.

### 2.3 – Investment Plan and Climate Challenge

**A – A turning point in the Union's economic policy.** At the beginning of the decade 2010, the Acts 1 and 2 for the Single Market[64], promoted by the then Commissioner Michel Barnier illustrated the wish to

introduce a European industrial policy. Following these Acts, the Investment Plan confirmed the late break from the Commission's previous economic doctrine, in force since the Single Act of 1986. This suggested, under the theoretical influence of Paul Krugman, that the competitive positions of Europe at world level would mainly be achieved via competition on the Single Market, fostering the emergence of European champions[65].

In reality, we note that competition on the Single Market has not provided, via spontaneous generation, answers to the present industrial challenges. Some major failures like that of the digital industry in which the dominant players, the GAFAM, are mainly North Americans remind us of this daily.

Hence, according to the Union, its economic development still depends on the single market, but this has to be completed on the one hand by the Digital Single Market and the Energy Union – and combined on the other with Banking Union and the Capital Markets Union. In other words, the Single Market has to work together with industrial and sectoral policies[66].

The Investment Plan is based on an original schema and in line with the guidelines taken by international authorities. Indeed, it aims to trigger an investment dynamic using limited public funds, in view of channelling significant private funds by way of a strong leverage effect.

#### **B – Regarding the problem of climate transition.**

International authorities note enormous investment requirements in order to face climate transition[67]. However, this does not mean placing a layer of green investments on the top of investments directed towards "brown assets" linked to fossil energies. It is rather more about substituting the latter with green projects. But these comprise two features:

- Their great diversity in terms of size and sector; they can involve simple housing, or a continental electricity transfer infrastructure; as for the sectors, although energy comes out ahead, since it is responsible for 75% of greenhouse gas emissions and around half of the investments required[68], all are concerned:

61. Task force on climate-related disclosures, 2017, Recommendations, June.

62. European Commission (2018), Sustainable finance: making the financial sector a powerful actor in fighting climate change. 24 May 2018.

63. EC Commission, 2018, A clean planet for all, op. cit.

64. Act for the Single Market, Commission Communication, COM(2011) 206 final ; Act for a Single Market II, Commission Communication, COM(2012) 573 final.

65. T. Padoa Schioppa : « Efficacité, stabilité, équité », *Economica*, 1987.

66. Commission (2017), The Deepening of the EMU, a Commission conception paper 31.3.2017, p. 24.

67. On the cost of the transition, see point 1.2.

68. EC communication, A clean planet for all, op. cit.

transport, agriculture, industry and building;  
- Their highly risky nature; because they focus on new technologies, even those in experimentation, but also because their equilibrium lies in the very long term. We might also stress the low yield anticipated regarding these operations and the uncertainty of the length of time necessary to achieve any return on them[69].

More over many other obstacles impede investments in sustainable activities: insufficient market knowledge of the benefits of these investments; the difficulty in identifying them precisely; the unequal maturity of the capital investment markets depending on the country[70]. These major traits imply in response strong public intervention to create a green investment incentive system.

**C – Some costing details.** The cost of transition to the Union can be estimated at around 13,000 billion €, on the horizon 2030 or 2035, i.e. an annual sum of between 800 and 1,100 billion €[71].

But Europe is lagging behind in terms of investment. Apart from low public investment in the Union – observed earlier (2.6% of the GDP), we might also note that spending on research and development is low, likewise that on infrastructures[72]. As for investments in energy systems and associated infrastructures, these only represent 2% of the GDP per year, whilst they should, according to the Commission, rise to 2.8%, i.e. a total of between 520 and 575 billion € per year (automobile aside)[73].

**D – The limits of the Investment Plan.** The latter, in our opinion, appears to be more a financial engineering montage than the expression of an industrial policy. Indeed, the plan does not set any sectoral goals[74]. The lack of coordination between the various economic tools damages the system's effectiveness.[75]. There is no overall vision, headed by a political body that can define a strategic vision in response to the challenges set out previously. It is vital for the Investment Plan to be redesigned so that it can play a central role in response to the requirements of transition.

**E – Public commitment must be part of a framework that aims to redirect financial flows toward transition.** Figures show that in no way does

public investment match the challenge of transition. Two possible answers are now emerging, as part of international and European thought into this[76]:

- On the one hand it is stressed that the role of public funds, which are limited by nature, is mainly there to attract private capital;
- To do this we insist that a general framework be introduced to redirect the various actors from industry, services and finance towards financing and green projects.

To channel financial flows, it is vital to create an overall mechanism, some of whose elements are already covered by the EU's proposals. The outline of this framework is set out in the following section.

### 3 – AN ENHANCED INVESTMENT PLAN IN RESPONSE TO THE CLIMATE CHALLENGE

We shall examine the possible components in the management of climate transition; the outline of a regulatory framework that will encourage the redirection of financial flows to this end and the possible means to widen the Investment Plan.

#### 3.1 – Deciding, regulating, steering the transition.

**A – Which political body?** The response to the challenge of climate change rests on a political choice[77]. This comprises implementing the goals selected at the COP21 and in terms of sustainable development. It is therefore up to political leaders, under the European Council and the "legislative triangle", to define a long-term strategy and pertinent public policy to direct private initiatives towards climate goals.

**B – A regulatory transition authority.** The contemporary notion of a regulatory authority is one of a public body that is independent of political power, that is responsible for supervising a given public good, which might be monetary and financial stability (in the case of the central bank) or the neutral running of the goods, services and capitals markets. To undertake their mandate, these authorities are given regulatory and sometimes operational powers.

69. G20 Sustainable Finance Study Group, 2018, Sustainable Finance Synthesis, July .

70. Idem.

71. We think along the lines of the estimates made by international bodies, of an overall transition cost of around the total annual world GDP (see point 12).

We transpose this to the Union whose GDP in 2017 totalled 13,000 Bn€. Total estimates however do not cover all of the sectors and sometimes remain unprecise on the date that is being considered. Hence the choice here of a relatively wide delta as far the date is concerned.

72. Draft regulation of 6th June 2018 establishing the InvestEU programme, op. cit.

73. EC, 2018, A clean planet for all, op. cit.

74. Confrontations Europe, op.cit.

75. Idem.

76. UNEP, 2016, Inquiry on Sustainable Financial Systems. EC, 2018, A Clean Planet for All, op. cit.

77. Idem.

Climate deregulation is threatening the financial system with a generalised crisis, recently identified as a systemic climate risk[78]. This bears features that are similar to systemic risk in finance, the reality of which no one can challenge[79].

For two centuries the central banks have been responsible for protecting monetary and financial stability, as a public good. Since the 1980's the exercise of this mandate has gone together with a status of independence in the implementation of their work far from the permissive temptations of political power. Supervision, on behalf of general interest, over public goods, in the shape of the environment, to protect or restore it, should at European level be granted to a regulatory body, created expressly to this effect. Thanks to its long-term vision and independence this authority, established by a Union regulation, would be able to overcome the obstacle embodied by the "tragedy of the horizon." [80]

This authority, which will be a tool in the Union's definition of its energy and climate strategy, would oversee the commitments made by the Member States and would have the power to sanction them in the event of the non-respect of the rules.

**C – A steering committee.** In response to the limits of the Investment Plan mentioned previously, a committee comprising public executives, experts and financiers could be established to define the main lines of the Investment Plan, by identifying major public projects[81], notably terms of the climate. This would palliate the lack of sectoral guidelines in the Plan. This committee would work together with the Council and the Transition Regulatory Authority and the Commission.[82]. These projects would be assessed on the basis of environmental criteria and according to the European value added, i.e. their knock-on effect on private capital and their diffusion capacity within the economy[83]. These priority investments would be in line with the COP21 guidelines. They would leave budgetary constraint behind. [84]

It would also mean putting together a stock of projects whose priorities would certainly turn towards transport, energy or digital infrastructures. There are also structuring projects in electric batteries, artificial intelligence and nano-electronics, which are of a transversal nature. In this sense, InvestEU provides for the establishment of a rationalised framework

to form a stock like this[85]. The implementation of these projects might be modulated according to the economic situation, speeded up when there is an economic trough and slowed down in times of overheating.

### 3.2 – A regulatory framework to guide financial flows toward green investment

The introduction of a general framework to foster green investment has been the focus of recommendations on the part of international bodies. In 2016 the UNEP[86] wanted to place sustainable development at the heart of the financial system by creating conditions favourable to green investments to attract private capital[87]. Following that the G20 recalled in its Energy and Climate Action Plan of 2017[88], the goal to align financial flows with the objectives of the Paris Climate Agreement. To do this, this body advocates the creation of a stimulating environment so that public and private investments are in line with national climate commitments.

This incentive framework must comprise a body of harmonised rules that are applicable to all businesses, both financial or not, focusing on information and accounting rules, designed for issuers, investors and regulators. Specific prudential rules should be applicable to financial actors. Some insights will be given next on financial tools and environmental tax.

**A – An information system on climate risks.** The task force on climate-related financial disclosures (TCFD), set up by the Financial Stability Council delivered its recommendations in June 2017, aiming to enlighten the business partners involved as to the position of the latter in the face of climate risks and opportunities[89]. Organised according to four themes: governance, strategy, risk management and statistical tools – the recommendations concentrate on making the process transparent whereby the institutions identify, assess and manage climate risks. In the main this approach follows the one already introduced in banks in terms of financial risk management. In the Action Plan for Sustainable Growth[90], the Commission plans for integration on the one hand of the recommendations of the TCFD, and, on the other, of climate indicators included in the European taxonomy, which are provided for in the same Plan. In parallel, the latter plans for institutional investors

78. M. Aglietta and E. Espagne, *op. cit.*

79. The Financial Stability Council, together with the Basel Committee, an international committee of banking regulators, recently identified systemic financial institutions, i.e. that are able, in the event of bankruptcy, can cause a crisis in the system. These are the focus of specific regulatory constraints.

80. Idea set out by M. Carney

81. M. Aglietta (dir.), 2018, « Transformer le régime de croissance », CEPII. General Conclusion.

82. We might imagine that the attributions of this Committee extend not only to the Investment Plan but also to all public transition investments.

83. An idea philosophical trend in the 1960's designed economic development based on a strategy like this, comprising the maximisation of investment knock-on effects (here we might quote A. O. Hirschman, G. Myrdal, F. Perroux and G. de Bernis).

84. They would do this for example by developing the options planned by the Commission in its 2015 communication: Making the best use of the flexibility within the existing rules of the Stability and Growth Pact, COM(2015) 12 final provisional.

85. Draft regulation of 6th June 2018 establishing the InvestEU programme, *op. cit.* recital n° 13.

86. United Nations Environment Programme.

87. UNEP, 2016, Design of a Sustainable Financial System, *op. cit.*

88. G20, 2017, Action plan, point F.

89. Task Force on Climate-Related Financial Disclosures (TCFD), 2017, Overview of Recommendations, June.

90. See point 2.2.

and assets managers to include sustainability in their investment decisions and to inform end investors on this point. At the "One Planet Summit" in 2017 in Paris, many leading financial institution executives maintained that they wanted to follow the TCFD guidelines[91].

**B – Adaptation of the accounting framework.** To assess the wealth created by a nation or a business, we have to look beyond the usual criteria provided by national or private accounting (with the GDP as the leading indicator or the balance sheet and the profit and loss account respectively). To achieve the purpose of the economy, i.e. the promotion of human well-being, according to the UNEP the result of all economic activity has to be covered, including not only the increase in stock of industrial capital (classic assets such as machines, patents ...) but also human (know-how, skills) and natural capital (forests, arable land, ecosystems ...). All of these capital stocks comprise a nation or businesses' overall wealth, or "inclusive wealth"[92]. The recognition of this overall wealth supposes the redesign of the customary accounting frameworks, to integrate human and environmental factors. Corporate accounting that gives value to various categories of capital, like the CARE model[93], would help investors and ratings agencies to take on board a company's social and environmental dimensions. We might imagine businesses publishing accounts to this end, alongside the one demanded by the regulations in force.

**C – The central banks and prudential policy.** As we have seen banks and regulators are now expressing their concern about the climate risks faced by the financial institutions. The possible answers are dual.

On the one hand, Central Banks might widen their field of action by taking into account climate-related financial risks in their macro-prudential policy with still-to-be defined tools[94]. They might also support sustainable development linked securities markets such as green bonds. The idea of integrating climate risk into stress tests which European bank regulators undertake regularly has also been suggested.[95]

On the other hand, prudential rules might be adapted to respond to sustainable development requirements. The measures now being studied by the Commission include: firstly, the idea of integrating climate risk in bank risk management policy; then that of the recalibration of statutory capital ratios [96] depending on the sustainable nature or not of the operations in question, and this, in line with the taxonomy provided for in the 2018 Action Plan.

**D – Financial tools to reorient savings.** The financing of transition requires the mobilisation of vast volumes of private capital. The euro zone, with a savings rate of 25% of the GDP, is relatively wealthy rather than suffering a lack of available funds. The problem therefore involves finding the financial instruments to channel these savings towards green investments, whose features are preventing financing. Regarding this issue the G20's Sustainable Finance Study Group has drafted several possible paths[97]:

- The creation of sustainable assets for capital markets to enable the financing of securities or bank loans by major investors, by subscribing securitised products[98];
- The development of sustainable capital investment by overcoming obstacles to this kind of operation (fear of low yield, uncertainty associated with the early stages of technical development);
- The application of digital techniques, such as the Fin-Tech, to sustainable investment.

Sustainable finance therefore requires the development of specific investment vectors, of which green bonds are an example[99]. Moreover, the public sector aims to play a dominant role for example in the granting of guarantees that act as a lever to increase financing, as we have seen in the Investment Plan.

**E – Rethinking the environment tax.** Sustainable taxation can be considered from two complementary angles. One the one hand, this involves terminating subsidies to fossil energies, which are still high. Initiated in 2009 on a voluntary basis under the G20, this process is notably based on the "soft" peer review method. This approach has led to some results, since after having totalled 616 billion \$ in 2012, these subsidies lay at 373 billion \$ in 2015, i.e. 39% reduction[100]. On the other hand, it involves supporting clean energies, to overcome impediments to their development. This action might include environmental tax or preferential tariffs agreed by the public authorities for the re-purchase of renewable energies. As for the carbon tax, based on CO<sup>2</sup> emissions and introduced on a voluntary basis, the lack of coordination between States which apply it has led to extremely volatile prices since the beginning of the century and consequently, negative unpredictable planning on the part of industrialists for the substitution of fossil energies by renewable ones. Proposals on the part of private executives are now being drafted in a bid to establish a kind of level playing field between Europe and another major economic zone, in view of returning visibility to industrialists by programming carbon tax prices for the long-term[101].

91. M. Carney, 2018, *Transition in thinking and action*, op. cit.

92. UNEP, 2018, *Inclusive Wealth Report*.

93. CARE : "Accounts adapted to the renewal of the environment" (*Comptabilité Adaptée au Renouvellement de l'Environnement*). This model was put forward by Jacques Richard in 2012.

94. "Transformer le régime de croissance", (*Transforming the growth regime*) op. cit. ch. 8 and conclusion.

95. European Systemic Risk Board, 2016, *Too sudden, too late*, February.

96. In the so-called Basel III capital ratio.

97. G20 Sustainable Finance Study Group, 2018, *Sustainable Finance Synthesis Report*, July.

98. For example, *Asset-Backed Securities, ABS, Collateralized Loan Obligations, CLOs, Covered Bonds*.

99. The European Investment Bank (EIB) and the world leader with 19.4 Bn€ of emissions accumulated since 2007. Cf. *EIB 2018, Financial Report 2017*.

100. OECD data. These differ from those of the International Energy Agency. OECD-IAE, 2018, *Update on recent progress in reform of inefficient fossil fuel subsidies that encourage wasteful consumption*, June

### 3.3 – Strengthening the public base of the Investment Plan

The G20 recalls the role that multilateral development banks can play in sustainable financing, due to their international vision, their ability to draw up large scale financing plans, and by doing this their multiplying effect, attracting major volumes of private funds[102].

From the beginning the Investment Plan planned for State and the national development bank contributions, via the injection of capital into the European Fund for Strategic Investments (EFSI)[103]. In 2015, 9 Member States committed to a total of 43 billion € to co-fund the EFSI projects. The ECB notes that no Member State has contributed directly to the EFSI's capital despite the favourable fiscal approach reserved for this type of contribution[104]. Meanwhile the Member States have only participated in national projects, which is not in line with the spirit of the Plan. This brings an obstacle to light – either that of the Member States obsession with the principle of “juste retour”, or because of other bodies.

This now involves the organisation of a network of Member States or national development banks, as part of the present measures, EFSI 2.0 or in the next InvestEU, which commit capital directly to the EFSI, then to the InvestEU programmes, to trigger the multiplying effect that is expected[105] on a greater scale.

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A significant political, technical and financial challenge, climate transition is also an opportunity for the recovery and mobilisation of an anaemic European economy that has found itself fragmented since the end of the financial crisis. This weakness has mainly come due to a lack of investment in the public sector, in innovation and infrastructures. The Union's commitment to climate transition faces some major obstacles. The expression of political will is therefore necessary for the introduction of an appropriate tool, comprising

a transition regulatory authority, a steering committee for the Investment Plan and a regulatory framework to reorient financial flows. This kind of organisation would allow the Plan to assume a new scale, matching the climate challenge. Transition projects can trigger a major, powerful knock-on effect throughout the entire economy. We are expecting surplus growth from it totalling around 2% by 2050[106]. They should now also guarantee a certain amount of energy independence.

Hence the climate transition strategy, an opportunity for the Union to become the world leader in this area, could provide new impetus to European economy, and with this, provide the best response to Euroscepticism.

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101. *Confrontations Europe, Post-Cop 24 Meeting, 9 January, Paris.*

102. *G20 Hamburg Climate and Energy Action Plan for Growth, 2017.*

103. *"Member States, directly or through their NPBs or similar bodies, will have the opportunity to contribute to the Fund in the form of capital" "Private investors can also join at the level of the Fund". An Investment Plan for Europe COM(2014) 903 final.*

104. *ECB, 2016, "Public Investment in Europe", ECB Economic Bulletin, Issue 2 / 2016*

105. *The Plan originally provided a multiplying effect of 15 based on public commitment. This effect has indeed turned into reality although at a slightly low level: 13.5 approximately.*

106. *EC, 2018, Clean Planet for All, op. cit. p. 16 & 23.*

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